EVER:
Evaluation of EMAS and Eco-label for their Revision

EXECUTIVE SUMMARY

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AIM AND METHODOLOGY

The EVER study has been carried out on behalf DG Environment of the European Commission, by a consortium of consultants led by IEFE – Università Bocconi, (IT). The other partners in the consortium were Adelphi Consult (DE), IOEW, Office Heidelberg (DE), SPRU, Sussex University (UK) and Valør & Tinge A/S (DK).

The fundamental aim of the EVER study has been to provide recommendations for the revision of two voluntary schemes managed by the European Commission: EMAS and the EU Eco-label.
The options and recommendations proposed for the schemes are based on the evidence collected in the different phases of the EVER study. The 'desk research', consisting of a thorough review of existing literature and previous studies and surveys on the schemes, and the 'in-field' research, carried out by way of direct interviews and case studies, provided the background relating to their strengths and weaknesses.
The findings of the research phase were presented, discussed and enriched through a stakeholder-engagement exercise, carried out within two workshops held in September 2005, that involved experts, institutions, companies, practitioners and NGOs. The positions and suggestions collected from the stakeholders (during and after the workshop) were used as empirical evidence for the study, and were further elaborated as the input for the final proposals.
The whole process of research, consultation and elaboration led to the defining of options and recommendations.

The study consists of two reports and three annexes.

- Report 1, 'Options and recommendations for the revision process', presents the options and the recommendations that the EVER consortium of consultants has defined and developed. These options and recommendations are based on a broad process of research and consultation.

- Report 2, 'Research findings', presents the main results of the desk research, carried out by means of a thorough review of existing literature and previous studies and surveys, as well as the in-field research, carried out by way of direct interviews and case studies.

- Annex I, 'Interviews: methodology and summary of the results', includes an explanation of the approach followed in the selection of the interviewees and offers a brief summary of the main results of the interviews.

- Annex II, 'Workshops for the revision of the two schemes', includes detailed reports on the outcomes of the workshops organised and held in Brussels on 26 and 27 September 2005.

- Annex III, 'Case studies based on on-site visits', describes the empirical evidence collected with respect to five specific visits to sites where EMAS and the EU Eco-label are being applied.

- Annex IV, 'Detailed results of the interviews', includes the results of all the direct interviews.

MAIN FINDINGS

The main findings of the EVER study are summarised in the following paragraphs, according to the thematic areas in which the research has been carried out. For a more detailed presentation, the reader is invited to read Report 2 and Annexes I – IV of the EVER study.

PART A: EMAS

A1. Contribution of EMAS to the improvement of environmental performance

- EMAS has a significant role to play in stimulating environmental improvement, particularly in relation to facility-related aspects of waste, water and air pollution. However, other factors, such as environmental regulation and technical progress, play more important roles.

- EMAS-registered organisations find that it is a useful tool for improving environmental performance both in the short and long term. They perceive their performance as better than that of other organisations, although most quantitative studies have not been able to confirm this.

- There is little evidence to suggest differences between EMAS and ISO 14001 in relation to performance improvement. This may be a consequence of methodological difficulties rather than a proof of their equivalence.

- The elements of EMAS considered to be most important for improvement are: requirement for legal compliance, employee involvement, targets, and audit.

A2. Further (indirect) effects linked to the existence of EMAS

- EMAS is not generally seen as a benchmark. Little more than 60% of the interviewed companies and stakeholders think that EMAS is regarded and used as ‘best practice’.

- EMAS has some effects within the supply chain – even if these are limited. Few EMAS participants adopt a green procurement policy, but 77% of EMAS participants support their suppliers in the adoption of measures and initiatives for environmental improvement and 72% declare that the environmental management system influences product performance in other phases of its life-cycle and/or in the supply chain.

- EMAS has been the model according to which numerous alternative environmental management approaches in the EU have been set up. These alternative systems are spreading very fast and contribute to the diffusion of environmental management in European companies and organisations.

- Most EMAS drop-outs apparently maintain their environmental management system - or parts of it (such as: procedures for operational control, surveillance of relevant environmental aspects, the audit system, etc.).

- Though difficult to estimate, it seems that the a sizeable number of companies which participate in one of the numerous EMAS promotion projects do not achieve EMAS, but still start to use environmental management.

- Taken together, the real number of companies which adopt an environmental management system, or part of such a system, due to EMAS is far higher than current figures of EMAS participants suggest.

- EMAS is perceived as a useful support for policy makers, regulators and other institutional and economic actors (such as public purchasers), other than the registered organisations.

A3. Drivers and Barriers for EMAS development

The main barriers to *achieving the first EMAS registration* are: the cost of implementation (including the consultant), the lack of human resources and competence and the difficulties in involving and motivating the internal personnel. Cost of registration seems to be rather unimportant. It should be noted, however, that the cost of EMAS implementation significantly vary in different EU Member States, the industrial sector, the size of the organisation and the level of their 'environmental complexity'.

- The barriers in *maintaining* EMAS, however, are linked to a lack of external feedback or incentives for the company running the scheme.

- Similarly, the perceived lack of feedback and incentives is currently discouraging potential new applicants.

- Currently, competitive advantages (especially those directly related to the market response, such as customer satisfaction, increase of the turnover or the market share, etc.) and stakeholder-relations (particularly with reference to the relation with institutional actors and with the local communities) are the main motivations that drive potential new applicants to participate.

- As to the perceived benefits, EMAS strongly improves an organisation's capacity to meet to legal and regulatory requirements.

- In addition, organisational benefits are strongly associated with EMAS implementation: participants experienced an increase in the motivation and involvement of personnel in management, and a better definition of responsibilities.

- EMAS is also able to produce cost savings for companies, but this benefit is not as important as the other benefits mentioned above.

A4. Contribution to competitiveness

- The most important competitive advantage for EMAS organisations is an 'improved image'.

- EMAS positively affects some aspects of competitiveness, but not those directly related to the 'customer response', such as improved innovation capabilities, cost optimisation and recognition as a leader by competitors and trade associations, etc. The success of EMAS as a competitive tool is not particularly related to general conditions such as the sector, size or

Member State in which the registered organisation operates, but it seems to be closely related to specific conditions (linked to the local context) and to the effort that the organisation makes in communicating and valorising EMAS registration on the market and with stakeholders.

- Market payback is perceived as much less significant: competitive advantages directly linked to any sort of 'market reward' are only perceived by a minority of the EMAS registered organisations.

- The question of whether EMAS is an effective tool for competition or not remains a controversial matter: participants in the scheme are more positive, while very few organisations outside the scheme believe it can produce competitive advantage on the market, especially if compared with other forms of certification, such as ISO 14001.

- All in all, EMAS seems to pay back its costs.

A5. EMAS relationship with Sustainable Development

- Sustainability-targeted initiatives are rather diffuse among organisations (both participants and non-participants). These include employee involvement, stakeholder engagement, occupational health and safety management systems and sustainability reports.

- A significant number of organisations are working to pursue integration between EMAS and occupational health and safety management.

- The relationship between EMAS and other issues relating to Corporate Social Responsibility and/or sustainable development is controversial: some companies are in favour of the possibility of including other CSR-related issues in EMAS, but only as an add-on of the current scheme (a "modular" approach).

A7. Desired incentives and measures for the EMAS revision:

- The majority of organisation want permanent institutional measures; the two external incentives that are most desired are fiscal incentives (e.g. tax abatement) and regulatory flexibility and relief.

- There is also broad agreement on the importance of 'indirect' incentives, aimed at increasing the demand for EMAS, such as the setting up of information and promotion campaigns for EMAS by public institutions and the inclusion of EMAS in Green Public Procurement.

- Upgrading EMAS to an internationally recognised scheme is considered by many companies and stakeholders as another powerful incentive.

- Direct funding and technical support seem to be less desirable according to interviewees than the literature and previous studies would suggest.

- The best incentives for taking up EMAS for SMEs are not so clear: simplifying access to the scheme for SMEs is seen as a useful measure, however there is less consensus on the idea of 'staged approach' that would allow SMEs to gain EMAS in phases.

PART B: ECO-LABEL

B1. Contribution of the EU Eco-label to changing consumption and production patterns: direct effects

- The EU Eco-label is currently used by participants in the scheme as a tool to help improve environmental performance.
- Moreover, the EU Eco-label is frequently able to actually produce such an improvement in environmental performance (both in terms of the product and the process).
- The EU Eco-label is also able to induce an improvement in the performance of other companies in the supply chain of the participants (e.g. providers of intermediate goods and services).

B2. Contribution of the EU Eco-label to changing consumption and production patterns: indirect effects

- Policy-related indirect effects (use of the Eco-label in supporting policy making, as a selection criteria in green procurement, in setting industry objectives for environmental improvement, etc.) are known and appreciated by companies and stakeholders.
- There is a strong market-related indirect effect on competitors, insofar as the EU Eco-label is used also by non-participants as a benchmark.
- The other potential market-related indirect effects should be empowered.

B3. Eco-label and national labels

- There is no clear preference for either national labels or the EU Eco-label by producers, although when considering the long term the EU Eco-label is more often preferred. National labels are not perceived as more successful than the EU Eco-label.
- The presence of national labels alongside the EU Eco-label is neither considered as being positive or negative - there is disagreement about whether they compete with each other.
- In any case, *harmonisation* is seen as being the only effective solution to be pursued. There is very little support for the options of abolishing either the EU Eco-label or the national labels.

B4. Drivers and Barriers for the EU Eco-label development

- Competition and marketing potential are the most powerful drivers for applying for the EU Eco-label.

- The public sector is a key target for many companies, and therefore public purchasing can be an effective driver.

- The improvement of environmental performance is a far less important motivation to adopt the label.

- However, even if it is not a strong driver, the improvement of environmental performance turns out to be an important benefit of the scheme: it is one of the two most important benefits perceived by participants.

- Corporate image and other immaterial advantages are also very significant benefits, while market-related results are less obvious,in a significant number of cases benefits do refer directly to the market reward (an increase in the market share or in the number customers/consumers).

- As to the most important barriers: procedural and organisational problems were difficult to overcome for those who applied for, and obtained, the EU Eco-label.

- Cost is the highest barrier for potential applicants.

- Technical considerations, such as the lack of internal human resources and competence and the lack of external technical support and information, are not seen as nearly such significant barriers as has traditionally portrayed by the existing literature.

- Low awareness largely prevails as the most significant barrier in using the EU Eco-label for marketing purposes.

- It is not just a problem of being aware of the EU Eco-label, but also of choosing it on the market: the lack of competitive rewards by all the above-mentioned actors is perceived as a considerable barrier (particularly high for new potential applicants).

B5. Contribution of the EU Eco-label to competitiveness

- The EU Eco-label is actively used by most of the participants in their marketing campaigns.

- The EU Eco-label is often able to produce positive effects on the market: slightly more than 50% of the Eco-label companies experienced an increase in their market share or in the number of new customers thanks to the adoption of the Flower. The market reward in terms of turnover is not easily measurable.

- The reason for the sometimes limited benefits of the Flower is well known: the lack of recognition and knowledge of the EU Eco-label by different actors on the market: consumers, public purchasers, intermediate customers and retailers.

B6. Eco-label relationship with other dimensions of Sustainable Development

- Among the various other product-related issues concerning sustainability, the issue of ‘consumer health and safety’ is already dealt with by many companies, whilst ethical issues, such as fair trade, are not.

- There is only a moderate consensus on a possible EU label covering a set of different issues relating to sustainability (including environmental ones).

B7. Desired incentives and measures for the EU Eco-label revision:

- Information and promotion campaigns and other actions aimed at increasing the knowledge and the demand of the EU Eco-label are perceived as the most effective measures for supporting the scheme and endorsing its success as a marketing opportunity.

- External incentives are also widely requested. Fiscal incentives, such as tax abatement, are thought to be effective, insofar as they enable producers to lower the costs and prices of Eco-labelled products. Another of the 'most wanted' incentives is the inclusion of the EU Eco-label as a facilitating condition for public procurement.

- Other desirable measures directly relate to various modifications that can be introduced in the Regulation or in its institutional and applicative framework, such as a higher number of product groups or a further extension of the EU Eco-label to services.

- Outsourcing the EU Eco-label to an entirely private body obtains a low degree of support (but also the idea of making it entirely Commission-managed also raises many objections).

- Lowering the number and/or the stringency of the criteria to make the scheme 'easier' is not strongly supported (although on the whole the idea is favoured by the literature).

- Finally, it should be emphasised that the proposal of having a graded label, strongly debated in recent years, has been definitively rejected.

PART C: INTEGRATION

C1. Evidence and desired incentives:

- To some extent, the product dimension is already part of EMAS: the environmental management system influences product performance in other phases of the life-cycle and/or in the supply chain.

- There is a certain awareness of the potential benefits emerging from a stronger link and synergy between EMAS and the EU Eco-label.

- "Synergy" between the two voluntary schemes does not mean merging them, but exploiting all the possible opportunities for mutual reinforcement.

- ISO type III labels can be a synergetic tool for both schemes: many opportunities were identified (both in the desk and in the in-field research) for pursuing integration with ISO type III labels, with reference to operational, marketing and institutional synergies.

- A major issue for the revision of both the schemes is integrating and linking them with existing legislation and environmental policies (to a wider extent).

- In particular, a considerable consensus was found during the desk and in-field research on the strong need for integrating and embedding EMAS and the EU Eco-label in other product-related policy and private-certification instruments (other labels and forms of certifications, other IPP tools, etc.).

- A more general request is also being made by stakeholders and organisations taking part in the two schemes for a truly effective and consistent embedding of EMAS and the EU Eco-label in existing and forthcoming legislation, in policy implementation and even in the enforcement of environmental legislation (e.g. regulatory relief and flexibility). Some of the most frequently suggested policy areas for promoting synergy are, for EMAS: the IPPC directive, the Emission trading directive, the Seveso Bis Directive; for the EU Eco-label: EuP, RoHS and, to a minor extent, REACH.

OPTIONS AND RECOMMENDATIONS

On the basis of the findings reported above, the EVER study elaborated the following options and recommendations for the revision process. For a more detailed presentation, the reader is invited to read Report 1.

PART A: EMAS

The following options and recommendations were proposed in the study:

- **A1: supporting EMAS by way of financial, fiscal and market-related institutional measures -** With the increase in the number of participants being a fundamental priority of the scheme, the set up and implementation of these kinds of incentives is recommended as an effective option for achieving this. Among the measures proposed by the EVER study, there are: a higher level of intervention by the European Commission in promoting Green Public Procurement within the Member States and income tax abatement. This option is mostly based on a guiding, stimulating and supporting role of the Commission towards Member States.

- **A2: Better promotion and marketing of the scheme -** We recommend making a greater effort in the *promotion and marketing* of the scheme, by means of information and publicity campaigns, by making it mandatory for Member States to promote EMAS, by allowing for a broader use of the logo as well as by other means (see Report 1). Such actions will produce an increase in the awareness of many actors (including the public at large). Implementing this option is strongly supported by most of the evidence collected in the EVER study, with many observers identifying in the lack of knowledge on EMAS (and, subsequently, the lack of reward for the market, the stakeholders and the public institutions) as one of the most significant barriers for the development of the scheme.

- **A3: Embedding EMAS within other legislation (policy making and implementing) –** Integration with the other legislation and regulations at the European and national level is seen as crucial for the success of EMAS. Our recommendation suggests how to further embed the EMAS regulation in environmental policies, in order to make it a truly integrated tool. The use of EMAS to make the implementation of the environmental regulation easier and more effective was proposed by virtually all stakeholders consulted during the study, therefore this option is strongly recommended.

- **A4: Upgrading EMAS to an internationally recognised and applicable scheme -** This option foresees possible ways to upgrade EMAS to an internationally recognised and applicable scheme. Even though implementation of this option would require careful consideration in order to make it work at the operational level (due to the implications in terms of international competition), it should be stressed that many organisations are motivated to participate in the scheme *only* if registration comes with international recognition, allowing EMAS to be effectively used (as ISO 14001) in non-EU markets.

- **A5: EMAS as a reporting and communication tool -** This option focuses on the possibility of making EMAS a more effective and powerful *communication tool*. Much of the evidence gathered in the study strongly supports the introduction of innovations in the way in which the environmental statement is conceived, validated and diffused. Some of the proposed measures rely on a wider use of environmental performance indicators.

- **A6: Making EMAS mandatory -** This option foresees the possibility of making *EMAS mandatory* for specific types of organisation or in certain circumstances (such as big events: see Report 1). Although this would be potentially a very effective measure in terms of raising the number of registrations, it should be noted that this option obtained a very low consensus from the evidence collected in the study. The change needed in the nature and in the requirements of the scheme to transform it into a mandatory policy instrument would be too radical, these changes would overlap with existing policies (e.g.: IPPC Directive) and could even decrease EMAS potential for involvement of other sectors and organisations.

- **A7: EMAS as a 'code of principles' -** A radical change in the nature of the EMAS requirements is proposed, focusing on a *code of principles* to be adopted and applied by the registered organisations, as a possible way to provide more flexibility in the implementation of the scheme. This could allow EMAS to be positioned as a scheme providing real 'added value' when compared to other forms of certifiable or non certifiable EMSs, and it could also allow the scheme to concentrate on performance in terms of continuous improvement and to simplify the participation by small companies.

- **A8: making EMAS a recognised '*standard of excellence*' -** Making EMAS a true, widely recognised '*standard of excellence*' could attract more organisations and increase the uptake of the scheme. This option relies on the fact that many actors (consulted in the study) do not consider EMAS as a benchmark and are asking for its requirements to be more strictly connected to the environmental performance of organisations, in order to raise the credibility and the positive perception of the scheme. In order to achieve this objective, some performance-targeted measures are proposed (see Report 1). It should be note that, by making the requirements more restrictive, this option would only be able to produce an increase in the number of registrations in the long run.

- **A9: Targeting SMEs -** This option aims at improving the specifications for SMEs, in order to make it easier for companies, that are suffering from lack of human, technical and economic resources, to enter the scheme. The proposed measures (see Report 1) build upon those already outlined (although not yet fully implemented) in Commission Recommendation EC/2001/680 and Decision EC/2001/681 of 7 September 2001 that accompany the EMAS Regulation. The measures also build upon some of the recent EMAS pilot projects aimed at tailoring it to the needs of small companies (including the so-called 'staged approaches').

- **A10: EMAS with a stronger product dimension -** The reinforcement of the 'product dimension' in EMAS is a measure well supported by the evidence collected in the EVER study. This option proposes the inclusion of optional requirements for those organisations that are interested in valorising the environmental performance of their products within EMAS implementation. The proposed measures are conceived as 'add-ons' to the Regulation and rely on those requirements already existing in other policies (e.g.: EuP directive, EPD Schemes, etc.).

- **A11: enabling and promoting a 'cluster approach' -** This option aims at strengthening the 'cluster' approach, that is well-established throughout the EU. Past experience has shown

that networking between companies and between them and other public or private 'collective' actors (local institutions, trade associations, large companies in the supply chain etc.) can be effective at promoting and supporting EMAS implementation, especially for smaller companies. This option is based on the evidence of the EVER study that stresses the need for long term support and simplification. The proposed measures foresee a special recognition for those actors that play the role of the 'catalyst' in the network.

- **A12: Integration of CSR- and sustainability- related issues -** This option proposes a way of introducing these issues into the EMAS Regulation, by means of an optional series of requirements ('add-ons' to the existing scheme, by means of a modular approach). The proposed solution is recommended, insofar as it enables the experimentation of the potential success of CSR-related issues, with no specific constraint for organisations that are not interested.

- **A13: Involving the banking and insurance sector in EMAS –** The EVER in-field research suggests that the involvement of this sector could be one of the most effective incentives for EMAS diffusion. This option is based on the possibility that the European Commission can influence the regulations adopted and the strategic behaviour of that sector, in order to promote the adoption of EMAS as a guarantee of good performance in terms of environmental risk management.

- **A14: EMAS for local authorities and public institutions -** This option is based on several measures identified as useful and potentially effective for improving public institutions capacity to implement EMAS requirements and to stimulate participation in the scheme. The first set of measures proposed aim at responding to the need for better, more practical guidance on some requirements, while the second set of measures aim at reinforcing the multiplier effect that, from an initial 'pioneer' experience, can lead public administrations to a wider application of EMAS and of its requirements (see Report 1).

PART B. EU ECO-LABEL

The following options and recommendations were proposed in the study:

- **B.1.: "Changing institutions" -** This package of options relates to the current institutional framework of the EU Eco-label. Four options for modifications to the current institutional framework are considered, concerning: the structure of the allocation of rights, duties, structure and power between the Commission, the Member States and their Competent Bodies, applicants and other stakeholders; the possibility of outsourcing parts of the scheme, or even the complete scheme; streamlining the allocation and validation process; and the possibility of increasing the degree of decentralisation of the scheme. Certain changes are recommended for consideration, in particular that the make-up of the decision making board of the Eco-label needs to be more representative of all stakeholders of the scheme.

- **B.2. "Changing framework" -** The proposed options aim at improving the attractiveness of the Flower by setting policy fiscal incentives, stimulating market demand through green public procurement, and making the certification process more efficient through better regulation and mutual reinforcement among eco-labels.

- **B.3.: Changing content of the Ecolabel -** The EVER study has investigated the need for changes in the criteria and coverage of the Eco-label to attract more license holders as well as possible ways to implement such changes. This option proposes measures to make more products groups available and to reduce the number of criteria, as a way to ensure that more companies are attracted to the scheme.

- **B.4.: Promotion and marketing –** This option is based on the strong message emerging from the EVER study that significant additional effort should be made in the promotion and marketing of the scheme. This effort could be by means of various possible kinds of initiative, aimed at raising the awareness of consumers, professional purchasers, retailers, potential license holders and other stakeholders. There are two different kinds of measure proposed in this option: direct promotion and marketing activities (e.g. information campaigns, co-marketing and dialogue forums, etc) and activities that support promotion and marketing by companies (e.g. tools and information materials, coordination centres and market analysis, etc).

- **B.5.: Harmonisation of eco-labelling schemes –** The EVER study points to the fact that more effort is needed in terms of harmonising ecolabelling schemes. We propose three possible ways to proceed: for Eco-label criteria to be adopted by national schemes; for national criteria to be adopted by the Eco-label when possible; or ; to transform the EU Eco-label in a sort of "umbrella" scheme (see Report 1).

- **B.6.: Direct support to applicants -** Two different types of direct support measure are proposed for applicants: technical measures, relating to the provision of know-how and tools and financial incentives, relating to the possibility of subsidising or reducing the costs that applicants currently face.

- **B.7.: Gradual extension of the EU Ecolabel, towards sustainability -** On the basis of the findings of our study, we do not recommend the setting up a new scheme for a 'sustainability label' with the forthcoming revision of the EU Ecolabel, but instead to gradually introduce some modifications into the scheme that could respond in the long run to the possibility of an EU sustainability label, stimulating the attention of companies and consumers on some related issues.

For both EMAS and the EU Eco-label additional options, of either maintaining the schemes as they are currently or of abolishing them, have also been considered. These options are identified as follows:

- **"Business As Usual" -** This option foresees only very small modifications and adjustments to the existing schemes, in order to take into account the requests that emerge from the EVER study concerning the institutional and organisational framework of the two schemes and some of their most problematic areas. This option is not going to change significantly the pattern of their development.

- **"Sudden Death"** – This option foresees ways in which the European Commission can exit the policy area of voluntary instruments in the short term, analysing the associated benefits and damages / risks.

- **"Slow Death"** – This option relies on the possibility of progressively reducing the commitment and the effort of the Commission in managing and supporting the two schemes,

eventually in with a view to preparing the transfer of the schemes to other responsible bodies.

PART C: INTEGRATION

A final option on the synergy and integration between EMAS and the EU Eco-label is composed of two possible sets of measures. The first is aimed at fostering and implementing the highest level possible of synergy between the two schemes, while keeping them separate. The second foresees an hypothesis of a new "three steps" environmental certification scheme, promoted and managed by the Commission, of which EMAS and Ecolabel are two steps.

- **Mutual reinforcement between EMAS and the EU Ecolabel -** The basic concept underlying this first set of measures is that the revision of the schemes should aim as much as possible at pursuing two objectives:
  - on one hand, EMAS and Ecolabel must include truly favourable conditions for the organisations that are already participating in one scheme and want to join the other one (and, even more, it must become genuinely convenient to implement them together)
  - on the other hand, the two schemes should be more coherent in principle and consistent in practice, also with respect to their requirements, in order to convey to organisations and to stakeholders an univocal message of 'environmental excellence'

- **Proposal for a "three level" EU environmental voluntary scheme -** In order to pursue a more intense and effective integration between the two schemes, and to accept some of the suggestions emerging from the EVER study, we propose a possible deeper merging of both EMAS and the EU Ecolabel, with the formation of a new scheme, relying on different certification opportunities. The new scheme could be based on a 'gradual' approach which foresees three progressive levels of recognition by the European Commission of the organisation's environmental management. The basic concept of this option is to consider environmental management systems as a first step, concerned with the organisation and the way in which it manages its environmental aspects, and then build on this first level to offer more opportunities for recognising the effort and initiatives relating to the product (good or service) environmental management and communication. Finally, the "top" level of the scheme is a recognition of the environmental quality of the product with respect to its competitors. The new scheme is based on some of the options described previously .

EVER:
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Report 1:

OPTIONS and RECOMMENDATIONS for the REVISION PROCESS

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Introduction

A fundamental aim of the EVER study was to provide recommendations for the revision of two voluntary schemes managed by the European Commission: EMAS and the EU Ecolabel.
This report presents the options and the recommendations that the EVER consortium of consultants defined and elaborated, as one of the main results of the study.

The options and recommendations proposed in this report are entirely based on the evidence collected in the different phases of the EVER study.
The "desk research", carried out by means of a thorough review of the existing literature and of previous studies and surveys, and the "in-field" research, carried out by way of direct interviews and case studies, both provided indications relating to the strengths and weaknesses of the two schemes.
The findings of the research phase were presented, discussed and enriched through a stakeholder-engagement exercise, carried out within two workshops held in September 2005, that involved a significant number of experts, institutions, companies, practitioners and NGOs
The positions and suggestions collected from the stakeholders (during and after the workshops) were considered as empirical evidence for the study, and further elaborated to become an input for the final proposals. Additional discussions were also help with the European Union Eco-labelling Board and with the EMAS Art. 14 Committee at this time, the results of which were fed into the study.

The whole process of research, consultation and elaboration, led to the options and the recommendations that are presented here.

The options and recommendations have been defined according to different scenarios for the development of the two schemes.
According to the opinion of the large majority of the consulted "actors" (participants, non participants, stakeholders), three basic scenarios can be foreseen for the evolution of the two schemes:

- a scenario leading to the ending of the two schemes, by means of a "sudden death" or a "slow death"
- a scenario aimed at keeping the two schemes basically as they are applied today (a "Business as Usual" approach)
- a scenario that aims at pushing the development of the two schemes, by way of more or less innovative modifications to them.

The first strategic choice to be made by the policy makers (first of all by the European Commission) should be focused on what scenario shall be pursued.
Although this report is not aimed at suggesting the way forward on the political level, we will provide a series of relevant options that can be used to pursue each of the scenarios, by means of different possible measures. Each option is described along with the rationale for choosing it, in order to orient the decision-making process towards one of the possible scenarios:

- Options A15, A16 and B8 are proposed to support the "ending" scenario.
- Option A17 relates to "Business As Usual"
- Options A1-A14 and B1-B7 are proposed with the aim of "pushing" the development of the two schemes

The options are based on a very pragmatic approach, focusing on "what can be done" to pursue the different scenarios.

According to the outcome of the research, there are some key-characteristics of the two schemes on which it is possible to act in order to push in the direction of one scenario or the other:

- The aims (the nature of the scheme can be transformed to pursue other aims)
- The scope (enlargement of the scheme, to include other "dimensions")
- The requirements (downgrading or upgrading them, both for the participants and for the other actors involved: Competent Bodies, Verifiers, Member States)
- The institutional framework of the scheme (division of powers, responsibilities, etc. among the actors involved)
- The external framework (possibility to create and enact different forms of external incentives or disincentives)

By changing or influencing these characteristics, a strategic direction can be taken towards one of the possible scenarios. Some examples can be useful:

- The enlargement of the scheme (e.g.: to include social issues) can produce a "push effect", thanks to the possibility of attracting new participants; but this push might be small, if participation is made more difficult for organisations that are not interested in the "new dimension".
- The external framework can be modified (e.g.: through financial incentives) in order to make it more appealing and convenient for organisations to participate in the scheme; but this can represent a very weak push if the financial resources available are small.

The options proposed in this report have been defined assuming there is a possibility to change and/or influence the abovementioned characteristics and combining them in such a way to produce an impact on the two schemes. The impact can be positive or negative, and is measured according to the following effects:

- Increase in the number of registrations, that the option is capable of producing (in terms of EMAS registrations or Eco-labels)
- Improvement on the environmental performance of the participants, that the proposed changes are able to stimulate and to induce

These can be considered as "direct effects" and when acting in the same direction (increase in numbers + performance improvement) they can generate an overall improvement of the environmental performance in the whole system.
Other kinds of effects should be taken into consideration:

- The indirect effects, measured as beneficial consequences for actors other than the participants (suppliers, customers, institutions, etc.) that are eventually linked to the development of an option.

The options will be also assessed according to the effort needed to implement them. In this case, the assessment will rely on the following factors:

- Organisational and coordination effort by the European Commission
- Organisational and coordination effort by the Member States
- Economic resources needed

Each of the options presented will be assessed according to its impact and the related effort required to implement it. Moreover, as we will see in the final part of this report, the proposed

options will be ranked according to their potential, and this will provide a guideline for their use in pursuing one of the scenarios.

The structure of this report is as follows:

1. & 2. The first two parts of the report are focused on the options defined and proposed respectively for EMAS and the EU Ecolabel. For each of the options presented, the following contents are included:

- the *motivations* supporting the option: in this part we will provide the most relevant information emerging from the study that backs up the idea of proposing the option
- a *description* of the objectives and measures foreseen, and the relevant recommendations for conceiving, planning and implementing these measures
- a review of the *potential impacts* of the option, including an overview of the advantages, disadvantages and effort that would be required from the different actors
- an *impact profile*, summarising and assessing the positive and negative impacts by way of some quantified indicators

3. The third part of the report focuses on a particular option, dealing with the potential integration and synergy between the two schemes.
This part will be presented with the same format the previous two parts and will be taken into consideration for the revision of both the schemes.

4. The fourth part of the report is devoted to a comparative assessment of the different options.
Two separate sections will deal with EMAS and the EU Ecolabel.
In these final sections we will present:

- A comparative assessment of the options presented, based on their potential effects (Impact Index), the possibility of mutual reinforcement with other options (Synergy Index) and the effort that should be made to implement them (Effort Index)
- An table of the inter-relationships, identifying the most synergetic and mutually reinforcing options
- A graph that attempts to "map" the options according to their comparative impact that is used to provide a ranking of the options.

The report will conclude with a ranking of the options, helping to identify the "top options" and the "key support" options for the revision process.

Although it relies on the outcome of the whole study, to which many researchers and consultants operating within the EVER consortium strongly contributed (see Report 2), this report was elaborated and drafted by:

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PART A:

EMAS

Option A1: supporting EMAS by way of financial, fiscal and market-related institutional measures

A1.a) Rationale

The findings of previous studies and research undisputedly show that the heterogeneous diffusion and success of EMAS, in terms of number of registrations, is linked to the efforts that each Member State (together with regional and local institutions) makes in defining and implementing different forms of external incentives.
In the past, organisations, and especially the smaller companies, have relied mostly on direct funding, provided by means of promotion projects and other local and sectorial initiatives. While introducing EMAS was heavily subsidized in some Member States in the beginning, financial support has been reduced in the meantime. That is seen by many observers as one of the reasons for the stagnation and even decreasing participation in some Member States.
The incentives proved to be effective, especially in some Member States (e.g.: in Germany, Italy and Spain), but it has to be noted that many of them have a short-term effect, with particular reference to the provision of funds aimed at financing the implementation costs.
Research into other environmental management approaches shows that the introduction of environmental management schemes generally necessitates financial support by public authorities. While financial support alone usually is insufficient for the success of an environmental management scheme, it seems to be a "conditio sine qua non" for initial success.
As to the other specific external incentives, such a fiscal abatement, green public procurement, etc., there are not yet many practical experiences in relation to their effectiveness.

The in-field research provided more direct and "usable" empirical evidence:

- There is a difference between barriers that registered organisations have to tackle to obtain the first EMAS registration and barriers that they face in maintaining EMAS.
- The most significant difficulties met by EMAS participants in obtaining the first registration were: the cost of implementation (including the consultant) and the lack of human resources and competence. So the cost of implementation is still an issue in obtaining the first EMAS registration.
- The three highest barriers perceived by the participants in maintaining EMAS, relate to: a lack of recognition by public institutions, a lack of competitive rewards from the customers and a lack of external incentives. These barriers are on average assessed as "important" and can be identified as the main reasons why some organisations left the scheme.
- The same three barriers (but in a different order of importance: lack of market payback, external incentives and institutional recognition) are today preventing non-participants from applying for EMAS registration.
- 78% of all the interviewees identified the "cost of capital" (for the necessary investment) as the most important reason for not meeting the targets in terms of improvement of environmental performance
- Permanent institutional measures are the "most wanted": fiscal incentives (e.g.: income-tax abatement) is the most effective support measure, or external incentive, according to all the interviewees.
- 86% of both the EMAS participants and non-participants agree or strongly agree that the European Commission should oblige Member States to include EMAS in Green

Public Procurement). A slightly lower percentage has been seen for stakeholders (75%).

- 51% of the whole sample (including participants, non participants and stakeholders) believe that support funding, also through promotion projects, is still a fairly or very important incentive for EMAS diffusion

A1.b) Description and Ways of implementation

With one fundamental priority of the scheme being the increase in the number of participants , the set up and implementation financial, fiscal and market-related institutional measures should be recommended as an effective option.
To achieve this objective, it is important to raise the economic benefits connected with the scheme. Since the Competent Bodies and environmental Ministries and authorities, who currently back the scheme, do not usually offer significant financial support and are not able to establish long running support mechanisms, the economic benefits for participation in EMAS would ideally come from sources other than direct support funding.
We propose the three following measures, in order to stimulate and endorse this option, that can easily be combined with other options presented in this report.

A1.1. Cross-compliance in funding opportunities
The text of the new Regulation could set a specific requirement that makes it mandatory for Member States to consider EMAS as a favourable and preferential condition for access to public funds. In other words, the Member States will be obliged to introduce an assessment or selection criterion based on the applicants' participation in EMAS into their general funding mechanisms.
The Member States will obviously be free to choose into which kinds of funds they prefer to introduce EMAS, as an assessment or selection criterion. The rational behind this measure is the following: if an organisation seeks to obtain public funds for investment in technologies, innovation or process upgrading, EMAS registration will be an advantage for access.
In order to make this measure truly effective, a system of "cross-compliance" should be proposed to Member States. Under such a system organisations would only (fully) receive any kind of subsidy if they *commit* to EMAS registration – i.e. if they have already achieved registration and if they are able to maintain it over time. Only in this way will the incentive have a permanent (or long-term) perspective.
It should be noted that a system of cross-compliance would not impose additional financial burden.
This option is already being experimented with, on a voluntary basis, by some Member States for the attribution of the EU structural and regional funds and for the application of national laws sustaining technological innovation or investments in production processes. If this obligation is established, Member States will have a wide range of general economic support funds in which EMAS can be used as an assessment or selection criterion for the approval of the applicant projects.

A1.2. Fiscal incentives
The text of the new Regulation could include a prominent article setting an obligation for Member States to grant a tax breaks for EMAS registered organisations.
Each Member State will be free to identify the more appropriate fiscal measures and choose the preferred entity of the breaks.

Since many problems have been encountered in the attempt of promoting indirect fiscal measures for green products (e.g.: VAT), it should be made clear that the tax breaks for EMAS organisations must be applied at direct taxation, such as, inter alia: "income taxes" or similar taxation imposed on the business revenue (turnover, etc.) or environmental taxes.
These kinds of fiscal measures are proving to be effective in some of the first experimental applications of them (e.g.: income regional tax in Tuscany, Italy). It should also be noted that, as in the previous case, tax breaks can be more effective if they are enacted as a permanent measure and not on a "lump sum" basis.
Moreover, only if the tax breaks for EMAS organisations is backed by a provision in EMAS III coming from the European Commission, this would guarantee a "level playing field" for the national economic systems.
This measure could have a relevant (negative) impact on the tax revenues of Member States, depending on the effectiveness of this incentive in terms of EMAS registrations. It has to be emphasised, though, that in the few application experiences, tax breaks for EMAS organisations have been accompanied by a tax raise for the most polluting companies, in order to achieve a neutral effect and to guarantee the fiscal balance.

A1.3. Market oriented "demand-pull" incentives: Green Public Procurement
As emphasised by the EVER study, incentives that are able to increase the "market demand" for EMAS registration can be very effective. The most important measure that institutions can undertake in this direction is the so-called Green Public Procurement.
Currently, EMAS participants can rely on such benefits to a rather different extent in different Member States. A stronger stimulus for (and a harmonisation of) such incentives at the highest level is needed today in order to increase their "power" on the market, which is generally perceived as very weak.
The new EMAS regulation could therefore set a mandatory requirement for Member States to implement national provisions for fostering and supporting the use of EMAS in green purchasing procedures.
As for the other measures presented above, also in this case, EMAS III should establish compulsory requirements for Member States and not for applicants. The way, and the extent to which, Member States will comply with this obligation, will depend on their willingness to promote EMAS and on the possibility they have to introduce such measures in the national legislation. Introducing EMAS as an exclusion criterion from the public tenders cannot be asked, since it runs against the GATT and GATS rules.
The Commission could add further specification concerning, for example, a minimum level of application to the central administration of each MS, in public schools and hospitals or for the construction of public infrastructures, but this might be seen as an interference in the national environmental policy.
In order to make this option really viable and effective, guidelines on how to include and use EMAS in Green Public Procurement should be published as an accompanying measure. The publication of these guidelines, which has been already planned, should be updated after the official approval and promulgation of EMAS III, in order to provide consistent indications.

A1.c) Potential impact

The impact of this option (if and when it is fully implemented) would be high in respect to EMAS diffusion. The proposed measures are the most desirable according to the actors that are interested in the implementation of the scheme, as well as by the new potential applicants.
For the implementation of this option no major changes would be needed to EMAS itself..

The impact on the organisation's environmental performance will be moderate, insofar as no change is proposed on the requirements for applicants. There could be a considerable effect on the system environmental performance, in proportion to the induced increase in the number of EMAS registrations. The literature review shows EMAS seems to have a positive effect on the environmental performance.

Indirect effects will be very significant, as the proposed measures would provide institutions with a simple and effective tool for the identification of environmentally better companies in calls for tenders, projects selection for attributing public funds, fiscal levies, etc.

None of the abovementioned measures imply any particular organisational or economic effort by the Commission, with the exception of the eventual negotiation process to obtain the necessary political consensus by Member States.

A1.d) IMPACT PROFILE:

	A1 (overall)	**A1.1**	**A1.2**	**A1.3**
Increase in the number of registrations	***	**	***	***
Improvement of environmental performance	*	*	*	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	***	**	***	***
Organisational and co-ordination effort by the European Commission	*	*	*	**
Organisational and co-ordination effort by the Member States	***	***	***	***
Economic resources needed	*	*	*	*

*** = considerable
** = moderate
* = low

Option A2: Increased promotion and marketing of the scheme

A2.a) Rationale

Most of the evidence collected in the EVER study backs up this option, showing that many observers identify the lack of knowledge of EMAS (and, subsequently, the lack of reward for the market, the stakeholders and the public institutions) one of the main barriers for the growth of the scheme.

When introduced, in the 1990s, EMAS was strongly promoted in some Member States, but over time this has been reduced and now some Member States have hardly promote EMAS at all. This is why we see a very incoherent picture of EMAS uptake in the EU, with most registered companies being located in only a few Member States. In addition, a new market for enlarging the potential for new registrations is emerging in the new Member States, calling for a significant effort in terms of promotion and marketing.

The EMAS logo has never become a trade mark and known to the broad majority of customers and stakeholders. This is one of the main reasons why the participants (and the potential participants) do not see many competitive rewards, for instance, in comparison with ISO 14001. As one interviewee concluded: *"What needs to change most in the EMAS is not the requirements – it is the social and market recognition of EMAS"*.

At the same time, the EVER study in-field research shows that EMAS is not widely seen as a benchmark: only 62% of all respondent thinks that EMAS is regarded and used as a "best practice" system for environmental management among industrial sectors or other types of organisations. From many respondents this answer was often followed by a comment like "because EMAS is not known in the general marketplace".

Therefore a majority (84%) of the respondents also see information and promotion campaigns for EMAS – and its logo – made by public institutions as either somewhat (15%), fairly (29%) or very important (40%), to make EMAS better known (a "trade mark") and thereby indirectly give more benefits to the participants in the market place.

For those organisations that are registered in EMAS, the most important competitive advantage is an "improved image": 84% of the EMAS participants perceived this immaterial and non-quantifiable advantage as fairly or very important, and similarly 62% of the participants found that EMAS is an effective tool for competition.

As one respondent said: "*EMAS as brand shall be saved – it is much more value-based than ISO 14001. It must not be a technical instrument as ISO 14001- the intention is much higher"*

But among non-participants only 32% found that EMAS is a competitive tool. This seems to be one the most significant problems for EMAS uptake. Few organisations outside the scheme believe it can produce a competitive advantage on the market or that it is a trade mark worth achieving. Knowledge of what can actually be achieved should be increased.

A2.b) Description and ways of implementation

An effort should be made to increase *promotion and marketing* of the scheme by means of different kinds of initiatives, which could produce an increase in the awareness of many actors (including the public at large).

A2.1. Information campaigns

To increase the level of recognition and knowledge of EMAS, and ensure that the level is sustained, the Commission and the Member States should plan and carry out EMAS information campaigns on a regular basis. Furthermore, less planning resources will be needed if campaigns are carried out on a regular basis, because experience and lessons learned can be exploited and the campaign network can be maintained.

Campaigns may be executed in many different ways:

- Lessons learned from the Flower Week 2004 could be used in EMAS campaigns such as, for instance, the use of campaign partners (EMAS participants, EMAS customers and stakeholders) and "ambassadors".
- Campaigns promoted by the Commission and the Member States, based on local networks and business association can be effective.
- Campaigns linked to other events (for instance EMAS awards, festivals, local community fairs or trade fairs, etc.) can be usefully organised in order to explore the synergies and to be network with companies and customers.
- Campaigns should focus on specific interest groups such as: the financial sector, public procurers, SME's etc., in order to stimulate their specific interest towards EMAS and to foster their role of "multipliers"
- Conferences and workshops to foster active participation, and exchange of experiences and best practices.
- Advertising on TV, radio and press is a key factor in enabling the diffusion of EMAS in the market place and among the consumers

The idea of having information campaigns was supported by participants at the EVER EMAS workshop. As the term "EMAS" – and its logo – are still not well known on the market, or to the public at large, there was consensus that better marketing can effectively improve the competitive capabilities of EMAS.

On one hand, many stakeholders and practitioners taking part into the workshop emphasised how today the real challenge is to make EMAS known to citizens and consumers. If this happens, then organisations will be stimulated to participate.

On the other hand, in the workshop there was a general agreement that potential applicants are quite aware that EMAS exists, what they do not perceive are the additional benefits of EMAS (with reference, for instance, to legal compliance, the product dimension or other assets, rather than the management system). The promotion and marketing of EMAS towards organisations should be aimed at explaining these benefits.

This cannot be undertaken through the revision of the Regulation, but EMAS III can bring about some changes that might support this very important measure. The following three measures are more closely related to the revision process.

A2.2. Introduction of Mandatory EMAS promotion by Member States

Article 12 of the EMAS Regulation lays down requirements to ensure the promotion of EMAS – but the promotion is voluntary.

Making it mandatory for all Member States to promote and carry out marketing campaigns and other kinds of information activities for EMAS on a regular basis, would improve the competitive capability of EMAS, giving the potential participants a greater opportunity of obtaining very effective marketing support.
Making EMAS a well known brand cannot be done by every single participant individually. In their marketing strategies, participants need to be able to use a brand– and only co-ordinated marketing effort at the Member State and EU levels can create such a brand.
If in the future all Member States are mandated to participate in common and co-ordinated information campaigns, this would make a big difference to the prospects of EMAS.
It could be foreseen that every Member State would establish national marketing centres staffed with skilled marketing personnel to provide direct support to the Competent Bodies. The marketing centres could rely on communication tools like: call centres, promotion and information materials, showrooms and meeting facilities where they could organise meetings for participants, potential participants and other stakeholders. The centres could also host dialogue meetings for producers to meet potential customers.
It should be noted that the results of the EVER study indicate support for mandatory national promotion of EMAS with an average result score of 3,9 out of a maximum of 5 (for all interviewees). 70% of the respondents find it fairly or very important that the EU Commission should oblige Member States to promote and market EMAS.

A2.3. Increased European Commission promotion activities

Article 12 of the EMAS Regulation also lays down requirements for the European Commission to promote EMAS. If successful promotion activities are to be executed, the Commission has a key role as driver and co-funding institution and, therefore, more EU funds should be made available for continued marketing activities for several years ahead.
A solution based on "shared responsibility" between the Commission and the Member States could be effective. The Commission could allocate a permanent budget for marketing activities for EMAS and from this budget the Member States should be able to apply for a certain percentage (up to 50%) funding of their marketing activities. Criteria for application and accession to funds could be written in order to guarantee a "level playing field" (e.g.: non discriminating newly accessed Member States).
A permanent budget could include the establishment of a central unit (composed of personnel skilled on marketing issue) that develops common campaign strategies for national adaptation / implementation, that would ensure coordination between national marketing efforts.
Finally, there is currently no overview of promotion and marketing activities. As a result many good initiatives may have been undertaken around the EU, but the lesson learned are not available for others. The Commission could consider having a homepage where all experiences and "best practices" from EMAS promotion and marketing activities are available, at the EU, national, regional and local level.

A2.4. Broader use of the EMAS logo

In order to make EMAS an EU brand for organisations representing high environmental performance and leadership, the logo has to be well-known and strengthened through more "aggressive" marketing as described above. In this context, the current and very restrictive framework for the use of the EMAS logo should be reconsidered. Today the effect of this framework is to make the logo unattractive for many EMAS participants (and for potential applicants). We should remember that 45% of the respondents of the EVER interviews agreed or strongly agreed to the suggestion of simplifying the use of the logo.
The outcome of the EVER EMAS-workshop confirmed that stakeholders, business and practitioners are strongly in favour of a broader use of the logo. The rationale for this is that a

key-element for the competitive capabilities and the success of EMAS is the customer, and therefore the scheme must be better known and better marketed with the aim of achieving a higher awareness of the logo by customers.
Workshop participants were strongly in favour of making it possible to use the logo on products. One caution to accepting this would be that the use of the logo would have to be associated with a clear indication of what it represents, for instance "this product was manufactured by an organisation that is continually improving its environmental performance by means of an environmental management system, verified and registered according to Reg. EC …", in order to make the distinction between product and organisation-related information very clear. A risk of potential overlapping and confusion with the EU Eco-label will still remain.
Another possibility is that specific requirements such as life-cycle-approach along the supply chain, life-cycle-management approach or an Environmental Product Declaration, could be used to allow use of the logo on the product. Option A10, which is complementary and synergetic with this option, builds on these requests (emerging from both the EVER workshop and in-field research) and focuses on a further integration of the "product dimension" in EMAS.
Finally, the EU Commission guidance document on how to use the logo is seen as very complicated. A simplified way of using the logo would make more participants use it and would improve the knowledge of it in other organisations.
We propose that the Commission:

- includes the main (mandatory) requirements on how to use and promote the logo in a new prominent article of EMAS III, stressing only certain specific issues
- publishes a new, more flexible, "user-friendly" and marketing-oriented guideline on how to use the logo

A2.c) Potential impact

This option is highly recommended, as it can produce the following positive impacts:

- A strong impulse to the number of EMAS participants , which could even initiate a snowball effect, leading to many more.
- More knowledge about benefits of EMAS – and the logo – among potential participants
- More knowledge about benefits of EMAS – and the logo – among customers trading with EMAS participants
- More knowledge about benefits of EMAS – and the logo – among other stakeholders in general who may act as "ambassadors"
- Easier access to competitive benefits among existing participants
- A higher differentiation of EMAS from other types of EMS, especially ISO 14001

These positive consequences might not be realisable without introducing other changes to EMAS, in order to make the incentives and benefits more visible to participants, customers and other stakeholders (see the interrelation table).

This option can be fully and effectively implemented by means of a considerable resource deployment by the European Commission and the Member States. In fact, it requires a large and continuous budget to raise and maintain the customers and other stakeholder knowledge and interest in EMAS. The impact of this option will therefore vary according to resource availability.

A2.d) IMPACT PROFILE:

	A2 (overall)	**A2.1**	**A2.1**	**A2.3**	**A2.4**
Increase in the number of registrations	***	***	***	***	**
Improvement of environmental performance	*	*	*	*	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**	**	*	*	*
Organisational and co-ordination effort by the European Commission	**	***	**	**	*
Organisational and co-ordination effort by the Member States	***	**	***	*	*
Economic resources needed	***	***	***	***	*

*** = considerable
** = moderate
* = low

Option A3: integrating and embedding EMAS within other legislation (policy making and implementing)

A3.a) Rationale

As provided by Article 10(2) of the current Regulation, Member States should consider how EMAS registration can be taken into account in the implementation and enforcement of environmental legislation, in order to avoid unnecessary duplication of effort by both organisations and enforcement authorities.
The recent COM(2004) 745 from the Commission to the Council and the European Parliament, emphasises how EMAS can support Member States both in policy making and policy implementation, in order to "alleviate the burden of regulatory pressure and streamline their own resources".
The possibility of using EMAS within this framework lies in the "strict requirements regarding compliance with environmental legislation" and in the role of "the independent and external verifiers to ensure that the organisation can demonstrate legal compliance".
Based on this possibility, as reported in literature, some Member States and regional / local authorities are using what the abovementioned Communication defines as *regulatory flexibility.* This includes both *regulatory relief,* construed as substitution of legal requirements without changes in environmental legislation as such, and *deregulation,* which involves changes in the legislation itself.
The main ways in which EMAS is used today by member States for regulatory flexibility are as follows:

- as a factor in risk assessment, with effects on site inspection frequencies (UK, DE, NO, PT, NL), insurance (CZ), governmental fees (UK) and penalties (AT),
- as a substitute for certain legal requirements, such as periodical reporting, authorisation and permit procedures, etc. (DE, AT, IT, ES, SE, NL, UK, LU)
- as a condition enabling for a longer duration of environmental permits (LU, SL, DE, IT)

Whilst most of the experts and practitioners agree that regulatory flexibility can be an important incentive for EMAS registered organisations, it has not been possible to identify and collect evidence on its effects in practice, since most of the above mentioned measures are very recent and, in many cases, they are not fully available and effective yet.

Some evidence was collected on the essential premise to this approach: the interrelationship between EMAS and company's regulatory compliance.
This evidence is ambiguous: on one hand, according to literature, there is no doubt that EMAS registration increases the self-confidence of environmental managers and CEOs in relation to the management of legal compliance, and that it improves their capability to monitor and keep up with the relevant changes in legislation; on the other hand, there is mixed evidence in relation to whether or not EMAS guarantees a full compliance (with some studies suggesting a positive relationship and others rejecting it). It has to be noted that this evidence might suffer from a country-related bias.

The in-field research provides an interesting insight into the views of organisations' and stakeholders' on legal compliance and regulatory flexibility:

- According to the interviewees, EMAS greatly improves companies capacity to meet legal and regulatory requirements: as anticipated, the three most significant benefits

perceived by (close to 70% of) the participants are all connected to a better monitoring, management and guarantee of legal compliance.

- 71% of the whole sample (including participants, non participants and stakeholders) believe that regulatory relief and flexibility is a fairly or very important incentive for EMAS diffusion
- Very interestingly, when asked "why do you think some registered organisations dropped registration and abandoned the scheme?", the stakeholders indicated the following two most important reasons: "no reward by environmental authorities" and "no regulatory relief" (both averagely scoring 4.0 on a maximum of 5)
- As in the case of economic incentives, permanent institutional measures are the "most wanted" support, with a particular reference, in this case, to regulatory flexibility and to the use of the environmental statement in the relevant administrative procedures.
- Finally, EMAS is also perceived as a useful support for policy makers, regulators and other institutional and economic actors: 93% of the stakeholders holds that EMAS makes the implementation of environmental regulation more effective.

A3.b) Description and Ways of implementation

This option implies a bigger effort by the European Commission in embedding EMAS in current and future legislation, and in defining provisions that can stimulate and enable Member States to use the scheme in both the implementation / enforcement phase and as a support for environmental control activities.

A3.1. Policy making

Stronger references to the use of EMAS should be made possible in EU and MS legislation.
This cannot be achieved by a modification to the current Regulation, but should be realised by the introduction of references to EMAS in EU Directives.
As examples, the IPPC and Emission Trading directives have been mentioned by many stakeholders and interviewees as "soft attempts" and missed opportunities for stronger intervention.
Many interviewees asked for the inclusion of text in the IPPC Directive in favour of EMAS registered organisations, obliging the Member States to ensure longer permit duration, to accept validated information as compliant with the reporting requirements, to enact provisions relating to the inspections and the fee due for the issue of the permit.
For the future, there are significant expectations on how EMAS will be recognised in the official version of the REACH Directive as a guarantee on the procedures for the registration and assessment of chemicals.

A3.2. Policy implementing

EMAS III should include mandatory provisions for member States to adopt EMAS as a support tool in EU (and national) policy implementation.
In order to help such adoption, best practices collected in EC COM 2004 745 should be proposed to Member States as useful guidelines, providing detailed indications and "good practices" on how EMAS can be used for the following aims: substituting legal requirements, fast-track or self-certification for authorisation and permit procedures, longer duration for permits, reporting requirements.
An effective way of fostering and enabling this adoption is to use the environmental statement as an official and credible tool for fulfilling the requests foreseen in the procedures, to provide guarantees and to enable the exchange of information and validated data with the public

authorities in all the above mentioned procedures (not just periodical reporting but, for example, as a substitute of requested documentation).
In order to implement this measure, EMAS III should include the possibility for organisations to validate the statement as an official communication tool for pubic institutions and local authorities (see option 14) and should provide the necessary supporting measures ("bridging document" and guideline for Member States).

A3.3. Control activities
EMAS III should make clear that Registration must be considered as a favourable condition affecting inspection frequencies and scope and that the data provided by the EMAS management system should be considered as reliable for control activities (and periodical monitoring).
A debate is taking place in some Member States on the possibility of reducing the inspection activities on EMAS registered organisations, due to the fact that there is no definitive evidence that the scheme provides full and continuous compliance of the organisation with every applicable legal requirement.
In some Member States, control bodies are directly involved in a pre-assessment of legal compliance before awarding EMAS registration. This could become a mandatory practise in all Member Countries in order to guarantee that subsequently (once registration is achieved) all the abovementioned forms of regulatory flexibility and control relief can be applied.

In order to strengthen the capacity of EMAS to provide legal compliance for participating organisations, it could be useful to harmonise the way in which legal compliance is assessed and checked in Member States. As a fundamental support measures, therefore, the Commission should clarify how to interpret "legal compliance" within the application of EMAS, e.g.: what is requested to participating organisations, what are the minimum criteria required to guarantee legal compliance, what are the ways in which it should be checked, etc.

A3.c) Potential impact

Because integrating and embedding EMAS within the other legislation emerged from the EVER study as one of the "most wanted" forms of incentive, the impact in terms of retaining registered organisations and attracting new applicants is likely to be high.

On the other hand, the fact that EMAS is increasingly used in policy making and enforcement will raise the awareness of public institutions of the scheme and of EMAS registered organisations. The need for EMAS organisations to demonstrate a higher credibility and transparency to these institutions (and, particularly, a higher involvement and awareness of the scheme by control and inspection bodies) can have a positive effect in terms of environmental performance.

Positive indirect effects will be generated by the implementation of this option, especially in terms of resources and time saving by public bodies involved in policy making and enforcement activities. As COMM (2004) 745 emphasises, authorities often "use what may be scarce resources" and "are forced to optimise the use of their resources e.g. for monitoring sites". By trusting and relying on EMAS, these authorities could focus their energies better on other, more sensitive, issues.

Whilst a considerable effort would be required for the Commission and Member States in order to negotiate, co-ordinate and agree on common positions for the inclusion of EMAS in EU Directives, this option is not resource intensive.

A3.d) IMPACT PROFILE:

	A3 (overall)	**A3.1**	**A3.2**	**A3.3**
Increase in the number of registrations	**	**	**	***
Improvement of environmental performance	**	**	***	**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**	**	**	***
Organisational and co-ordination effort by the European Commission	***	***	***	***
Organisational and co-ordination effort by the Member States	**	**	***	**
Economic resources needed	*	*	*	*

*** = considerable
** = moderate
* = low

Option A4: upgrading EMAS to an internationally recognised and applicable scheme

A4.a) Rationale

In the EVER study literature review we found some sources reporting that many companies (especially multinational corporations and export-oriented companies) criticise EMAS for not being applicable, known or useful at the international level, in particular for extra-EU business relations. A high percentage of these companies are consequently opting for ISO 14001.

Few experimental applications of the scheme in companies located outside the EU have been carried out in recent years. A large company in the electronic sector, for example, experimentally applied EMAS to some of its extra-EU sites, asking an accredited European verifier to validate their environmental statements. A limited number of multinational corporations, that currently apply EMAS within the EU, are also using the scheme as a reference for their environmental management systems in third countries.

It is important to emphasise that, according to the literature, "mainstream" voluntary environmental instruments, such as EMAS, should not be considered as potential Non-tariff Trade Barriers (NTB) for third-country producers because, although they concern the Product and Productions Methods (PPMs), the fact that they are *voluntary* prevents them from violating the main GATT and WTO provisions against protectionism (see report 2).

More pragmatic information can be taken from the EVER in-field research:

- The lack of recognition of EMAS at the international level (outside the EU) is perceived as a significant barrier. This is especially true for the non participants: 65% of whom believe that this is a fairly or very important barrier (the third most important barrier on average, together with the lack of regulatory relief).
- Upgrading EMAS to an internationally recognised scheme would be a powerful incentive: all the categories of interviewees mentioned this possibility as averagely important; for the non-participants this would be a truly effective incentive (74% believe it would be fairly or very important).
- Rather interestingly, 30% of the non-participant organisations (mostly large companies) hold that the participation in the United Nation "Global ComPact" is an initiative that they now aim to address.

Finally, the stakeholders' views on the relationship between EMAS and competitiveness, expressed during the EVER EMAS-workshop, confirm that an upgrading to the "international dimension" would be a crucial step forward in the improvement of its competitive effects and, therefore, in the development of the scheme.

A4.b) Description and Ways of implementation

The scheme could be redefined to give it an international scope. There are two ways (measures) to achieve this: the first is to apply the current EMAS, still managed by the Commission (as it is currently conceived), on an international level; the second is to try to define a new "global scheme".

A4.1. International application of the current scheme

To pursue this objective, the following steps could be taken:

- The current limitation, constraining EMAS within to the EU, could be abolished.
- In this way, organisations operating in third countries would be allowed to apply for EMAS registration.
- Since there are neither accreditation systems nor competent bodies in third countries, alternatives would have to be found.
- There are two possible such alternatives: the European Commission could play the role (this means that verifiers operating outside the EU, be they EU-based or located in a third country, would have to be directly accredited by the Commission) or, like in ISO, third countries could use the accreditation systems and competent bodies of Member States.
- In the event that a third-country verifier would want to be accredited, this could be undertaken with the involvement of EU Member State experts to ensure it is done correctly.. Verifiers would then operate in the third countries for which they were accredited (as happens today with branches and sectors).
- Organisations interested in this accreditation would undergo an application procedure and, in the event of a positive verification, they would be registered in a separate section of the EMAS register.
- This could be a transitory solution, looking forward to negotiating mutual agreements with national governments or to promoting in other possible ways, the creation of competent bodies and accreditation systems within the third countries.

A4.2. A new "global scheme"

The second measure could be implemented by the Commission in cooperation with a credible international partner. Only in the case that EMAS would be transformed into a scheme based on a "code of principles" (see option A7), then cooperation could be considered , with, for example, the Global ComPact, issued and managed by the United Nations and promoted by Kofi Annan.

At present the Global ComPact is designed only for large multinational corporations andif they want to officially adhere to the pact they have to undertake an explicit commitment to comply with some basic principles of sustainable development, and they have to report to the UN yearly on the actions planned and implemented.

The Global ComPact does not currently foresee any form of third party certification, nor does it impose more specific requirements relating to performance or management procedures on corporations. The new international certification scheme could therefore develop from the merging of EMAS as a "code of principles" with the Global ComPact. To take this idea forward would require detailed negotiations with the UN.

The possible route to realising a new "global scheme", in this case, could be the following:

- The revision of EMAS would have to completely rethink the founding principles of the Regulation, starting from its aims and focusing on few and simple but "high profile" requirements.
- The United Nations could be directly involved in the revision of the scheme, so as to incorporate the founding principles of the Global ComPact and to foster the co-operation between the two schemes.
- The result of the revision would be that laid out by our "code of principles", option (A7).

- The text of the Global ComPact could be amended, in order to become fully compatible with the new EMAS.
- EMAS could then become the "operational network" by which also the UN could actually verify and "certify" the achievements deriving from adopting the Global ComPact.
- By means of a mutual agreement between the European Commission and the United Nations (for example, through the UNEP – United Nations Environmental Programme) a new global scheme could finally be created and, eventually, jointly managed.

It should be noted that, for the new "global scheme" to be fully consistent and compatible with the Global ComPact, the other dimensions of sustainability should be introduced within the "code of principles". This would imply even more considerable changes in the scheme.

A4.c) Potential impact

The impact of this option in terms of the potential increase in the number of EMAS registrations could be considerable. On one hand, the attractiveness of the new scheme for many multinational and export-oriented EU companies could be high. On the other hand, many companies based in third countries, exporting to the EU could be interested in obtaining a high-profile recognition of their environmental commitment.
Globalisation would also probably make the new scheme (in either of the two forms presented) attractive for innovative SMEs.

This option would also have an effect on the environmental performance, (raising the environmental standards of companies located or operating in third countries) both in terms of better management and in terms of easier co-operation for environmental improvement, within those supply chains that include companies located or operating in third countries.

If the Commission does not take the role of an accreditation system and competent body, then the organisational and co-ordination effort will be rather low. This option might imply a small increase in the economic resources needed to run the scheme (e.g.: for promoting the scheme in third countries)

In both cases, the biggest barrier for the implementation of the new scheme would be the achievement of the required political consensus from member States and from third countries. Even if, as literature predicts, EMAS would not be seen as a Non-tariff Trade Barrier, many complaints are now coming from companies operating in third countries, due to the difficulties they have in implementing environmental management systems. Member States might complain that companies facing lower requirements for legal compliance in their countries of origin are awarded with EMAS registration.
As a final comment, it should be noted that these complaints might prove unfounded, since ISO 14001 is well diffused in third countries (see, for example, the case of China).

A4.d) IMPACT PROFILE:

	A4 (overall)	**A4.1**	**A4.2**
Increase in the number of registrations	*	**	*
Improvement of environmental performance	*	*	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	*	*	*
Organisational and co-ordination effort by the European Commission	**	*	**
Organisational and co-ordination effort by the Member States	*	*	*
Economic resources needed	*	*	*

*** = considerable
** = moderate
* = low

Option A5: Better use of EMAS as a reporting and communication tool

A5.a) Rationale

A stronger focus on making EMAS a more effective and powerful *reporting and communication tool* has been envisaged at many occasions. Considerable evidence was gathered in the EVER study that strongly supports the need for innovation in the way the environmental statement is conceived, validated and diffused.
This was also a much debated issue under the Revision of EMAS I and, at that time, some changes were made, but it is still of interest to many and it clearly still needs further elaboration.

The literature on the EMAS statements reports that:

- The statement is not used for communication purposes very much, especially for competition-related target groups (customers, suppliers, public purchasers, financial and credit institutions). It is mainly distributed to employees and sometimes to local communities and it is almost exclusively requested by students and researchers.
- The statement is often drafted in a ineffective format for external communication purposes, and mostly for the verifier. (the average length of the statement is well over 30 pages, see report 2)
- The drafting and diffusion of the statement represent difficult steps in the EMAS implementation process for many companies.
- There is very little use of the "extracts" of validated information, for specific target groups.
- In some Member States there are experiences relating to an effective use of the EMAS statement for legal reporting requirements

The in-field research confirmed that:

- 53% of the participants decided to implement EMAS in order to improve their relations with stakeholders and the local community (this motivation was fairly or very important to them)
- Communicating EMAS, as a general concept, to stakeholders was not perceived as a barrier.
- The three most important benefits perceived by the EMAS-registered organisations interviewed were connected with the monitoring and management of legal compliance and the use of the Environmental Statement as an official communication document as a way to improve these benefits. (This response was given by 63% of the whole sample and by 77% of the participants)
- 76% of interviewees (from the whole sample) believe that environmental reporting is a somewhat, fairly or very important factor in stimulating and achieving environmental improvement (even if other factors, such as regulation, technical progress and the EMS itself are considered more effective)

At the EVER EMAS-workshop there was a strong agreement on the limitations of the statement as a communication tool in its current form. There was frustration about the fact that it is mostly students who request it, as well as a perception of it being too complicated and confusing for the general public. The full EMAS statement in its current format is not used in the marketplace. It was argued that in some cases companies are opting for a combination of ISO 14001 and a CSR report instead of EMAS.

Moreover, although there was agreement regarding the impossibility of fixing strict reporting standards, the participants were in favour of establishing some sort of guidelines for the elaboration of the statement, as well as of enforcing more consistency in the requirements.

A5.b) Description and Ways of implementation

This option aims at strengthening the role of the environmental statement as an effective tool for reporting and communication, in order to provide EMAS registered organisations with relevant marketing and "consensus-building" opportunities.
The option can be implemented by means of the three measures described below:

A5.1. Make the EMAS statement a more "flexible" communication and marketing tool
The EMAS regulation is already encouraging organisations to use all methods available to communicate with their stakeholders and giving them free and easy access to the information in the environmental statement. The possibilities already exist in the current EMAS regulation to produce validated information for a specific stakeholder.
Nevertheless, the requirements regarding information "extracted" from the statement stipulate that it should provide a complete picture of the environmental performance of the organisation and should be preventively validated by the verifier. This is hampering the wide use of this viable and effective tool.

Other requirements and validation procedures decrease the effectiveness of the Statement as a tool for communicating with specific stakeholders, who need concise and "to the point" information. It also appears that there is variation in the stringency and expectations of different national accreditation and verification bodies regarding the content of the statement, affecting the use of this document for marketing purposes.

The following modifications in EMAS requirements and in the validation / registration procedures represent just some examples of how to improve the "flexibility" of the environmental statement and make it a useful tool for marketing and "consensus-building" purposes:

- It should be possible (at least for SMEs) to validate and publish the statement once every three years (or accordingly to the validation period), removing the obligation of the yearly validation.
- There should not be an obligation to publish the statement in a paper format or in hard copies (the only mandatory requirement being that of making it available and diffusing it to the stakeholders, but by any media)
- EMAS registered organisations should be allowed to extract and independently use any specific information or data that is included in the validated statement for any marketing purposes and in any circumstances, regardless of the fact that it is presented within an exhaustive and complete overview of all the significant environmental aspects. Parts of the Statement should be even usable, for example, as a target-specific "environmental claim" (e.g.: CO2 emissions). The only constraint to the use of the information in the Statement should be the obligations to specify that "this information has been validated as a part of a wide-ranging verification process" and to ask the reader to consult the full text of the statement for a more complete overview of the organisation environmental performance (providing appropriate access, e.g.: the web site).

- Information extracted from the environmental statement should not have to be submitted for validation by the verifier or by the competent body prior to its diffusion (as is requested by some Member States). The verifier could however check the correct use of "extracts" according to usual procedures and timing, for example by assessing, during verification audits, a sample of the validated information that has been published.
- An organisation operating in multiple Member States should be allowed to publish only one statement (and should, as a consequence, be required to have only one registration for all its sites, even if they are located in different Member States)
- The publication of Key Performance Indicators in the statement could eventually be set as a requirement of the new Regulation, in order to enhance benchmarking between competitors (this measure is entirely synergetic with option A8: "EMAS as a standard of excellence"). In this way, the EMAS statement would become a powerful "green marketing" tool. The KPI can be selected on the basis of the most recent and widespread methodologies, according to the environmental policy priorities of the European Commission (e.g.: global warming, ozone depletion,…). This would also support EMAS organisations in identifying their priorities for improvement actions. Guidelines on how to elaborate and produce the KPI would be a necessary accompanying measure.
- The so-called 'guidelines' concerning the drafting of the environmental statement, annexed to the EC Recommendation 681/2001, should be evaluated and the most important aspects should be included in the text of the new Regulation, providing straightforward requirements both for organisations and verifiers. This will bring together the different approaches and will enable the Commission to define a clear position on the main issues at stake. (For example: an explicit requirement relating to the fact that the statement should be simple, concise and 'easy to read').
- Other suggestions and guidance on how to use the information from the environmental statement as a communication and marketing tool should be considered in an official EC Guideline or Manual. EMAS III could include a new requirement which points out that registered organisations should provide examples on how they have used the EMAS logo and the environmental statement in relation to their marketing activities and a requirement for the European Commission and Member States to make this information available to the public.
- Finally, the possibility of dealing with other issues (product life cycle, health and safety issues, other aspects of corporate social responsibility, financial risk related aspects, etc…) in the statement should be explicitly foreseen and not left to the discretion of each Competent Body. This measure is strictly connected with many of the other options presented in this report.

A5.2. Make the EMAS statement an official communication document for Environmental Authorities

We propose that the new EMAS Regulation set mandatory requirements for the Member States to define ad-hoc provisions in national legislation and regulation, in order to accept the environmental statement as an official document for legal reporting purposes and other official communication flows with competent authorities.

To support Member States, the Commission will have to elaborate and publish a type of "bridging document", comparing the requests of environmental data and information made by EU- and MS- based legislation. On the basis of the bridging document, an official guideline would be provided to EMAS registered organisations, including the minimum set of contents

(indicators, data, information,…) that the environmental statement must have, in order to respond to these requests. The Member States (together with the Competent Bodies) will further develop and enrich these guidelines, according to country specificities, to ensure that the EMAS statements can be used for this purpose.
In order to make the statement an effective official communication document in standards administrative procedure, the guidelines will have to provide indications on how to deal with documentation in relation to the compliance with legislation, such as emissions trading and climate change, waste, REACH, IPPC (BREF-notes and BAT), PRTR, etc., as well as environmental fees and taxes. The guidelines will have to specify what kind of key performance indicators the EMAS registered organisations are expected to publish.
The adoption of these guidelines will not be mandatory for an organisation to be registered in EMAS, but will be considered optionally, as a standard reference only by those organisations that want to use the statement as an official communication. The validation of the statement for this purpose should be explicitly requested by the applicant to the verifier.
If an organisation also wants to have the statement verified for legal communications and reporting aims, then the verifier will eventually provide an extra validation for the statement to be used for such purposes, according to the rules provided by the guidelines.

A5.3. Transforming EMAS into a scheme for the verification and validation of environmental reports as an "add-on" to any certified EMS

This option relies on the possibility of making EMAS a pure communication and reporting tool, in order to strengthen the abovementioned green marketing- and consensus building-related positive effects.
The main policy objective for EMAS will then become the diffusion of environmental information to citizens, local communities and stakeholders in general, and the promotion of the continuous improvement of environmental performance.
This means that EMAS will only include requirements for performance-based environmental reporting (what to report, how to report), eventually to be based on ISO 14063, and only the content of the report will be verified.
This option foresees the following verification system in the new scheme:

- the requirements concerning the report will be verified "in field", to check that they are true and correctly reported. This means, for example, that a verifier will not only assess if an indicator has been correctly elaborated, but he/she will also check if an initiative described in the report has really been undertaken, its results, the ownership of the initiative by the management, etc.
- other basic EMAS requirements can be usefully maintained: a policy, the definition of objectives and programmes for environmental improvement, etc. They could be easily requested as contents of the report (if they are reported, then they should be in place).
- the strengths of EMAS should also be maintained: legal compliance could be requested as a pre-requisite and continuous improvement should be a crucial requirement to be documented in the report. In this case, if the organisation does not satisfy one of these two basic requirements, it cannot achieve registration.

The most 'delicate' issue concerns the environmental management system. Since it would not be effective to drop this requirement (as shown by the evidence of the EVER study), the new EMAS regulation could foresee that the registration of the report is obtained only by those organisations that have some form of third-party certification of their environmental management. The third-party certification can be considered as an "entry level".

This would imply that EMAS III will set no requirement at all on the EMS anymore, but will recognise ISO 14001 and other forms of certifications as a satisfactory guarantee. This will produce different benefits:

- Not only would ISO 14001 be recognised as a possible way to "enter" the new EMAS, but also other forms of certification (eventually, for example, third-party certified "staged approaches", or simplified certifications tailored to SMEs' needs)
- In this way, smaller companies would be able to obtain registration more easily.
- There will be no communication bias in reporting, since organisations will have to explicitly declare which certification has been obtained for their environmental management
- The Commission will have to select and approve the different forms of certification that are recognised as the "entry level"
- There will be no need for verifying any requirement on environmental management, because there will be no possibility of developing an EMS regulated by EMAS
- EMAS will be explicitly perceived as a "surplus" with respect to ISO and to other certifications, mostly focusing on consistent reporting and on some specific 'strengths (legal compliance, continuous improvement,…)
- No change will be needed with respect to the current situation apart from the deletion of all the requirements on the management system, as more than 80% of the EMAS registered organisations are also certified according to ISO 14001

In the case this option is chosen, more guidance would be needed for developing the environmental reports to avoid different practices arising in different Member States and to make them more comparable – for instance by introducing the abovementioned Key Performance Indicators. Moreover, a new series of requirements on the content and on the format of the report(s) should be defined, and more in-depth with respect to the present Environmental Statement requirements.

A5.c) Potential impact

The improvement of the environmental statement as a "multi-tasking" communication tool, by increasing its "flexibility", is strongly recommended.
The potential for increasing the number of registrations is high, as organisations are really interested in obtaining positive feedbacks from the stakeholders and rewards from the market. Furthermore, if the statement will be used as a communication tool to environmental authorities in administrative procedures (reporting legal requirements, permitting procedures, etc.), so the impact is going to be even higher.
It has to be underlined that, depending on the degree of "flexibility", the proposed measures are complementary and synergetic: even if a thorough and detailed statement is used for communication with authorities, this will not be in contradiction with the "flexible" use for marketing of some of the validated information from the environmental statement , as described above.

This option does not imply a significant effort by the Commission or Member States in terms of economic resources. The recommended measures mostly rely on modifications to the requirements and to the verification / registration process.
The only effort required is the one related to the co-ordination between the Commission and Member States in developing the "bridging document" and the guidelines for the use of the statement in communication with public authorities.

Specific advantages of the EMAS statement as a reporting tool towards authorities are the following:

- Easier documentation of legal compliance, as a kind of regulatory relief.
- Less reporting to environmental authorities.
- Strong support to local authorities in administrative procedures, as an indirect effect .

An significant disadvantage of this option could be the difficulty in introducing performance-related requirements. Through the EVER study we have seen scepticism about the possible use of the EMAS statement as a tool for benchmarking. It is argued that setting some benchmarks for e.g. emissions is not compatible with the idea of the environmental management schemes that are conceived to address the environmental impacts of a particular organisation and their own performance improvement (not comparable with others). It is also argued that the circumstances of companies in, for example, different geographical areas, are too diverse for this kind of comparisons to be meaningful.

A specific comment should be made on the final hypothesis of transforming EMAS into a reporting tool. This option could have an important impact in terms of number of registrations, as it is based on some of the most urgent requests collected by the EVER study. On the other hand, we have to acknowledge that some opposition has been seen to the idea of excluding any requirement on the EMS from the new Regulation, due to credibility and consistency reasons, and to fully recognise ISO 14001 and other certifications as an equivalent guarantee.

A5.d) IMPACT PROFILE:

	A5 (overall)	**A5.1**	**A5.2**	**A5.3**
Increase in the number of registrations	**	*	**	**
Improvement of environmental performance	*	*	*	**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	*	*	*	**
Organisational and co-ordination effort by the European Commission	**	*	**	**
Organisational and co-ordination effort by the Member States	**	*	**	**
Economic resources needed	*	*	*	*

*** = considerable
** = moderate
* = low

Option A6: making EMAS mandatory

A6.a) Rationale

A review of previous studies and experiences provided the following evidence:

- There have been some attempts to implement EMAS as a compulsory requirement enacted by law (or through an ad hoc regulation) aimed at highly polluting companies / sectors or at companies located in high environmental risk territorial areas.
- There are some EU policy areas (i.e.: environmental or 'contiguous' areas, such as industrial risk and occupational health and safety) in which the Commission already introduced some mandatory requirements asking companies to implement (parts of) a management system. Examples are: the Seveso II Directive (encompassing a full management system of industrial risks) and the IPPC Directive (even if several Member States did not fully grant this Directive, excluding the management-related requirements).
- Within the framework of the "Thematic Strategy on the Urban Environment", a discussion has been raised on the possibility of making it mandatory for large urban areas to adopt an Environmental Management System (and, in particular, EMAS registration) in order to guarantee an appropriate and effective implementation of the foreseen EMP (Environmental Management Plan).

Within the EVER EMAS-workshop, the issue of a mandatory application to some specific sectors of activities has been dealt with in different parallel sessions.
The general outcome of these discussions was negative regarding the idea of making EMAS compulsory for any kind of organisations (including public authorities).
The main reason for the opposition this option is that it runs counter to the current voluntary character of the system. As one participant stated, "*a mandatory application of EMAS requirements should be grounded on totally different premises and principles, requesting a completely different verification and validation system (the current voluntary-based system could not be used)*".
In addition, from the perspective of maximising the environmental gains of EMAS, an compulsory approach should be designed to cover in particular those companies with a high environmental risk and/or high emissions/high resource consumption. While an obligation to introduce EMAS could be seen as a drastic step, many participants at the workshop argued that such companies should already apply environmental management systems. In fact, depending on the precise definition of the sectors / sizes for which the mandatory approach would be valid, one can assume that the majority of the companies which then would have to use EMAS are already registered under EMAS or certified according to ISO 14001.

A6.b) Description and Ways of implementation

Due to the opposition to a 'mandatory approach' for specific companies or sectors, this option is not recommended. We instead propose three alternative scenarios, that could be based on a compulsory application, but from a different perspective:

<u>A6.1. Transforming EMAS into a "command and control" policy instrument, aimed at highly polluting companies and sectors</u>
This drastic measure implies a revolutionary approach with respect to the original aims and guiding principles of the scheme. EMAS would not be applicable as a voluntary instrument

anymore, but it would only be used as a mandatory requirement for obtaining guarantees in terms of environmental management. In this case, EMAS could be transformed into a standard "management system" requirement, applicable to different policy areas: environment, industrial risk, health and safety etc. When, in the future, new EU legislation is conceived for particularly risky or polluting companies, the "management system" would be included as a baseline requirement. The new EMAS regulation would not be applicable "per se", but only within mandatory legislation.
This measure implies a radical change in the verification and validation process: if EMAS were to be a "command and control" instrument, then the scheme must be totally managed by public competent bodies and the verifiers must be identified among public control bodies (as for the Seveso II directive).

A6.2. Introducing a mandatory requirement for municipalities in urban areas to adopt an Environmental Management Plan, promoting the use of EMAS as a useful tool
In defining the applicative framework for the Thematic Strategy, an obligation could be imposed on large municipalities and on municipalities operating in large urban areas (e.g.: more than 100,000 inhabitants) to adopt and implement an Environmental Management Plan. Actually, the Communication COM (2004) 60 already stresses the importance of local authorities using an appropriate environmental management system to help them ensure the implementation of their urban environmental plan and to monitor its progress. If the adoption of the plan is made compulsory, then the local authorities will have to choose the most effective tool for guaranteeing that the EMP is fully implemented. EMAS would be proposed as a voluntary tool, but useful to satisfy a mandatory obligation.
One could expect that local institutions, as is already beginning to be the case, would prefer EMAS over ISO 14001 or other privately managed schemes.
In this case, the measure proposed would not be applicable by means of the EMAS revision, but would require a further intervention of the European Commission in future years, in the applicative framework of the Thematic Strategy.

A6.3. EMAS could become a mandatory requirement for companies wishing to manage big events
This measure would mean an obligation for companies, committees and other bodies, that want to be candidates for the organisation and management of big events (fairs, expositions, sport events, music events, etc.) tendered by public authorities, to obtain EMAS registration. If these bodies obtain EMAS registration before the candidacy, they will be able to plan, organise, prepare and carry out the big event within their environmental management system, taking into account the need for legal compliance and continuous improvement.
This measure has a weak point: once the responsibility of the event has been assigned (and the event organised and planned), it would be very difficult to revoke the contract in a case where the EMAS registration is dropped or lost, due to non-compliance.
The measure proposed could be applied by including in the new Regulation an obligation to consider EMAS as a mandatory pre-condition for the management of big events.

A6.4. EMAS could become mandatory for all those in receipt of EU grants
Each year hundreds and thousands of organisations benefit from EU grants. Application for grants or final payment of grants could be cross-linked to EMAS participation. Thus, participants at EU-Life, but also beneficiaries of the EU regional and structural funds and beneficiaries of the various subsidies of the Common Agriculture Policy could be requested to participate in EMAS.
The rule would relate to the final beneficiary of the grant not only to intermediary agencies.

The measure would have to be implemented through the various regulations stipulating the conditions for EU-grants.
Given the risk that the those in receipt of grants might participate in EMAS without any long –term commitment it would be wise to combine such a step with stronger requirements on the provision of evidence that the environmental management system leads to environmental performance improvements.

A6.c) Potential impact

The potential for increasing the diffusion of the scheme is only moderate in this case. The first measure is not consistent with the current use of EMAS as a voluntary tool, so its impact would not relevant for this discussion. For the other two measures, the impact would mostly be in terms of indirect effects, i.e.: by way of 'pressure' that EMAS applied in public institutions and big events can exert on related organisations (local industry, tourism accommodations, etc.).

A slightly higher impact could be obtained in terms of performance, as EMAS has proved to be an effective tool for environmental improvement in different kinds of organisations (including public institutions).

None of the proposed measures imply a significant investment in terms of organisational and economic resources.

A6.d) IMPACT PROFILE

	A6 (overall)	**A6.1**	**A6.2**	**A6.3**	**A6.4**
Increase in the number of registrations	**	**	**	*	**
Improvement of environmental performance	*	**	**	*	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	*	*	**	**	*
Organisational and co-ordination effort by the European Commission	*	**	*	*	**
Organisational and co-ordination effort by the Member States	**	**	**	**	**
Economic resources needed	*	*	*	*	*

*** = considerable
** = moderate
* = low

Option A7: EMAS as a 'code of principles'

A7.a) Rationale

While the number of EMAS registered organisations is increasing rather slowly, the uptake of ISO 14001 has been rapid. Numbers ISO 14001 certified organisations in Europe are increasing steadily and soon might be ten times a high as the numbers of EMAS participants.
Furthermore, so called alternative and staged approaches (Ecoprofit, Eco-Lighthouse, BS 8555, e+5 etc.) have had quite some success. Total numbers of participants in alternative and staged approaches already are higher than the number of EMAS participants, even though such approaches are on the market only in a minority of EU countries.
The success of the alternative and staged approaches relies on a number of factors, i.e. lower requirements, regional or sector-specific approaches, service packages, convoy-approaches etc.
At the same time, all alternative and staged approaches are clearly based on EMAS and although they have reduced some requirements and in some cases taken up additional elements, the basic structure is based upon the European management system. EMAS itself, however, has not been able to benefit from the success of these schemes as they are seen rather as competitors than as supporters of EMAS. Broadly speaking, the same holds true for the relationship between EMAS and ISO 14001.
To profit from the success of the other schemes and systems, to avoid further competition and to support environmental management in European companies by all means possible, EMAS could be enlarged to encompass various other types of environmental management systems and schemes: ISO 14001, various alternative approaches and some "home-made" environmental management systems in individual companies.
The move would constitute a return to the early days of EMAS. Before framing EMAS as a precisely described environmental management system, only certain principles on environmental management were under discussion (e.g. Tutzinger declaration).

A7.b) Description and Ways of implementation

This option relies on the possibility of changing the 'philosophy' of the scheme, in order to increase its flexibility, lower the degree of formality and standardisation of the requirements and to focus only on environmental commitments by the organisations (and on their capability to achieve consistent results). In other words, a "revised" EMAS registration would be awarded to those organisations that undertake a credible commitment towards the improvement of the environment and that demonstrate they are really able to contribute.
It would be possible to rethink the scheme basing it on a different approach to environmental improvement: applicants could be requested to adopt and to comply with a code of principles, rather than to specific operational and/or management requirements. A slightly different approach from this would be the possibility of an open scoring system.

A7.1 Fixed Set of Principles
In order to be registered, organisations might adopt an officially recognised environmental management scheme or use their own home-made system. If they use their own system they will have to:

- Officially subscribe the code of principles. (top management could also be asked to adopt the principles by means of official acts within the organisation: policy, mission, statements, etc.)
- Demonstrate that they pursue those principles in their strategic behaviour and in their day-to-day operations.
- Concretely implement actions, and adopt tools and initiatives, in order to prove that they are able to effectively pursue the subscribed principles.
- At the same time, they will be free to do this by choosing any environmental management tool, that seems appropriate.

Parallel to this EMAS could become an umbrella scheme recognising various types of environmental management scheme. Each of the alternative systems would be checked and approved to see if it complies with the set of pre-established principles. Each company that participates in ISO 14001 or at any of the alternative schemes (Ecoprofit, Eco-Lighthouse, BS 8555 phase 3 etc.) would become automatically an EMAS participant.

In practical terms, the scheme could be implemented with the following steps:

- The Commission would agree with Member States and establish general principles to which applicants must commit to and then pursue in carrying out all their activities (e.g.: "save energy", "reduce GWP", etc.). The principles should not contain quantitative standards or performance limits.
- Each of the alternative EMS schemes would be checked by the Commission and only approved if they comply with the set of principles pre-established.
- Each company that participated in any of the schemes (ISO 14001, Ökoprofit, ECO-Lighthouse, BS 8555 phase 3 etc.) would immediately become an EMAS participant or under certain additional conditions.
- Organisations applying the principles in a 'home made EMS' or using an approach which cannot be registered (e.g. Ecomapping) could also certify their approach against the set of principles and become EMAS participant. They would be free to choose the aims and the ways to achieve them. But, they would have to demonstrate the effort they were making at regular intervals. (by way of an environmental statement, for example)

For all participants reporting rules might be imposed to document to the Commission the achievements on each principle (e.g.: pre-set questionnaires, quantitative indicators, etc.). Also, some of the EMAS strongholds, such as legal compliance and continuous improvement, could be maintained to guarantee "baseline" requirements. In order to demonstrate that they concretely contributed to the improvement of environmental conditions, organisations might be requested to prove that they invested economic resources in this area (e.g.: by using environmental accounting indicators).
From an institutional perspective some requirements would be necessary at least for all applicants that follow a non certified approach:

- A national independent body, created on a national basis, would take the responsibility for the final assessment if an organisation deserved to be registered or not
- The independent body would guarantee that stakeholders have an effective role and would have the power to decide if an organisation was actually behaving consistently with the principles and achieving required results
- NGOs, consumer associations, academics and other social stakeholders could be involved in the national independent body, in order to guarantee a fair and balanced system.

- Verifiers could still be involved in the scheme: once an organisation was registered, they would check if the improvement efforts were really being implemented and if the organisation did anything in contradiction with the principles of the scheme.

A7.2 An open scoring system

A scoring system can be applied on the basis of the information on what the organisations achieved during each year:

- Within such a system, applicants would receive credits for different actions which they undertook. If their total score were high enough, they could become EMAS participants.
- The same approach would be applied on a regular basis to assess the participants and renew (maintain) their EMAS registration.
- The required scores could be different for different groups of participants (e.g. larger companies would need more credits).
- Finally it should be noted that EMAS, if conceived as a "code of principles", could easily be enlarged into a CSR scheme by adding credits on social actions, in which case the participant will receive a different EMAS recognition (e.g. EMAS – CSR logo).
- Also different levels of EMAS participation would be possible (according to the credits received).

A7.c) Potential impact

The option proposed is basically aimed at increasing the number of organisations within the framework of a new EMAS scheme. Thanks to the introduced flexibility and to the possibility of including other EMS-based schemes as potential 'actions' to be undertaken, this option could reach its main goal. As a matter of fact, establishing strong (but general) principles and allowing for a more flexible and agile implementation of the actions for their achievement, could have a great potential in the promotion of EMAS.
In particular, this option has considerable potential for involving SMEs, due to its 'lower' requirements in terms of organisational structure, procedures, documentation and other management tools and solutions.

In the short term, effects on the improvement of environmental performance would be low. However in the long run, it might well be that a big increase in the number of registered companies would result in positive effects on environmental performance at the aggregated level, i.e.: of the economic system as a whole.

A moderate organisational and co-ordination effort by the Commission and by Member States would be necessary, especially as concerns the defining of the principles, the negotiation with other environmental management schemes and the defining and implementation of a scoring system on the different possible actions for environmental improvement.

If the new scheme were to be conceived as a 'code of principles', some positive consequences can be foreseen:

- It would be easier to explain and communicate it to the general public
- The scheme would be more consistent and it could be explicitly linked with the environmental policy priorities of the European Union

- It would be able to attract organisations that are interested in specific environmental aspects (and not in a comprehensive approach to environmental management)
- It would rely on the "pull-effect" of more well-known and diffused environmental management schemes

All the abovementioned advantages would probably allow for 'self-promotion' and, therefore, would imply resource savings in the promotion and marketing of the scheme.

A7.d) IMPACT PROFILE:

	A7 (overall)	**A7.1**	**A7.2**
Increase in the number of registrations	***	***	***
Improvement of environmental performance	*	*	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**	**	**
Organisational and co-ordination effort by the European Commission	***	***	***
Organisational and co-ordination effort by the Member States	*	*	*
Economic resources needed	*	*	*

*** = considerable
** = moderate
* = low

Option A8: making EMAS a truly and widely recognised '*standard of excellence*'

A8.a) Rationale

Even if EMAS has not been set up with the intention of creating a system for just a small minority of 'top runners', the literature often considers the scheme as a standard of excellence, which can and should be achieved only by a few organisations. Often EMAS is referred to as the "Rolls Royce" of Environmental Management Systems.
It is difficult to determine if the facts are confirming this:

- First of all, the actual effects of EMAS registration on company's environmental impacts are difficult to quantify. While some studies point towards a positive, in some cases important effect, others do not find a strong correlation between EMAS registration and high environmental performance.
- Nevertheless, the only statistically significant evidence concerning the "absolute level" of environmental performance shows that organisations that are simultaneously registered in EMAS and certified according to ISO 14001 perform better than those that are only ISO 14001 certified.
- On the other hand, a number of companies dropped EMAS in the past and continued with ISO 14001 and (given the current numbers of the two schemes) many potential participants of EMAS clearly decided to go for ISO 14001 instead. A clear differentiation between EMAS and ISO 14001 seems one way to solve these problems.
- An effective way of making the real environmental "top runners" win in the competition arena, is to favour and promote benchmarking.
- More generally, literature emphasises that in order to stimulate the improvement of environmental performance by industry, the role of government should focus on the setting of priorities for action. For most sectors, such priorities would have to be established at EU level to ensure a level playing field.

The interviews carried out within the EVER study provide additional information:

- EMAS participants perceive their performance as better than the others': 67% of respondents assesses their environmental performance as (somewhat or much) better than the performance of competitors or similar organisations, operating in the same sector.
- Nevertheless, EMAS is not widely seen as a benchmark: 62% of the whole sample regarded and use EMAS as "best practice" for environmental management among industrial sectors or other types of organisations, but if we consider only the non-participants the perception of EMAS as a benchmark drops drastically to 36%.
- Most interviewees believe that this perception can be enhanced by making EMAS a real "standard of excellence", e.g.: by "*strengthening the requirements regarding the use of performance indicators*", by making it "*a more performance-driven scheme*" or by enabling "*benchmarking on performance between participant and non-participant organisations*".

A8.b) Description and Ways of implementation

This option aims at defining a clear positioning and generating a true and consolidated perception of EMAS as the highest possible level of environmental management systems.

With that positioning EMAS can also effectively serve as a benchmark for all other environmental management systems and approaches.
We therefore propose some measures to reinforce the positioning of EMAS as a standard of excellence. This choice implies that all the features of the system that guarantee a high level of environmental performance are strengthened as much as possible and that participation in EMAS is performance-driven, e.g.: it guarantees a high level of energy and resource efficiency and a low level of emissions in participating organisations.

In order to achieve these objectives, the new EMAS regulation could rely on the following measures:

- The use of Key Performance Indicators (KPIs) could be set as a requirement of the new Regulation, in order to stimulate a higher attention to performance and to enhance benchmarking between competitors.
- Companies operating in different branches and sectors would be asked to measure their performance on the basis of specific KPIs, that would be set according to the environmental policy priorities of the European Commission (e.g.: global warming, ozone depletion, energy saving, etc.). Working groups could be created within the Commission to identify the relevant KPIs for the different sectors and sub-sectors. The KPIs could be based on the most recent and widespread methodologies (ISO 14031, 14032, EC Rec. 532/2002, etc.) but should be sector-specific.
- Moreover, organisations might be asked to publish the KPIs in the environmental statement (see also the "reporting and communication" option). This would imply that participants be forced to publish information and data in a comparable way and that differences in their performance would be immediately apparent to the reader of the EMAS statement. This will stimulate competition on "environmental performance".
- A further aspect of this approach, aimed at making the scheme even more performance-driven, could be that of asking EMAS registered organisations to either improve a minimum number of indicators (in order to show that they are able to effectively pursue continuous improvement) or even to pursue indicator-led objectives, set by the European Commission. In the latter case, for each KPI that identified as relevant for a branch or a sector, the Commission would define an objective for improvement (e.g.: in terms of % reduction of a pollutant emission, or energy saving / water recovery performances, etc.). EMAS would then be awarded to those organisations that are able to achieve these objectives. In this way, the requirement of 'continuous improvement' would be reinforced and applied to the KPIs, focusing more on environmental performance.
- The achievement of an objective could be measured by the improvement in the KPIs. For example, the new EMAS could simply ask participating companies to improve their performance on at least 5 out of the 10 KPIs selected for a particular sector. Obviously, in this case performance improvements would be weighted according to the 'distance' from the best-performing value of the KPI or from the corresponding objective.
- Since the KPIs (and eventually the associated objectives) would be the basis for benchmarking and for stimulating performance improvement, they could be set, if it is the case, according to the BREFs (Bat Reference Documents) or to the EU Ecolabel criteria, when these are available, as these references already result from a prioritisation and negotiation process involving industry and stakeholders.
- By identifying KPIs (and eventually objectives) on some prioritised environmental impacts, the Commission would also support EMAS organisations in identifying their

most significant environmental aspects and, even more importantly, choosing their priorities for improvement actions.

- To make a new EMAS even more oriented towards 'top runners', additional measures could be undertaken to favour those registered organisations that are performing better during a given period of time. For example, the Commission could organise an annual contest among EMAS participants and award those organisations that are performing better than their competitors or those that are contributing to a greater extent to the improvement of a certain environmental impact (e.g.: CO2 emissions) chosen as the "priority of the year". Awards could also be provided as economic incentives (e.g.: subsidies for the sustained environmental costs or for further investments).
- Another way to strongly promote benchmarking and stimulate environmental competitiveness and improvement would be to explicitly benchmark the EMAS participants performance on the basis of the KPIs. A list of frontrunners and laggards could be made available for the stakeholders, as the Dutch Ministry of Economic Affairs did with the 'Transparency Benchmark' in 2004. This approach is already adopted for the rating of sustainability performance, e.g. by the DJSI (Dow Jones Sustainability Index).
- Sector specific guidelines on how to elaborate and produce the KPIs would be a necessary accompanying measure for this proposed option.
- A further measure to ensure EMAS being a standard of excellence could be that EMAS participants be required to comply with all international environmental agreements. Also, EMAS participants could be requested to apply the environmental standards foreseen in their country of origin in all countries in which they operate.

A8.c) Potential impact

Making EMAS a true, widely recognised '*standard of excellence*' could attract more organisations and boost the uptake of the scheme. It should be noted that, by making the requirements more restrictive, this option would only produce an impulse for the number of registrations in the long run, while in the short run there could even be a slight decrease, owing to the new performance-based requirements.
This option would positively influence the EMAS capacity to contribute to environmental performance improvement by different sectors. Moreover, there would be positive indirect effects on the economic system, connected with the availability of clear references and benchmarks on environmental performance and "usable" indicators (e.g.: for non participants SMEs, for green public purchasers, for local institutions and trade associations, etc.).

However, the benefits of the perception of EMAS as a 'standard of excellence' could mostly be seen in a clear market positioning of the scheme. While at present EMAS is neither particularly easily distinguishable from ISO 14001, nor is it clearly positioned as a system for all or only for a few, the proposed system in the future would send a clear message. By holding the position at the top, it would also be easier to argue for incentives and favourable conditions which would be exclusively obtainable by EMAS participants. (e.g.: regulatory relief and flexibility, access to GPP procedures, etc.; see also the other options presented in this report).

Disadvantages of such an explicit and strong move towards such 'excellence' would be that the number of participants could actually decrease in the short term and, with that, there could be a lower justification for the administrative expenses for running the system . Also, such a

move would be successful only if companies really obtain sizeable additional benefits from reaching out towards higher levels of performance. Otherwise EMAS might become a theoretical model without further practical application. In a situation where external benefits and rewards of the scheme already are regarded as insufficient for attracting companies, the chances for realising the necessary substantial increase in benefits seems questionable.

Last but not least, the effort by the Commission in defining, proposing and discussing the KPIs (and eventually the objectives) with the relevant stakeholders, as well as in organising and managing the different possible solutions to award the "best performing" organisations, would be very significant.

A8.d) IMPACT PROFILE:

	A8
Increase in the number of registrations	*
Improvement of environmental performance	***
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	*
Organisational and co-ordination effort by the European Commission	***
Organisational and co-ordination effort by the Member States	*
Economic resources needed	*

*** = considerable
** = moderate
* = low

Option A9: targeting SMEs

A9.a) Rationale

A general problem of environmental management systems seems to be that of attracting SMEs. Though precise figures are lacking, the common understanding is that far less SMEs join ISO 14001 than one would expect according to their share of the number of companies worldwide. A special working group has been set within ISO specifically with the aim of finding solutions to this problem.

The situation concerning SME participation in ISO is not very different for EMAS. About two thirds of EMAS participants are SMEs, while their share of all companies is at around 99%. Also there is no reason to believe that the production processes of SMEs are much more efficient or cause less environmental damage than the production processes of large companies. As a consequence, there is still a large and widely untapped market for EMAS and there is a need to promote environmental management in this market segment.

As the review carried out within the EVER study emphasises, a prominent tool for attracting more SMEs could be a 'staged approach'. In theory, staged approaches offer several advantages for the implementation of EMAS: a low entrance-level, a clear guidance on how to achieve validation, flexibility concerning the speed in implementing the necessary steps to establish the EMS, and - ideally - a competitive climate between the participants towards the achievement of the validation. Apart from a staged approach, other tools seem appropriate to attract SMEs.

In fact, the general literature supports the idea of attracting SMEs and has come up with several ideas on the various ways this could be achieved:

- Research in EMAS implementation, and in alternative environmental management approaches, indicates that success with SMEs relies on a number of factors: regional and/or branch networks (see also the cluster approach, option A11), less administrative efforts for participants, low costs for certification/registration, package solutions (including group projects), and continued financial support.
- In a recent study for DG Enterprise a staged approach is advocated as an interesting instrument to increase the number of companies, in particular of SMEs, with an environmental management system. A recent German study (www.ems-for-sme.org) supports the idea that a staged approach can increase the number of EMS-participants, however the report is cautious as to what extent this is possible.
- In a survey by ISO TC207 61% of consultants to SME companies supported developing a step-by-step approach to certification.

In-field research has shown that:

- The majority of the interviewees support the idea of a staged approach. 56% of the participants said that a staged-approach would be somewhat to very important, and over 60% of the stakeholders agreed with this opinion. SMEs in particular supported the idea (almost 60 %).
- SMEs felt in particular that administrative relief is fairly important or even very important (62% of all SMEs)
- SMEs also supported strongly the idea of tax abatement for EMAS participants (68% agreed that would be fairly or very important)

- SMEs underlined that information and promotion campaigns would be helpful to remove barriers to EMAS implementation (almost 80%)
- SMEs also indicated in particular that decreasing the cost of registration and verification would be important (47% of the SMEs indicated that would be fairly or even very important)
- Also, they indicated that simplified access to EMAS registration for micro enterprises and SME would be important (47%) and that support funding (including pilot projects) would be greatly beneficial to the scheme (52%).

At the EVER-EMAS workshop a special parallel session was dedicated to the question of how to attract SMEs:

- The participants clearly stressed the importance of a staged approach as an instrument to attract more SMEs. In particular, it was emphasised that a staged approach allows better control over costs and benefits.
- Participants also agreed that cluster registration would be beneficial to raise the number of EMAS registered organisations.

A9.b) Description and Ways of implementation

As indicated by various empirical sources, any attempt to attract SMEs on a large scale has to involve a bundle of instruments. Many of these instruments are already mentioned as part of other options pointed out in this report:

- Cluster-approaches can give SMEs a particularly good opportunity to learn from each other in the implementation process of EMAS. Moreover they offer the chance to strengthen local networks. They also decrease the total cost of implementing EMAS for each participant (see option A11).
- Regulatory relief like fast track procedures, or easier procedures to maintain permits, are very important to SMEs, since they generally they lack time and resources. Therefore any reduction in administrative work is very welcome. (see option A1).
- Promotion of EMAS can encourage SMEs to use EMAS as a marketing tool. SMEs, like all companies, are interested in improving their reputation through EMAS participation. Such gains rely on public awareness of the scheme (see option A2)

In addition to these, two additional measures could be focused particularly on SMEs:

- Relying on the forthcoming guidance standard for a staged implementation of ISO 14001, that would include EMAS
- Providing more effective support to SMEs by means of methodological and operational guidelines based on an ‘easy’ approach

A9.1. Introduce a top level (EMAS) within the guidance standard

At the ISO level it already has been decided that a guidance standard for a staged implementation of ISO 14001 will be developed. The standard will include EMAS. The stages of this guidance standard shall not be certifiable. Obviously, it would not be helpful for EMAS to develop, parallel to that, a different staged approach.
However, EMAS could benefit from this move by ISO and additionally or alternatively go even further.

The idea of the guidance standard is based on BS 8555. BS 8555 already foresees registration under EMAS as an ultimate step. The guidance standard might also include, as a last step to the top, to register under EMAS. It even might include other steps beyond that, which could be potential add-ons to EMAS.

EMAS could include a special registration for SMEs that are able to achieve e.g. step 3 of the new guidance standard. This registration would be open only to SMEs and offer them a lower level of EMAS registration, with simpler requirements. Also by such a move, EMAS could enlist existing alternative environmental management approaches. Many of them to a large extent already fulfil the requirements of BS 8555 phase 3. For SMEs seeking wider recognition it would be easy to carry out the missing steps. It might even be that the alternative environmental management approaches would start to offer such a module to their participants.
Public support for EMAS would need to be adapted and would need to take into account the lower level of EMAS for SMEs. E.g. financial support could be offered in two steps, a smaller amount for "EMAS SME" and a larger for the full EMAS.
In order to attract companies in the long run to the full version of EMAS, it would be possible to introduce a time limitation for SMEs to stay at phase 3 and to remain certified as EMAS SME.

A drawback of this option is that there would be a second EMAS (EMAS SME) which might create some confusion to the market.
If this option were to be implemented then the Commission would need to take care that the new guidance standard contains a level which is appropriate for being an EMAS SME. The level should require SMEs to do as much as necessary but allow them to skip as much of the administrative work as possible.

A9.2. Stronger guidelines for SMEs
Alternatively, a simpler route for EMAS could be made available to SMEs by way of methodological and operational guidelines for the implementation process, addressed to companies, to verifiers and to consultants or promoters (it could be strictly connected with the "cluster approach").

The guidelines would need to be very clear on the steps that must be taken and the ways in which the implementation of EMAS requirements could be "made simple" for SMEs (e.g.: "EMAS EASY" project). It would need to have a very operational and pragmatic approach and include "good practices" and useful tools (tested "in-field" and approved by the Commission) that would be enable SMEs to easily develop their environmental management system.

The guidelines could be officially published as Recommendations (starting from those already existing), but it would need to be made extremely clear that verifiers must accept the approach as an integral part of the scheme.

A9.c) Potential impact

Implementing the option could have an immediate effect on the EMAS participation. So far only in a minority of EU Member States, and within these states only in certain sectors or regions, do companies have the option of choosing an alternative approach instead of EMAS.

With this move EMAS would create a scheme which is applicable in all Member States. At the same time the scheme could rely on the existing infrastructure of EMAS and partly on the benefits created for EMAS companies. If applied properly the scheme could be co-branded at the regional level and thus make use of regional networks as much as possible.
The move would be particularly successful, if the EMAS SME were to be accompanied by the other measures indicated before.

Advantages of the scheme are:
- SMEs could become well represented in EMAS. With that a target group which oftentimes has no environmental management at all can be reached.
- Potential SME participants could no longer criticise EMAS registration with the argument it would be too demanding.
- The Commission would dispose of a new tool to stimulate environmental management.
- If enough SMEs signed up to EMAS, it could lead to a 'me-too' effect by which every new company attracts even more new participants.

Disadvantages of the proposal are:
- Setting up a new lower-tier system might create confusion in the market.
- Some SMEs which might have decided to register under EMAS itself will stay with EMAS SME if allowed to do so.
- A new system of public benefits has to be set up which relates to EMAS SME and which differentiates between provided benefits for the participants there, without compromising the level for benefits offered to EMAS participants.
- Setting up EMAS SME might have a negative impact on the market of the existing alternative environmental management approaches.
- In shaping the requirements for EMAS SME the Commission depends on ISO.
- Reduction in the EMAS requirements for SMEs might be contested by the larger competitors.
- Some political frictions with ISO and some Member States might arise from the fact that the planned guidance standard for staged implementation of EMS does explicitly exclude any certification.

A9.d) IMPACT PROFILE:

The impact profile spells out the consequences of the introduction of EMAS SME. Introducing the other elements of a full SME target approach will have different consequences depending on the exact tool which is used.

	A9 (overall)	**A9.1**	**A9.2**
Increase in the number of registrations	**	**	*
Improvement of environmental performance	*	*	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	*	*	*
Organisational and co-ordination effort by the European Commission	***	***	***
Organisational and co-ordination effort by the Member States	***	***	**
Economic resources needed	***	***	**

*** = considerable
** = moderate
* = low

Option A10: EMAS with a stronger product dimension

A10.a) Rationale

Since 2001 the product dimension has been explicitly included in EMAS II, among the so-called 'indirect environmental aspects', and the verification system has provided for product dimension coverage among those aspects. But experience analysed in the EVER study shows that this dimension has never been treated by participants, verifiers and competent bodies as a significant issue or as a potential value adding element of the scheme.

In the overall EU environmental policy, the environmental performance of products is becoming more and more evident, spurred by the Integrated Product Policy, and more directly, in EU Directives on packaging, electronics, waste (WEEE) and latest in the Directive on establishing a framework for the setting of eco-design requirements for energy-using products – the EuP directive of July 2005.

The reinforcement of a '*product dimension*' in EMAS is seen as desirable and is supported by much of the evidence collected in the EVER study. The actors involved in the scheme particularly emphasised the possible synergy with a product "ecological profile" and/or a product declaration system, with possible links to the Eco-label scheme.

The literature review we can see the following:

- Several studies and projects recommend the full integration of the 'product dimension' into Environmental Management Systems (including EMAS) by means of different types of assessment and management tool (LCA, LCC, LCM, POEMS…) or other forms of labelling (especially type III: environmental profiles or EPDs); a particularly interesting piece of information from a previous study is that 75% of companies that published a certified EPD are also implementing an ISO-certified or EMAS-registered management system. It has to be noted that only 6% is implementing EMAS.
- A restricted number of very operational pilot-projects show that this integration can be useful and effective, although today, in most of the cases, the 'product dimension' is not very well developed within Environmental Management Systems (not even in those implemented after 2001 within EMAS II, in such a way that takes into account the product-related "indirect aspects").

Additional evidence has been provided by the EVER in-field research:

- To some extent, the product dimension is already part of EMAS: 72% of the EMAS participants declare that the environmental management systems influences the product performance in other phases of the life-cycle and/or in the supply chain. Only 6% state that this influence is 'great' (for the others it is 'considerable'). At the same time, the environmental improvement produced by EMAS on product-related indirect aspects (such as the transport phase) is still low compared with the one on direct aspects. The overall impression derived from the interviews is that the potential for integrating the 'product dimension' in EMAS is interesting for companies, but far from being fully realised.
- ISO type III labels can be a synergetic tool for EMAS: the majority of respondents consider the EPD (or other environmental profile) systems as complementary to

EMAS. It should be noted that a high number of participants on both sides were not able to answer, due to a lack of knowledge on type III labelling.

- There is a certain awareness of the potential benefits emerging from a stronger link and synergy between EMAS and the EU Ecolabel: 46% of the respondents on both sides (i.e.: companies participating in one of the two schemes) sees potential synergies between EMAS and the EU Ecolabel. The synergies that could be realised within the framework of the revision of the schemes are found at the operational, marketing and institutional level, at the same (high) level of interest.

At the EVER EMAS workshop in Brussels, there was an agreement among participants that two options are emerging for EMAS participants for further improving of their environmental performance of their product and giving evidence to the market place:

- Put pressure on suppliers
- Choose suppliers fulfilling the requirements

Supply chain cooperation is already part of the implementation of EMAS by many organisations, but the requirements and recommendations in EMAS could be much more clearly stated. Participants also agreed that not only the 'before' is important, but so is the 'after': Product Chain Management should hence be implemented and strengthened.
Participants in the workshop agreed strongly on the potentially synergetic use of EMAS together with product oriented instruments, such as the EPDs and the EU Ecolabel (also in a "modular" way).

A10.b) Description and Ways of implementation

This option is about the inclusion of optional requirements for EMAS participants that are interested in improving the environmental performance of their products within EMAS implementation. The measures proposed are conceived as an 'add-on' to the regulation and they rely on the already existing requirements of other policies, directives and international standards.

A stronger focus on the product dimension as a mandatory requirement in EMAS is not recommended as an appropriate route because, firstly, it is not relevant for some parts of the user community (for instance services and public organisations) and, secondly, it might put some companies off EMAS because of the additional operational and documentation burden.

A10.1. Connection and synergy with ISO type III labels and with the EuP directive

This first measure is grounded on the idea that, by providing quantified environmental information from the whole product chain, an Ecological profile or an EPD can support EMAS with further environmental information for marketing in B2B relations, more evidence on product environmental ambitions and performance, and even further relevant environmental information in relation to public green procurement.
Moreover, an Ecological profile or an EPD could be the tool by which an EMAS registered organisation can put pressure on its suppliers (and better manage its supply chain from the environmental performance point of view), give evidence to suppliers and customers about the fulfilment of product-related requirements and even provide evidence of product performance in the EMAS environmental statement.

If the Ecological profile or EPD is taken into account within EMAS, these potential 'competitive uses' may attract new companies to EMAS and, at the same time, provide a higher institutional guarantee to the existing product-related environmental management and communication tools.

The rational of this option is to provide additional institutional recognition to those companies that are willing to provide thorough and transparent information on their products, by adopting already established methodologies and standards.
This option is well-grounded in initiatives that the Commission is already undertaking and developing (e.g.: Directive 2005/32/EC, on "EuPs"), as well as on some increasingly diffused initiatives based on ISO 14025.
In particular, many actions will be taken to implement the EuP Directive, but there are two main important elements which a product-oriented EMAS can rely on:

- Ecodesign requirements shall be set up by the Commission, meaning any requirement in relation to an energy-using product or design of such product, intended to improve its environmental performance or any requirement for the supply of information with regard to the environmental aspects of the EuP (including Ecological profiles). These requirements can be based on "harmonised standards", already developed by third parties and approved by the Commission.
- Companies covered by this directive shall eventually prepare so-called Ecological profiles, once again according to "harmonised standards".

This definition of the Ecodesign requirements and Ecological profile in the EuP Directive is very similar to the definition of Product Category Rules for Environmental Product Declaration (EPD) in the ISO standard 14025 and national EPD schemes (for instance in Sweden, Denmark and Italy).
Given the fact that energy-using products cover many products in the market place, these requirements will also affect many potential EMAS participants.

This option foresees that:

- Organisations that prepare a so-called "Ecological profile" (defined as a description of the input and outputs – such as materials, emissions and waste – associated with the product throughout its life cycle) will be entitled to use the EMAS logo on the products and to diffuse the Ecological profile validated within EMAS III (eventually, as a section of the environmental statement).
- This measure will be included in EMAS III, not as a requirement (mandatory to be registered), but rather as an 'add-on' only for organisations that are interested.
- Introducing and applying 'ex-novo' requirements for Eco-profiles in the new Regulation will be too complex, and will overlap with existing standards/systems (a new "EMAS-ISO14001 effect" must be avoided).
- Instead, these standards/systems should be backed and endorsed by the Commission.
- The product profiles, therefore, would have to be prepared according to those international or national standards/systems that will be recognised and approved by the Commission as possible references to develop an Eco-profile.
- The Commission will establish a working group with the aim of assessing and approving the standards and systems that can be used as references by EMAS registered organisations to prepare an Ecological profile or EPD.
- Among these standards/systems, for example, there will be the 'harmonised standards' foreseen by the EuP Directive, once the reference to such a standard has been

published in the Official Journal of the European Communities, or other standards/systems referring to EPDs (Environmental Product Declarations)

- Only the organisations that are be able to demonstrate, by way of appropriate documentation, that the profile prepared for the relevant products complies with one of the recognised standards, will be allowed to use the EMAS logo and to diffuse a validated ecological profile.
- This approach will be particularly effective if and when ISO 14025-based Environmental Product Declaration systems are officially recognised in 'harmonised standards' within the EuP Directive (in this case, they could be taken as a reference also for non EuPs) or by way of mutual agreement with the bodies in charge of managing these systems.

Harmonisation between the different standards/systems (e.g.: different PCRs on similar product groups) will be a major issue in the implementation of this option. If an international EPD system is developed and put in place, this could also effectively be recognised by the Commission as the main reference in this field.

A10.2. Links to Eco-label

Introducing 'add-on' requirement related to Eco-profiles will also automatically better link EMAS to the EU Ecolabel, since participants will obviously get data from the whole life-cycle of the product chain and thereby they will have easier access to the documentation required by the EU Ecolabel.
This is just a single measure aimed at creating a better relationship between EMAS and the EU Ecolabel (strictly connected with the 'product dimension' option). More measures are presented and dealt with in Part C of the present report, that is specifically focused on the potential integration between EMAS and the EU Ecolabel.

A10.c) Potential impact

Advantages of the "EMAS with a stronger product dimension" are connected to the fact that this option:

- Emphasises the differentiation from ISO 14001
- Offers new possibilities for frontrunners to show their environmental product performance, and valorise it on the market
- Makes EMAS a better marketing tool, because products are more often in focus than management systems, at least in marketing strategies
- Allows for a more efficient use of the EMAS logo
- Promotes a coherent approach with and better links to some other EU regulations and directives

Disadvantages of EMAS with a stronger product dimension are the following:

- An Ecological profile or an EPD is still a new tool to industry and purchasers.
- Best practice is not known yet.
- Commitment among industry to prepare an Ecological profile or an EPD are not known.

- Specific eco-design requirements for the Ecological profile or product category rules for the EPDs are not developed yet. Such requirements on many product groups are essential.
- A Product oriented EMAS will require a strong marketing effort and clear market advantages for the participants
- The management of the different EPD standards / systems are placed at different organisations / units / bodies. There are no formal established mechanisms for harmonisation or coordination at management level neither at national nor at EU-level.
- A broadly accepted data foundation and collection strategy would be needed and require a co-ordinated management of all the EPD systems and of the provisions to be established (e.g.: for the implementation of the EuP Directive).

A10.d) IMPACT PROFILE:

	A10.1	**A10.2**
Increase in the number of registrations	*	**See part C**
Improvement of environmental performance	**	**See part C**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**	**See part C**
Organisational and co-ordination effort by the European Commission	*	**See part C**
Organisational and co-ordination effort by the Member States	*	**See part C**
Economic resources needed	*	**See part C**

*** = considerable
** = moderate
* = low

Option A11: enabling and promoting a "cluster approach"

A11.a) Rationale

Networking between organisations emerges from our literature review as one of the most important factors fostering the diffusion of EMAS. Working with groups of companies, for example, emerges as a useful and efficient way of adopting EMAS in SMEs. This happens to be particularly effective between organisations operating in the same sector (such as the industrial sector, but even service sectors like tourism or public institutions operating at different levels) and between organisations operating in the same region (or territorial area), or both.
In the first case, enterprises collaborate by identifying and assessing similar environmental aspects and by finding technological and operational solutions that can be applied to similar production processes and products, as well as by defining organisational structures suitable for the "local production cycle". In the second case, co-operation is facilitated by the 'physical contiguousness' and there are synergies both in improving the environmental impact on the same local eco-system, and in interacting and communicating with the same stakeholders (local population, authorities, etc..).
For some, a network has been created among SMEs within an 'industrial cluster', in order to favour information and experience diffusion and to define and apply common solutions to similar environmental, technical and/or organisational problems, or to share environmental management resources (training, audit teams, etc.). Another kind of co-operation between organisations takes place within the supply-chain. When a large customer, for example, is willing to support small suppliers in EMAS implementation, then all the smaller organisations involved in the supply chain can benefit greatly from networking.
This approach proved to be effective in some Member States: Germany (the so-called "Konvoi" approach), Italy (for the so-called APO "Ambiti Produttivi Omogenei"), Spain (co-operation in the supply chain and for tourism activities), Nordic Countries (especially in Denmark, Sweden,…).

The in-field research confirmed the existence of some of these effects and a support (stronger from SMEs) for the idea of promoting the cluster approach:

- EMAS is positively affecting environmental management within the supply chains: 77% of the EMAS participants support their suppliers in the adoption of measures and initiatives for environmental improvement and 72% declare that the environmental management system influences their products performance in other phases of its life-cycle and/or in the supply chain.
- 54% of all interviewees (including participants, non participants and stakeholders) believe that simplified access to registration for micro enterprises and SMEs would be a fairly or very important support measure and incentive for EMAS development. Another 17% believe that that this would be "somewhat important". This percentage is higher if we consider the sub-sample of the small companies (less than 50 employees).
- It should be noted that the interviewees where also asked to assess the possibility of registering an 'industrial cluster' as a potentially effective support measure and incentive for the diffusion of EMAS: 31% believe that this approach would be fairly or very important, an additional 23% think it would be "somewhat important". The consensus on this hypothesis is much higher if we consider the sub-sample of SMEs.

As anticipated, participants to the EVER EMAS workshop agreed that cluster registration would be beneficial to increase the number of registered organisations.

Finally, one of the case studies of the EVER study was carried out on an SME that developed the process for EMAS implementation within a cluster. This company mostly relied on the resources that were made available and shared by the other organisations involved. The case study shows how this approach enormously reduced costs and time, favouring the adoption of EMAS.

A11.b) Description and Ways of implementation

All these approaches are grounded on a similar base and do work in the same way:

- Within a given cluster of organisations (supply chain, industrial district, hotels and restaurants in a tourist area, schools and kindergartens in a region, etc.) one actor (or a small group) takes the lead for promoting an EMAS-oriented networking initiative (a large customer, the trade association, the local authority, etc.)
- The promoter of the initiative plays the role of the 'locomotive of a train', trying to 'pull' as many organisations of the cluster as possible, in order to create and provide to every 'wagon' with as much support and shared resources as possible
- In some cases, the promoter is an EMAS-registered organisation, but in many other cases, this role is also played by non registered companies and public institutions
- The networking within the cluster takes place by sharing common technical, operational or management resources that support a single organisation in complying with individual EMAS requirements
- The largest part of these experiences were not able to be registered as a unique 'composite organisation' (according to Decision 681/2001/CE – Annex I pt. 6), mainly due to free-riding problems

Many private and public actors, already playing the role of promoters and catalysts, are today asking for an explicit and official recognition of a cluster approach in the new EMAS Regulation. These actors are also requesting a chance to simplify the EMAS process for small and very small organisations in connection to a cluster-based application of the scheme, especially when they operate in the above mentioned homogeneous clusters: an industrial district, a supply chain, a tourist area, etc.
The revision of EMAS could further develop the rules already provided in Regulation 761/2001/CE (Art. 11) and in Decision 681/2001/CE, Recommendation 680/2001/CE and Recommendation 532/2003/CE and introduce a specific article in the new Regulation for a "cluster" application of EMAS.

The steps to implement this option could be the following:

- A set of requirements could be introduced for an organisation that wants to be a promoter and catalyst (i.e.: a "locomotive") for a cluster approach. This organisation could be private, public or a consortium, and could be created on an ad-hoc basis for carrying out this initiative.
- The cluster would have to be well identified, clarifying what the other typologies of organisations that can benefit from using this support are. The cluster would have to have very strict geographical limits (an industrial area) or could be 'unbounded' (such as a network of providers located all over the EU and operating through e-commerce).

- These ‘cluster requirements’ would be based on previous EMAS Recommendations and Decisions, and would be included in the new text of the Regulation. Some examples of these requirements are: the promoter must carry out an initial environmental review relating to the cluster, it must approve and diffuse an environmental policy for the whole cluster, it must define common targets and a programme to pursue continuous improvement, it must report on the environmental performance of the whole cluster.
- The promoter would be requested to register in EMAS as an individual organisation and, in addition to that, to submit to an accredited verifier all the “cluster requirements” carried out to support and help the other organisations of its cluster.
- Verifiers would have to obtain a special accreditation to check and validate the ‘cluster requirements’. Member States should provide for this accreditation framework, on the basis of guidelines provided by the Commission.
- Once they are verified and validated, these requirements (cluster initial review, policy, programme, etc.) would then be available for the other organisations and could be used with no need for further submission them to another accredited verifier. These requirements would substitute the individual EMAS requirements for the single organisations.
- Provided that the other organisations of the cluster were able to develop the small number of missing parts of EMAS on an individual basis, they could register in the scheme in a simplified way.
- If the promoter were able to guarantee the implementation and availability of the minimal set of ‘cluster requirements’ to the other organisations, and it is able to stimulate and support an increase of individual registrations in the cluster, year by year, then it will be awarded a special recognition by the European Commission. This special recognition would be needed, in order to stimulate the initiative by a large number of potential promoters.
- This recognition could be, for example: the official mention of the validated ‘cluster requirements’ in the promoter’s EMAS certificate, its inclusion in a special section of the register dedicated to ‘EMAS promoters’, the diffusion of the cluster experience by the Commission as a best practice (as it is partially happening already), an annual award for the “best promoter of the year” for those who will produce the highest number of individual registrations, etc.

A11.c) Potential impact

Depending on the attractiveness of the ‘recognition’ given to promoters, this option might have a very considerable impact on EMAS diffusion. In fact, it is likely to strongly motivate proactive players to take the initiative and support a large part of the organisations in a cluster, that either suffer from a lack of resources or are not stimulated enough to undertake the EMAS adoption process.
It is self-evident that this option might have a very strong impact on the improvement of the environmental performance (by transferring to small and reactive organisations knowledge, resources and tools to improve environmental management). For the same reasons, also indirect effects could be important.

The only organisational effort requested to the Commission would be that of managing a separate and new section of the register and to organise the marketing activities for the

"EMAS promoters". The only economic resources will be needed to sustain these marketing activities.

A11.d) IMPACT PROFILE:

	A11
Increase in the number of registrations	**
Improvement of environmental performance	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**
Organisational and co-ordination effort by the European Commission	**
Organisational and co-ordination effort by the Member States	*
Economic resources needed	*

*** = considerable
** = moderate
* = low

Option A12: integration of CSR- and sustainability- related issues

A12.a) Rationale

The literature review investigated on the relationship between environmental management and several strategies and tools that are included in the wider concept of corporate social responsibility (and sustainability, at large). Based on some of the most important experiences, the following evidence was collected:

- The high level of complementarity and mutual reinforcement between environmental management and health and safety management was emphasised. Notwithstanding this positive outcome, there seems to be low official consensus on the hypothesis of an integrated certifiable standard in this field, especially among industry representative associations.
- Specific research show that many ISO certified and EMAS registered companies are drafting and publishing a 'sustainability report' (according to the GRI standards). This proves that there is a growing interest by EMAS organisations in communication on other sustainability issues and on their performance in corporate social responsibility as a whole.
- Less information in the literature and fewer examples can be found on the connection and synergy between EMAS and other CSR-oriented tools.

In order to gain further insight into the relationship between EMAS and sustainability, a significant part of the in-field research was devoted to this issue, providing the following results:

- Sustainability-targeted initiatives are rather diffuse among organisations: 65% of the respondents (summing up all groups) in the past carried out initiatives for employee involvement in social issues, 47% performed stakeholder engagement on social issues, 67% developed (or are developing) an occupational health and safety management system (OHSAS 18001 or others) and 43% drafted (or is drafting) a sustainability report. No significant difference in these percentages between EMAS participants e non participants was reported.
- Promoting and favouring integration between EMAS and health and safety is an interesting option: 62% of all the interviewees is in favour of integrating health and safety into EMAS (68% among EMAS participants).
- An upgrading of EMAS to a wider scheme on CSR and/or sustainable development is controversial: 50% support on this option, 50% do not. Largely preferred is the possibility of including CSR-related issues in EMAS, as an add-on of the current scheme (with a "modular" approach).

A specific parallel session within the EVER EMAS-workshop was aimed at discussing the relationship between EMAS, CSR and the other pillars of sustainability. The outcome of this discussion confirms the findings of the in-field research.
On one hand, there is a growing interest in CSR and a full awareness that EMAS must be a part of this wider concept (in relation to this, one of the people interviewed during the in-field research said, "*how can an EMAS registered company be socially irresponsible as concerns child labour or workers' health and safety? It would totally compromise its credibility and image, we should not allow this*").
On the other hand, the actors involved and interested in EMAS are not ready for (and in favour of) a full integration within a CSR-oriented scheme, for to several reasons:

- The uncertainty regarding a precise identification of CSR-related issues and the possibility of measuring and assessing them (as it is done with the environmental issues)
- The fact that these issues are usually dealt with in the general business strategy and not by way of operational tools (such as a management system).
- The limited diffusion of experiences in managing CSR-related issues.

'Reporting' is the area in which integration with other CSR-related issues has been considered viable and, to some extent, already diffused.
Some interest has also been shown by the workshop participants towards an integration with occupation health an safety management, which was considered feasible.
Despite the abovementioned difficulties, and since participants believed that a CSR framework for voluntary instruments is desirable in the long run, a gradual approach to integration was suggested.

A12.b) Description and Ways of implementation

This option proposes a first attempt of introducing CSR-related issues in the new EMAS regulation, by means of an optional series of requirements ("add-on" to the existing scheme). This is done by way of a sort of "modular" scheme, that makes it possible (but not mandatory to obtain the registration) for the participants to develop additional initiatives concerning CSR, and validate them through the environmental statement.

The premise of this approach is the need for EMAS of fully and exhaustively deal with the concept of 'environment' as defined by ISO, i.e.: including 'human beings' as a target of the impacts generated by any activity. This implies, for example, that the integrity and well being of the employees and of the local communities could be considered as part of the environment, i.e.: potentially affected by the productive and economic activities of an industrial company.
If this approach is accepted, then there could be a natural extension of the EMAS scope, with the explicit aim of promoting many of the issues related to CSR and sustainability.

The option could then be implemented by way of the following operational steps:

- The aspects that could be dealt with in the new scheme would be defined in the revised regulation (e.g., by stating that it is possible, on a voluntary base, for the registered organisations to undertake initiatives relating to: occupational health and safety, child labour, non-discrimination, diversity management, socio-economic aspects, etc.).
- The new EMAS would specify that these initiatives, undertaken within the context of the environmental management system, should be reported in a special section of the environmental statement.
- The text of the new regulation could mention the GRI guideline (Global Reporting Initiative) as the main reference to define an effective reporting on CSR and sustainability issues.
- The information reported in this section would be checked and validated by the accredited verifier, according to the ordinary procedures (the verifier would assess if the content of the section was reported in the correct way – e.g.: according to GRI – and if it was consistent with the behaviour, the strategies and the results achieved by the organisation in that area).

- At this first and experimental stage, no additional requirement would be included in the new regulation with respect to the 'new' issues (e.g.: requirements for an integrated management system), leaving the organisations free of undertaking different kinds of initiatives. The aim would be to evaluate the outcome of this innovation with EMAS III, in order to eventually introduce new requirements with EMAS IV.
- This approach would be applied, in particular, with respect to occupational health and safety (OHS): if a large number of EMAS organisations chooses to implement and report OHS management initiatives (and even OHS management systems), then the Commission could decide to include it in the future revision as an integrant part of EMAS IV.
- The proposed approach implies that if, for example, the organisation declares that it operates with an health and safety management system, integrated with the EMS, the verifier should be able to check and validate this.
- The requirements for the accreditation system would take this possibility into account, and provide an indication on how to enable verifier to play this role. This implies that a special accreditation would have to be foreseen for verifiers that could validate the environmental statements including an additional section on CSR or sustainability.
- For credibility and coherence reasons, the only two pre-requisites that would need to be added are the legal compliance in those areas (and for those aspects, like diversity management) on which the organisations decides to report, and the inclusion of the same aspects as an extension of the 'environmental policy'.
- In the event of a positive outcome of the validation process, no special sustainability- or CSR- registration would be foreseen; the only benefit for the registered organisation would be that of using a validated 'sustainability report' (in this case, the organisation could be allowed to change the title of the environmental statement).
- Therefore, EMAS registration procedure (including the certificate) would not need to be changed, insofar as it would keep on referring to an EcoManagement and Audit Scheme. The Commission could create a special section of the EMAS register for those organisations that could choose this approach.

A12.c) Potential impact

This proposed option is highly recommended, because it enables the experimentation of the potential success of CSR- and sustainability- related issues, with no specific constraint for non-interested organisations. In this case, it would be important not to create additional requirements and make it more difficult for small and medium organisations to apply for the new scheme.
On the basis of the study's findings, we estimate that the potential impact in terms of increased number of participating organisations could be reasonable, but would be concentrated mostly on large companies. In any case, this experimental approach would enable the Commission to assess the potential success and, if positive, to further modify EMAS in future revisions, heading towards a full CSR- or Sustainability- oriented scheme.
We can also envisage considerable indirect effects of this option, in terms of diffusing the knowledge and the awareness (and, eventually, best practices) on these issues to the whole business sector, and especially to SMEs, that are not yet approaching CSR or sustainability in an organic way.

Additional organisational resources would have to be deployed in the implementation of the scheme, due to the enlargement of its scope. Firstly, a significant internal organisational effort would be needed from the European Commission in order to co-ordinate the functions that deal with different aspects of CSR and sustainability. An additional coordination effort would be needed by the Commission and to the Member States in order to set up and manage an appropriate accreditation system.
The economic resources required to directly support the option would, however, be low.

A12.d) IMPACT PROFILE:

	A12
Increase in the number of registrations	*
Improvement of environmental performance	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**
Organisational and co-ordination effort by the European Commission	***
Organisational and co-ordination effort by the Member States	*
Economic resources needed	*

*** = considerable
** = moderate
* = low

Option A13: involving the banking and insurance sector in EMAS

A13.a) Rationale

The literature review identified many recent initiatives in the financial and accounting areas that are leading to an increasing need to obtain environmental guarantees and information from companies and other organisations:

- The Basel II Agreement obliges banks to assess and cover all types of credit risk. (many banks are trying to comply with this agreement by also taking into account the 'environmental' credit risk);
- The new International Accounting Standards (IAS) requires the evaluation and accounting of immaterial assets (even if not explicitly the environmental ones);
- Recommendation 2001/453/EC strongly encourages companies to report on environmental expenses and investments (including this information within the economic balance sheet or within a separate report) and the subsequent Directive 2003/51/EC on the rules for annual and consolidate accounts required the inclusion of "non-financial key performance indicators relevant to the particular business, including information relating to environmental and employee matters";
- The new directive on Environmental Liability (2004/35/EC), requires companies to get insurance or alternatively to demonstrate that they are correctly managing their relevant risks (the problem being how to prove this);
- There are an increasing number of sustainability stock market indexes and rating systems that are assessing companies on the basis of their environmental performance.

We should emphasise, however, that the EVER findings also show that these initiatives do not include explicit references to the use of EMAS as a guarantee or to the use of environmental statement as a tool for data provision. (with the exception of few banks and sustainability indexes that are taking EMAS into account for their assessment procedures.)

The EVER in-field research confirmed that:

- One of the most important motivations for participants to obtain EMAS registration has been to better manage risk and prevent environmental liability (scoring 3,7 on a max of 5).
- A vast majority (81%) of EMAS participants believe that the Commission and the Member States should involve financial institutions in the implementation of EMAS, so to make registration a favourable condition for credit, insurance, etc. (this option averagely scored 4,1 on 5). This result is one of the most 'wanted' and agreed-upon options of all the in-field research.
- Similar results were obtained for stakeholders (4,0) and non participants (3,7).

These issues were also discussed during the EVER EMAS-workshop (within the parallel session on the integration of EMAS with other legislation) and the prevailing opinion was that something should be done to increase the very important incentives that potentially could be provided by the credit and insurance sector.

A representative of a registered bank strongly emphasised that "*the Commission must provide banking / financial institutions and insurances with clear indications concerning the need and opportunity to use EMAS in risk assessment and on the way this can be done*".

A13.b) Description and Ways of implementation

EMAS can become a scheme that aims at providing guarantees on environmental risk management by companies to different actors of the financial sector: banks, private and institutional investors, insurances, stock market, etc. This option will improve the usefulness of EMAS in many business relations for the participant organisations.
In order to achieve this objective, two kinds of measure are recommended.

A13.1. Measures to be adopted by the European Commission to improve the awareness and adoption of EMAS in the banking, financial and insurance sectors
The following steps should be taken:

- In the revision of Directive 2003/51/EC, the EMAS statement would be identified as an effective way of providing relevant environmental information and would be proposed as the ideal tool for those Member States that intend to make social and environmental reporting for businesses obligatory.
- In the revision of the Directive 2004/35/EC on Environmental Liability, EMAS should be identified as a 'best practice' for companies that want to demonstrate the effectiveness of their environmental management and risk prevention. EMAS registration should be an guarantee accepted by Member States, that could be used even as a preferential condition if they decide to impose mandatory insurances for relevant environmental risk.
- In the same context, EMAS would be a favourable condition for the reduction of insurance premiums.
- When involved as a party in the discussion on the Basel II agreement, the European Commission would be able to lobby in favour of the development of environmental credit risk

A13.2. Measures to be foreseen within the framework of the next EMAS revision
The following steps should be taken:

- As proposed for the 'reporting' option, registered organisations would be invited to validate information concerning issues that might interest banks and insurance companies and they would be allowed to freely circulate this. (also in a 'stand alone' format and with no previous validation of the 'extract' from the full text statement)
- The Commission should set up a working group with credit, financial and insurance institutions aimed at defining the data, indicators and information that are more interesting for these stakeholders and requested in their standard procedures. The outcome of the working group would be a guideline for EMAS organisations on how to report, on one hand, non-financial information on social and environmental performance (including risk) and, on the other, environment-related financial information (environmental expenditures, investment, hidden liabilities, etc.)
- The Commission would need to be able to fund pilot-projects on the application of these guidelines for the assessment of credit-worthiness and risk by banks and insurance companies, especially if carried out in the newly Member States and involving SMEs.

A13.c) Potential impact

This option could produce significant impacts both in terms of increases in numbers of registrations and in the environmental performance of participants, but this would happen only if the first set of measures recommended is fully adopted. As this would take some years, the impacts would be only visible in the long run, while in the short-medium run these impacts would be moderate.
The potential indirect effects of both the sets of measures are very high, because they will mainly aim at supporting the credit, financial and insurance institutions with more effective information and tools to better manage a relevant category of risk (that is capturing a growing attention by all the economic actors): the social and environmental one.

The organisational effort required by the Commission and the Member States would be low (the directive revisions are due, and coordinating a working group is not complex). Similarly, the support needed in terms of economic resources will be low.

A13.d) IMPACT PROFILE:

	A13 (overall)	**A13.1**	**A13.2**
Increase in the number of registrations	*	***	*
Improvement of environmental performance	*	*	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**	***	**
Organisational and co-ordination effort by the European Commission	*	**	*
Organisational and co-ordination effort by the Member States	*	**	*
Economic resources needed	*	*	*

*** = considerable
** = moderate
* = low

Option A14: EMAS for local authorities and public institutions

A14.a) Rationale

Most of the evidence collected in the EVER study (in-field research, literature review, workshop) points towards adopting measures targeted at public institutions within the EMAS revision process, both to improve Public Administrations (PAs) capacity to implement EMAS requirements and to strengthen their role in promoting the scheme.
The main challenge seems to be the correct identification, assessment and management of indirect environmental aspects: the concept of 'influence' (e.g. to what extent the policies of a public institution or its activities influence the activities of other actors) is indeed both difficult to grasp and to measure.

A wide literature review reports that:

- Nearly all the studies and pilot projects analysed confirm that indirect environmental aspects are one of the key features of EMAS implementation by public institutions (see report 2);
- The majority of European pilot projects dealing with EMAS implementation by local authorities aim at providing them with tools 'tailored' to the specific needs of public administrations; the difficulties reported are mostly related to the *lack of competence and knowledge* within PAs, as well as to the *lack of operational and practical guidance and tools;*
- the decision to adopt EMAS is closely related to PAs nature and functions e.g. the role they play in being an example for the community they govern, and their need to obtain and maintain consensus (political consensus above all, within a broader framework of stakeholders' relations);
- *budget constraints* are often a significant barrier to EMAS adoption: when resources are limited, EMAS has to compete with many other local government priorities;
- *a lack of recognition by public institutions (mainly superior administrations)* and *external feedbacks* also hamper the effectiveness of EMAS after the initial registration.

The in-field research and the EMAS-workshop confirm that:

- The most desirable option for supporting and stimulating EMAS adoption by public institutions is the provision of *technical training and information support*,such as: the indirect aspects to be taken in consideration, suggestions on how to measure indirect aspects and practical examples and best practices taken from interesting experiences.
- The three other most important measures according to the interviewed EMAS-registered PAs are "*regulatory relief*", "*support funding*" and "*the use of the Environmental Statement as an official communication document in the standard administrative procedures*";
- *Lack of competence* and *difficulties in involving, motivating and obtaining the commitment* of *the personnel* act as barriers both in participating in and maintaining EMAS;
- A significant part of the study focused on to the role to be played by PAs in their community. The main drivers to EMAS adoption identified within the interviews refer to "*political consensus*" (50% of the PAs interviewed) and to "*local stakeholders and community's relations' improvement*" (43%).

Another interesting point was touched upon during the EVER EMAS workshop in Brussels: there was a general agreement among the participants that registered PAs are not fully exploiting all the communication opportunities offered by EMAS. A shared view was that EMAS III should give PAs more effective tools for the communication of their environmental decisions and actions, and to allow them to better interact with the social stakeholders.

A14.b) Description and Ways of implementation

This option is based on several measures identified as being useful and potentially effective ways to improve public institutions' capabilities of implementing EMAS requirements and stimulating participation in the scheme.

It should be noted that the idea of a separate EMAS scheme for public institutions is clearly not supported by the EVER study (either by the interviewees or by the EMAS workshop participants); consequently, this option relies on some measures that are aimed at strengthening the current framework of the scheme.
It should also be noted that, being local authorities (and public institutions at large) and being therefore a specific typology of 'participants', many of the above mentioned options can be applied to them in a similar way (e.g.: economic incentives, promotion and marketing of the scheme, EMAS as a reporting and communication scheme, etc.). As we are about to see, this option deals particularly with the attempt of better "tailoring" some of these measures to the needs and specificities of public administrations.

Below are a first set of possible measures, aimed at responding to the need for better guidance and a pragmatic orientation on some EMAS requirements:

- The Commission could publish official guidelines addressed to public administrations, especially focusing on the assessment and management of indirect environmental aspects (by developing the small number of general rules contained in Decision 681/2001/EC, I, 8). These guidelines would have to be filled with operational and empirically-based examples and good practices.
- In the same guidelines, the Commission could adapt the content of Recommendation 532/2003/EC on environmental performance evaluation and indicators to the specific needs of public institutions.
- Finally, in the same guidelines, the Commission could even propose a standard-model for the environmental statement (with a format that could be used by public administrations).

A second set of measures aimed at reinforcing the multiplier effect that, from an initial 'pioneer' experience could lead public administrations to a wider application of EMAS and of its requirements are as follows:

- In EMAS III could be mandatory for the public administrations that opt to register just one (or few) part(s) of their organisation to commit officially (in their environmental policy or in the programme) to achieve EMAS registration for the whole administration in a certain period of time. This would be considered by verifiers as an essential part of the policy (or programme) and would be checked with a "continuous improvement" approach. The Commission could decide if public administrations are asked to specify themselves the period to achieve the objective, or if this is made explicit by the new Regulation by saying that this objective should be achieved within

a maximum length of time (e.g.: three years from the registration of the first part of the organisation).

- Also, the Commission could set specific requirements in the Regulation (or rules in the eventual EC official guidelines) foreseeing that even if the administration is not entirely registered, some of the key EMAS-related activities should involve the whole organisation (diffusion of the environmental policy, environmental training of all the employees, etc.).

A last set of measures can be envisaged to adapt some of the options previously described to local and public institutions, by means of 'tailor-made' specifications, e.g.:

- Financial and fiscal incentives: for EMAS registered local authorities, public expenses for the environmental improvement could be considered out of the scope of eventual budget constraints and limitations imposed by national governments. Fiscal flexibility could be granted to registered local authorities, to let them vary the taxation rates they impose on industrial companies according to the environmental performance of those companies.
- Regulatory flexibility: EMAS registered local authorities could be allowed to partly comply with the requirements of Directive n. 2004/4/EC (on public access to environmental information) by way of diffusing to the local communities the validated environmental statement.

A14.c) Potential impact

The increasing interest shown by public administrations in EMS certification and, especially in some Member States, particularly in EMAS, shows a high potential for improving the development and diffusion of the scheme in the EU.
Many experimental projects are under way all over the EU with the aim of supporting public administrations in developing an EMS according to EMAS requirements. As has happened with the first development phase of EMAS in the industrial sector, the difficulties and the barriers can be overcome by supporting the first tentative initiatives by local or regional authorities with technical assistance and other forms of direct support. In this regard, this option could initially produce high uptake of the scheme in this sector. At a later stage, other forms of 'external' incentives will be needed to maintain the push for EMAS, e.g.: a positive feedback by citizens and local communities (a recent study shows that this is already happening in Member States where EMAS is diffused among local authorities, such as in Italy), political and electoral consensus, success in the territorial marketing of the registered administration, etc.

As has been seen in the literature and as has been confirmed by the EVER study (see report 2), the adoption of EMAS can bring improvements of the environmental performance in public administrations, both directly and indirectly. On this basis, one might expect that strengthening the requirements for this category of EMAS participants (especially as concerns a better management of indirect aspects) could generate a positive impact in this area.

The same effect can be foreseen concerning the indirect effects: a larger diffusion of EMAS among public administration will foster the benefits in terms of integration with urban and land planning, inclusion of environmental criteria in public procurement procedures, etc.

Some effort would have to be made by the Commission in elaborating, drafting and publishing the proposed guidelines, while a lesser effort, in terms of economic resources, would be needed to promote and support "pilot" projects to test and apply these guidelines.

A14.d) IMPACT PROFILE:

	A14
Increase in the number of registrations	*
Improvement of environmental performance	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**
Organisational and co-ordination effort by the European Commission	**
Organisational and co-ordination effort by the Member States	**
Economic resources needed	*

*** = considerable
** = moderate
* = low

Option A15: "Sudden death"

A15.a) Rationale

The very existence of EMAS is not supported by some stakeholders and practitioners. While there has not yet be any widespread debate, at least some argue in favour of abandoning the scheme. There are a range of arguments which are put forward to support that point of view. Partly those arguments refer to targets which have not been achieved, partly to the size of the problems which EMAS currently faces, partly to the political implications of current EMAS policy. This debate has been analysed by consulting direct sources and by way of the interviews carried out during the in-filed research of the EVER study.

- Targets

Some sources emphasise that EMAS attracts only a very limited number of companies. If the original EMAS target was that of introducing environmental management on a large scale (and this might be arguable), then this has not been achieved. The introduction of EMAS (as of other voluntary instruments, such as ISO 14001) depends heavily on the personal and idealistic values of the business owners and, in many cases, is driven by the corporate headquarters of operational sites.
Also, in many Member States EMAS has not achieved the target to empower and enrich a general command and control approach by a policy relying on a partnership approach with industry and on self–control mechanisms. This is one of the most relevant EMAS' lost opportunities, that (as we have seen in other options) could be pursued with the next revision but hasn't been realised up to now.

- Current problems

Neither the public authorities in some Member States nor in some EU institutions have clearly identified themselves with EMAS. Only a limited number of public authorities have signed up to EMAS (166 in total, the first EU institution only recently), although these figures are increasing.
As we described before, EMAS has not, up to now, delivered the benefits it promised for participants. While business expected to receive favourable treatment through EMAS participation, in many Member States administrative relief and procurement requirements still barely support EMAS. This represents another lost opportunity.
With limited public recognition, EMAS has found it very difficult to compete with ISO 14001. While EMAS imposes an additional burden with respect to ISO 14001, the additional benefit is perceived as too low: partly because the two schemes provide the same benefits (organisational and managerial benefits, reward on the market, cost efficiency), partly because the potential 'surplus' of EMAS (e.g.: in terms of institutional credibility, social-orientation, better guarantee of legal compliance), is not fully appreciated by those actors that should provide benefits to registered organisations, especially public institutions. Thus, most companies have chosen ISO 14001, as it is clearly shown by the numbers of the registrations / certifications.

- Political reasoning

While the number of participants is relatively low, the cost of supporting EMAS is relatively high: considerable funds have been spent by the European Commission and the Member States in the past (although it has to be noted that in many Member States also ISO 14001 is supported with public funding). These funds have been pumped into the industrial system as

direct support for the achievement of EMAS registration, not as incentives to keep registered organisations inside the scheme.
According to some observers, however, more important than the financial costs are the "political costs". EMAS is thought to hamper the concentration of public policy on other means of environmental protection in companies.

In this framework, the argument is put forward that a strategic decision has to be made: if EMAS is seen as a strong public policy instrument, and a substantial additional burden is put on the companies to achieve a high-profile registration, then substantial benefits must be provided in turn. If the willingness for such benefits is missing, then the instrument should be abandoned or transformed into a far leaner version, which can eventually be run as a private scheme.

Scientific literature and official statistics partly back this line of reasoning. The following data is used as supporting evidence by EMAS critics:

- Far less than 0,1% of all companies in the EU are EMAS registered. Therefore even a 100 or 200% increase would not cause a significant market impact.
- 5 Member States have no EMAS registered site at all, 6 Member States 10 and less, 7 Member States 50 and less, and only 8 Member States have more than 50 registrations.
- Of the largest 100 EU companies, one quarter has signed up to EMAS with the maximum being 11 sites.
- The number of low environmental impact participants (from the service and the public sector) increases while industry participants, originally the primary target group of EMAS, become less.
- While EMAS currently has about 4.200 registered sites, about 3.000 have stopped registration in the past.
- According to surveys, ISO 14001 is seen by participants as easier to implement than EMAS.
- There are more than 33.000 verifications of ISO 14001 in the EU, but only about 4.200 registered EMAS sites. Also, numbers of ISO 14001 are increasing far more rapidly.
- Alternative environmental management approaches (e.g. Eco-Lighthouse, Ecoprofit, QuH etc.) are outnumbering already EMAS.
- Total administrative costs and costs of supporting EMAS diffusion (by means of direct funding) might even exceed 3 million Euro per year, which means that annual spending per participating organisation might even be above 1.000 Euro.

The in-field research did add some further indications towards the issues raised above:

- Several interview partners declared that EMAS needs a strong increase in participant numbers, otherwise it will not be able to continue.
- The substantial difficulties to find interview partners in some Member States has to be attributed to lack of interest and even discontent with respect to EMAS at a large scale.
- Lack of external incentives and recognition by public institutions figured very high in the reasons given for not implementing EMAS.
- Also several interview partners indicated that EMAS is seen as too close to ISO 14001 and that the additional benefit with regard to ISO 14001 is perceived as rather small.

The EVER EMAS-workshop did further support some of the arguments mentioned above:

- Once again, people indicated that EMAS does not differentiate itself enough from ISO 14001.
- Also the lack of public recognition (green procurement, administrative relief etc.) was intensely debated. At the same time, participants described the substantial efforts which have been undertaken to increase this support both at the level of the Member States and at European level – often with little or no success.

We can report a rather emblematic statement by one of the workshop participants, backing this position: *"Given the revision of ISO 14001:2004 that I consider as a standard that leads to high quality environmental management systems […], the EC better put their efforts in contributing to the next revision of ISO 14001 as well [as] ensuring sound accreditation and certification practices. It is in my eyes a waste of public money to maintain a system that is clearly loosing interest in the market, where a good private alternative is available."*

A15.b) Description and Ways of implementation

The option aims at reducing the financial and political costs of EMAS and at opening the way for new policy initiatives.

In order to implement the option, several steps seem to be necessary.

- The Commission should conduct a high level policy exchange with the Member States to discuss the policy shift. Since some Member States might resist heavily, it would be important to create a group of supporters of the idea. Since a number of Member States have (almost) no EMAS registrations, it seems likely that such a coalition of States could be set up.

- The Commission would have to develop, right from the beginning, ideas on how it can use the leeway which the termination of EMAS offers. The success of the termination of EMAS hinges very much on the way in which the closure of the scheme is promoted. It will be important to underline the new opportunities which such a step offers. New policy initiatives to promote environmental management can focus on ISO 14001, on the planned ISO guidance standard, on alternative EMS and on various other instruments.

- The termination would have to be underpinned by a systematic and thorough collection of arguments. That might include a cost-benefit analysis of the closure the scheme. Reference could be made to substantial discrepancies among the Member States on the future of EMAS, to the low participant numbers, to the unlikelihood of attracting large additional numbers of participants, etc.

- The closure of the scheme is likely to be best done by adding a new provision in the current regulation which sets an end to the duration of validity to all provisions of the regulation. The end of the validity would be set in such a way that current EMAS participants are allowed to enjoy the benefits of their registration up until the end of their registration period.

- The closure of EMAS would include the dismantlement of the institutions linked to the scheme (competent bodies, accreditation bodies, Art. 14-committee, etc.)

It should be noted that the closure of the scheme does not necessarily mean that all elements of EMAS would have to be abandoned. As a matter of fact, there are many ways to maintain those segments of EMAS which it might be considered worthwhile to keep. The option to discontinue EMAS, therefore, overlaps partly with other options which foresee a substantial transformation and reduction of the current EMAS system.

One way to keep the certain elements of EMAS, while dismantling the scheme, could be a transfer to ISO. That might include a bridging agreement concerning the participants of the scheme, but it might also include features such as the introduction of the environmental statement as a voluntary element to ISO 14001. The recognition of these EMAS elements could be named "ISO 14001 plus". The new work item proposal for ISO TC 207, the ISO guidance standard on a staged implementation of EMS, offers a good opportunity for such a move. The guidance standard could contain a step beyond current ISO 14001 which would add EMAS elements.

A15.c) Potential impact

In contrast to the other options laid down in this report, this option obviously does not have a positive potential impact on EMAS participation. However, it still might lead to a strengthening of the environmental management capabilities of European companies, since it might give further impetus to ISO 14001 and even to other initiatives.

Specific advantages of the option are:
- The Commission could focus on supporting other forms of environmental management schemes (including ISO 14001), avoiding further friction.
- Financial and personnel resources would be set free for new initiatives in the field of environmental management. These initiatives, if more effective than EMAS, might even lead to an improvement of the environmental performance, in the medium-long run.
- The move could be promoted as a part of the deregulation process of the Commission.

Relevant disadvantages of this option are
- The Commission's credibility might suffer, from it abandoning its own scheme.
- The benefits linked to EMAS adoption by industrial companies and other organisations (see report 2 of the EVER study) will be lost: improvement of environmental performance, better management of legal compliance, improvement of image and of stakeholder relations, etc.
- The opportunities for improving the scheme, described in the Options above, will not be pursuable.
- Liability issues might arise especially if the transition period is set too short. EMAS participants than might claim damages due to the fact that they invested in EMAS relying on the fact that they could enjoy specific public benefits afterwards.
- Environmental management itself might suffer a loss of credibility, with the loss of one of its cornerstones.
- It would be difficult to gain acceptance of the move among the current proponents of EMAS.
- DG Environment looses an instrument on which it has major influence.
- Closure of one of the only two voluntary instruments which the DG Environment has, might be interpreted as a return to command und control policies.

If parts of EMAS are kept and transferred to ISO, this implies other disadvantages:

- The necessity to promote and explain the new name.
- The imponderability of getting to an agreement with ISO or of modelling the new guidance standard as desired.
- The possible criticism that it would have been better if elements of EMAS were kept to brand them as EMAS rather than to transfer them to ISO.

A15.d) IMPACT PROFILE:

	A15
Increase in the number of registrations	**(*)**
Improvement of environmental performance	**(*)**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**(*)**
Organisational and co-ordination effort by the European Commission	***
Organisational and co-ordination effort by the Member States	**
Economic resources needed	*

*** = considerable
** = moderate
* = low

Option A16: "Slow death"

A16.a) Rationale

The basic reasoning behind this option is the same as it is for the option sudden death:

- EMAS is considered by some stakeholders and practitioners as unsuccessful and missing some of its targets (i.e.: broad diffusion)
- the size of the problem which EMAS faces cannot be overcome in the short run
- any substantial improvement of the situation will require decisive measures which come at a high cost (politically and financially) and which are uncertain to succeed.
- there is no need to continue with the scheme since valid alternatives (ISO 14001) for environmental management exist, even if EMAS is partly perceived as a more credible and reliable tool for many relevant aspects (legal compliance, stakeholder relations, environmental performance, etc.)

The motivation for the closure of the scheme is seen in:

- avoiding further costs associated with the EMAS scheme
- freeing up resources which are 'locked' in the administration of EMAS
- opening up opportunities for new initiatives in the field of environmental management
- increasing the power of the EU to influence the future of privately managed environmental management schemes in Europe
- potentially expanding environmental management in European companies through a focus on other more effective means

However, different from the option 'sudden death', the option 'slow death' aims at minimising the political problems associated with an abolishment of EMAS.

A16.b) Description and Ways of implementation

The option aims at abolishing EMAS while at the same time to avoid frictions with Member States, heavy criticism of other EU institutions and major discontent by relevant communities.

The easiest way to 'terminate' EMAS eventually is to slowly reduce all resources allocated to the scheme. That means: no further money spent on promoting the scheme, no further backing for any public supporting measures (like administrative relief or green procurement), not even direct financial support to EMAS participants, etc.

Currently, the scheme is heavily dependent on external benefits and resources. With no further promotion campaigns, no financing of EMAS participation, and no further public support of the participants, numbers are very likely to shrink decisively. In that way the scheme will slowly disappear. The more difficult legal abolition of the scheme can thus be deferred until later.

As in the case of the option 'sudden death', the success of this option depends partly on how it is communicated. The selling message of this approach might be, that EMAS after more than 10 years of existence should be able to stand on its own two feet. Given the strong support EMAS received in the past, any future failure of EMAS must then be attributed to the

unwillingness of business. Neither the Commission, nor the Member States can be blamed in this case.

In practical terms the Commission can start with such a move by reducing its own staff and abandoning any actions on EMAS. This includes no further publication of promotion material related to EMAS, no new pilot project on the use of EMAS in different sectors or countries, stopping the EMAS helpdesk, no further workshops and conferences on EMAS, no further activities or policy integration, etc.

However, most of the administration and promotion of EMAS is dealt with at the national level. Therefore, the implementation of this option must involve Member States as well. Consequently, the Commission might discuss with Member States reductions in their effort spent on administration and promotion of EMAS. While some Member States do not devote significant resources to EMAS others support the scheme with substantial financial and personnel resources. The objective would be that the scheme finances all administrative and promotion costs through the registration fees and that registration fees would have to be raised to enable this.

Under this option, the revision process itself should be guided in such a way that would not lead to further costs. Especially, the revised regulation should not require any additional commitment of public resources. Possibly any such commitment would even have to be reduced (e.g. Art. 11, 1, the obligation of Member States to promote EMAS, could be cancelled).

A16.c) Potential impact

The consequences of this alternative would be falling numbers of EMAS participants. However, at the same time, resources would b freed which could go into the promotion of environmental management through different instruments. The rational behind the option is that any losses in environmental management through a decrease of EMAS are more than offset by the stimulation of other instruments of environmental management.

Advantages:

- Same of the “sudden death”, plus a less evident loss of credibility, lower level of conflict with some MSs and no liability actions by participants.

Disadvantages:

- The Commission can not really steer this solution. Mostly, it is the Members States who decide about resource input into EMAS.
- The solution leads to continued resource consumption by EMAS, costs will decrease only slowly and also the political struggle on EMAS will continue. The latter will partly impede new initiatives on environmental management and the formulation of a community wide Environmental Management promotion policy beyond EMAS.
- Once again this option will preclude to develop EMAS further and to potentially profit from the opportunities which the scheme offers.

A16.d) IMPACT PROFILE:

	A16
Increase in the number of registrations	**(*)**
Improvement of environmental performance	**(*)**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**(*)**
Organisational and co-ordination effort by the European Commission	*
Organisational and co-ordination effort by the Member States	*
Economic resources needed	*

*** = considerable
** = moderate
* = low

Option A17: Keep the scheme as it is today (Business As Usual)

A17.a) Rationale

Some stakeholders in the workshop and some interviewees contacted during the in-field research were in favour of very limited changes in the scheme.
A number of reasons are given for this position:

- Having seen a number of changes in the EMAS scheme since its inception it is better now to leave potential users, as well as current participants, some time to accustom to EMAS as it is right now. Too many changes over time make it difficult for business (and other potential participants) to understand what EMAS stands for.
- It is too early to judge the success or failure of the changes adopted with EMAS II.
- Problems with EMAS are mainly not connected with the regulation itself, but with the way it is applied in the various Member States of the Union and poor implementation which cannot be established through the EMAS regulation.
- EMAS is at least partly successful. Numbers of EMAS participants are rising. Also, particularly in Germany, the decline of numbers has stopped and figures are now even at a very slow increase again.
- Political consensus on major changes could be difficult to obtain (especially from the actors involved in the implementation of the scheme) and discussing such an option is likely to turn into a long negotiation process. Moreover, even if major changes are necessary, they do need however a very long discussion between the Member States and a long preparation. Therefore, only with EMAS IV there is a chance for implementing the necessary changes.

According to this view, carrying out a revision with no significant change to the current scheme and keeping on with BAU (Business As Usual) should be considered as an option.

A17.b) Description and Ways of implementation

The option does not signify that no changes would be made to the regulation. However, the number of changes foreseen under this option is limited and the especially the depth of the changes is rather low.
Changes which are often mentioned as necessary small adjustments of EMAS are:

- Abolishing the necessity of printing the environmental statement. The publication of the environmental statement through the internet is widely regarded as sufficient.
- Review of the guidelines and inclusion of the issues contained in the guidelines wherever possible within the regulation itself (SME, environmental aspects, use of the logo, validation etc.). Collection of the remaining issues within one guidebook.
- Return to EMAS I with respect to Art. 3 (3), i.e. a return to the three year cycle concerning the environmental statement and its validation.
- Creating the possibility of registering an organisation which is located in several Member States in one registration process rather than through separate registrations in each Member State.
- Support (promotion, external incentives, etc.) would continue at the current level or slightly increased, however not through mandatory measures binding the Member States or the Commission.

- Changes would mostly be restricted to the regulation itself and would not include changes in the institutional set-up of the system or with respect to other tools of Community or Member States policies.

It should be noted that this option could even end up being the unintentional consequence of some of the other options, presented above, if they are not fully implemented and they do not obtain a strong and real support.

A17.c) Potential impact

This option would not improve what some consider the 'weaknesses' of the scheme and would not provide a chance for a wider diffusion of the EMAS. Current trends in the development of the scheme would likely remain fixed and all the decisions would be postponed to the next revision.
On the positive side, no significant effort would be require of the Commission or the Member States.
Of course continuing the scheme would imply some continuing financial commitment.

A17.d) IMPACT PROFILE:

	A17
Increase in the number of registrations	*
Improvement of environmental performance	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	*
Organisational and co-ordination effort by the European Commission	*
Organisational and co-ordination effort by the Member States	*
Economic resources needed	*

*** = considerable
** = moderate
* = low

PART B:

The EU Eco-label

Package B.1. Changing institutions: modifying the framework of the EU Eco-Label to improve its effectiveness and efficiency

This cluster "Changing institutions" refers to the current institutional framework of the different regulations of the European Commission allocating rights and duties to the Commission, Member States, European Union Ecolabelling Board (EUEB), stakeholders and business for the management of the EU Eco-Labelling scheme. Below, we describe four options with different measures to modify the current institutional settings.

Option B1.1. Structures and decision powers: possible improvements

B1.1.a) Rationale

The structure of the allocation of rights, duties, structure and power between the Commission, the Member States and their Competent Bodies, the stakeholders and the applicants has been discussed several times since the start of the EU Eco-label scheme. Also, the EUEB's Policy Management Group has dealt extensively with this point over the last few years.

The general tendency of the survey carried out by Nuij (2004: 17) was to continue the European eco-labelling scheme under its current set-up; nor did the related informal draft non-paper (2002) propose any structural changes.

Our interviewees were quite clear about their rejection of a private scheme (overall average: 1.9 on a maximum of 5) and also did not prefer a purely public scheme (overall average: 2.6). At the EVER Ecolabel workshop, it was also emphasised that the optimal framework for the management of the scheme should foresee a mix of public and private actors - a structure existing in eco-labelling schemes of many Member States. The challenge of the privatisation of the scheme is discussed below as option 2 and we will therefore not go more deeply into this option at this stage.

Nevertheless, the credibility of the scheme, the present complex procedures, and the lengthy criterion development processes are challenges for the present scheme. Taking into account experiences of other schemes (like the German Blue Angel), we propose as ways forward some measures to reallocate institutional rights and the composition of the present bodies.

B1.1.b) Description and Ways of implementation

- Allocation of formal final decision rights: The current status of the Flower scheme allocates the formal final decision power to the Regulatory Committee. We propose to strengthen the importance of stakeholders and their self–perception as "owners" of the scheme by allocating the formal decision-making powers about the selection of product groups and the acceptance of requirements to a – modified (see below) – EUEB. The question of whether or not the EUEB should be should be *juridically* independent should be dealt with by a working group specifically set up to examine this subject. An institutional reform of the EUEB should aim at a wider market acceptance of product group selection and criteria elaboration.
- Composition & structure of the EUEB: The current composition of the EUEB should be

rebalanced by including new members (inclusion of a public procurement representative, a media representative, an educational representative) and reducing the influence of the Competent Bodies (see next measure).

- Voting and participation rights at the EUEB meetings: We propose to allocate voting and decision-making powers to the participating stakeholders (i.e. the current Consultative Forum) and to restrict the role of the Competent Bodies to that of a discussion partner with a reduced decision-making powers; the Competent Bodies should elect a chairman and a deputy chairman who would be able to vote on behalf of all of the Competent Bodies – but who would have only two votes. A different "balance of power" could also be proposed for the EUEB, provided that Competent Bodies should not be able to influence the final decision decisively. Concrete decision rules and prescriptions for qualified majority decisions have to be put forward by the Commission.
- Subsidies for specific target groups for joining the EUEB: Participation in the EUEB is time and cost-intensive. Participants without own funds and without commercial interests should be supported by direct funds, with a long term grant in order to guarantee continuity
- Criteria development process: The organisations and institutions involved in the criterion development process should be stimulated to become active and – if necessary – financially supported with a long term grant; especially small and medium sized enterprises (SMEs). Specific attention should be given to involve single companies, especially if these are environmental advanced companies and frontrunners, so that the Eco-label scheme can learn from their experience and stimulate market innovations.

B1.1.c) Potential impacts

The advantages of these measures will be a stronger empowerment of stakeholders, a shortening of processes and clarification of decision procedures.

Even if the proposed measure does not imply that the scheme is taken entirely out of the hands of the Commission, its organisational efforts might be relevantly reduced to a co-ordination and promotion role,. As an outcome, we predict some clear advantages with regard to the number of registrations, direct and indirect impacts.

A strong disadvantage is the risk of weakening the engagement and funding of the Commission at a time when more funding will be necessary.

B1.1.d) IMPACT PROFILE

Increase in the number of registrations	**
Improvement of environmental performance	**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers, etc)	***
Organisational and co-ordination effort by the European Commission	*
Organisational and co-ordination effort by the Member States	*
Economic resources needed	**

*** = considerable
** = moderate
* = low

Option B1.2. Outsourcing and "privatisation" of the EU Eco-Labelling scheme (or parts of it): is this an opportunity for potential improvement?

B1.2.a) Rationale

Current experiences with the European eco-label scheme have led to discussion about outsourcing parts of the scheme, or even the complete scheme; the EUEB's policy management group dealt with this topic in several meetings during its existence. The idea of outsourcing is based on the Canadian eco-label scheme which is completely run by a third party (TerraChoice Environmental Services Inc.).

There are several different candidates that could be considered for outsourcing, e.g. criteria development, decision-making process, awareness raising, marketing, monitoring or the entire eco-label scheme.

Completely outsourcing the whole scheme could be regarded as a "privatisation", which would have all the advantages and disadvantages of more completely assimilating business and its interests. ERM (2003: 9f.) proposed a complete outsourcing as a radical revision scenario to stimulate market penetration of the eco-label. Discussion within the policy management group (meeting as of 22 September 2003) showed as a general outcome that the current status quo should not be changed. At the EVER Ecolabel Workshop in Brussels, the proposal to invert the development process (industry develops and proposes criteria and the Commission – together with the Member States – approves them after an assessment process) was rejected, notably by the participants from the private sector and industry.

A study (Rubik/Frankl 2005: 99f.) carrying out a representative consumer survey in Germany, Italy, Norway and Spain brought a clear result: trust in eco-labels goes hand in hand with a strong involvement of consumer and environmental organisations and/or an independent body which could include several stakeholders.

The in-field research carried out in the EVER study provides consistent evidence: interviewees judged a privatisation of the scheme as strongly negative. No other option sampled got such a low ranking: among participants 2.0 (on a scale form 1 to 5), among non-participants 1.6 and among stakeholders 2.0.

Altogether, we conclude that any structural change encompassing a pluralistic approach and a *complete* outsourcing to an organisation dealing with the Ecolabel scheme as a "commercial service" would dramatically reduce trust in the scheme and lower its credibility. Nevertheless, the outsourcing of some elements - which do not reduce the credibility and acceptance of the scheme - to third parties, using their comparative experiences could be considered; these aspects will be dealt with in other proposed options.

B1.2.b) Description and Ways of implementation

- No change proposed.
- Proposals with regard to a new EUEB structure are dealt with above in option 1.1.

B1.2.c) Potential impacts

No impact is connected with this option, because no change is proposed.

B1.2.d) IMPACT PROFILE

Increase in the number of registrations	**(*)**
Improvement of environmental performance	**(*)**
Indirect effects	**(*)**
Organisational and co-ordination effort by the European Commission	**(*)**
Organisational and co-ordination effort by the Member States	**(*)**
Economic resources needed	**(*)**

*** = considerable
** = moderate
* = low

Option B1.3. Streamlining the application and validation process

B1.3.a) Rationale

Streamlining the application and validation process is an important issue, especially for current participants (average 3.7 on a maximum of 5) and stakeholders (3.7). When discussing barriers and difficulties in implementing the Flower, it is notable that that factors like 'application procedure slow and very bureaucratic' (3.3) and 'difficulties in implementing the requirements in criteria' (3.0) are not perceived as such significant barriers in implementing the EU Eco-label by the participants.

B1.3.b) Description and Ways of implementation

With regard to the institutional setup relevant for this option[1], we propose the following measures:

- Working group: The shaping of institutional changes relevant for the application and validation process should be carried out by a special working group consisting of representatives of the Commission, the Member States and their Competent Bodies and the EUEB.
- Division of competences and work: The current knowledge and capacity landscape does not allocate resources in an optimal way. We want to strengthen the proposal presented by Nuij (2004: 39) who suggested as one outcome of his questionnaire that a 'behind the scenes' structure should be considered where different countries are experts for different sets of criteria and answer interpretation questions for all Member States. This division of work builds upon current structure, but tries to reallocate competences and work. An interesting proposal came from EEB (2004: 30) suggesting a centralised expertise bureau, but we recommend postponing this approach and waiting to see the results of a division of competences and work among Member States.
- Product improvement & verification: We propose liberalising the prescriptions in cases of product improvements and innovative changes and making them more flexible to reduce burdens for license holders. For instance, even if a product innovation introduces a new technology which is not foreseen by the relevant criteria, there could be a flexible procedure allowing the innovator company to obtain the EU Eco-label. This possibility should be explicitly foreseen by the new Regulation. The assessment on whether the innovative product deserves the EU Eco-Label even though its characteristics are not foreseen by the product group requirements can be assigned to the EUEB (see above the previous options).
- Support by other proposed options: Changes of the content of the eco-labelling requirements and an improved direct support for applicants (see the following Options) will also contribute to a streamlining of application and validation processes (they

[1] Beside the institutional settings also administrative practises and technical support are important; they will be dealt in the following options.

strengthen each other). For example, by providing guidelines, the application procedure can be simplified and streamlined.

B1.3.c) Potential impacts

We estimate that the costs for the Commission should be modest.

The impacts on the application of the Flower might be moderate.

B1.3.d) IMPACT PROFILE

Increase in the number of registrations	*
Improvement of environmental performance	*
Indirect effects	*
Organisational and co-ordination effort by the European Commission	*
Organisational and co-ordination effort by the Member States	*
Economic resources needed	*

*** = considerable
** = moderate
* = low

Option B1.4. Degree of centralisation of administration: should the scheme be more centralised or decentralised?

B1.4.a) Rationale

The degree of centralisation or decentralisation of administration is of minor importance among interviewees. Participants seem to favour a slightly more decentralised structure (3.2) whereas the – "unexperienced" – non participants voted more for a centralised administration (2.9). A clear mandate for changes in current institutional settings therefore does not seem appropriate. This is supported by the outcome of the 7th EUEB Policy Management Group meeting (19th May 2003). However, the experience of business show that administration is perceived as a challenge and therefore we present some "soft" proposals.

These proposals are backed up by the results of the EVER Ecolabel Workshop, where a parallel session was devoted to this particular issue. One of the outcomes from this parallel session was the following position: an effort can be made to decentralise more the management of the scheme, but only if this is useful to prompt the diffusion of the EU Eco-label. It emerged that a higher decentralisation could make sense, for example, in order to enable a more effective and intense marketing of the scheme by the Member States and/or the Competent Bodies.

B1.4.b) Description and Ways of implementation

- Perception of administration: Often Competent Bodies are still in the position of administrators and not of sellers of a service, namely the application of the Flower. Competent Bodies should enlarge their functions and act more proactively, e.g. by providing more information on the Flower, by contacting strategically important business associations, and by undertaking direct contacts and support actions with customers. Specific emphasis is necessary with regard to the newer Member States. The new Eco-Label regulation should set clear indications for the Competent Bodies to become more proactive in "selling" the scheme, for example by foreseen the obligation of creating permanent structures for direct support to applicants, a marketing task force, a stable co-operation with business actors (actually, this would imply a formalisation of what is already happening in a informal way in some Member States).
- Regional contact points: The current practises in the EU are that Competent Bodies are formed on a national level. In some Member States it might be useful to supplement this structure on the level of regions. The Italian regions, the German Länder are examples to supplement the national oriented structure by regional contact points which are "closer" to potential applicants and know more about regional circumstances and cultures. The new Regulation can foresee the possibility of creating Regional contact points.

B1.4.c) Potential impacts

We estimate that the costs for the Commission should be modest, but some costs will arise for Member States allocating some additional tasks to existing agencies/bodies. The impacts on the application of the Flower might be moderate.

B1.4.d) IMPACT PROFILE

Increase in the number of registrations	**
Improvement of environmental performance	*
Indirect effects	*
Organisational and co-ordination effort by the European Commission	*
Organisational and co-ordination effort by the Member States	***
Economic resources needed	*

*** = considerable
** = moderate
* = low

Package B.2. Changing framework: creating the external conditions for the success of the EU Eco-Label

In general, eco-labelled products are placed in niche markets and do not yet reach a widespread market penetration. This is particularly true for the EU Flower. The eco-labelling community therefore calls for supporting and flanking measures in order to generate a market pull effect, since current market demand is too weak to successfully convince companies to apply for the Flower.

The framework of an eco-label, on both the supply and demand sides, is strongly related to its success as being a market-based product policy instrument. The package of options relating to "changing framework" refers to how business and industry deals with eco-labels as a matter of free market decision. The aim is to improve the attractiveness of the Flower by setting policy incentives (fiscal incentives), stimulating market demand (green public procurement), and making the certifying process more efficient (efficient regulation and mutual reinforcement among eco-labels).

Several topics of supporting and flanking measures can be clustered in **changing the general framework** of eco-labels and the EU Flower respectively. In the following paragraphs, we focus on four options within changing the Flower's framework.

Option B2.1.: Fiscal incentives for Eco-Labelled products and companies

B2.1.a) Rationale

The environmental added value of eco-labelled products may influence their price levels. Price fixing is, inter alia, based on a consideration of the administrative costs of the labelling procedure and the investment cost for producers to fulfil the eco-label criteria. These costs may be (partly) shifted to consumers. One approach of supporting measures is to give fiscal incentives in order to change relative prices and influence the price relation between eco-labelled and non-eco-labelled products with cost benefits for both producer/retailers and final consumers.

The in-field research identified the "most wanted" incentives from all the categories of interviewees. Among these, a primary role is played by fiscal incentives, such as tax abatement, that can enable producers to lower the prices of Eco-labelled products (76% of all the interviewees considers it fairly or very important). The EVER Ecolabel Workshop confirmed this indication.

B2.1.b) Description and ways of implementation

- Change of Value-Added Taxes: A change (and reduction) of the VAT rate might be a possible tool, i.e. products using the EU-Flower would be allocated to the zero or reduced

VAT tax band with fiscal benefits for producers and consumers. Several proposals for linking VAT with eco-labelled products exist. The European Commission suggested within its IPP Green Paper a reduced VAT rate for eco-labelled products. The French Government published a document linking VAT measures and climate policy (Ministère 2003)[2].

We see three promising ways to implement strategies for VAT changes and linkages to eco-labelling:

- to use current reduction opportunities for environmentally benign products in Member States according to Annex H of directive 77/388/EU.

- to change annex H of directive 77/388/EU by adding and/or deleting product groups, and differentiation among products groups with full and reduced VAT rates.

- to generally allow eco-labelled products and in particular the Flower a reduced VAT rate for all its product groups by adding this criterion in annex H of directive 77/388/EU.

With respect to the VAT hypothesis, it has to be noted, using the words of Nuij (2004) that "the IPP Communication dismissed it by stating that *in the light of the stakeholder comments received, in particular from Member States, the Commission will not develop initiatives to apply reduced VAT rates to products bearing the EU Eco-label for the time being*".

But the same author adds that the COM continued by saying that "*for other types of tax, Member States, where appropriate, should promote and encourage the use of the aforementioned fiscal measures to favour greener products*" (ibidem).

Therefore, the Commission should explore the legal feasibility of these approaches, in order to eventually find ways to stimulate the Member States in this direction.

- Subsidies for eco-labelled products: Another possibility to change the relative prices is to offer some sort of subsidy to eco-labelled products. A similar attempt has been made in the Netherlands with a subsidy for products with the best energy-using class according to the European energy label scheme for washing machines. The Flower could also be linked to public subsidy programmes in the area of local/regional business development schemes (e.g. with regard to energy saving and renewables). Subsidies should be implemented within the act of purchasing, by guaranteeing a "price benefit" for private and professional purchasers.
- Corporate income tax reduction: Fiscal supply-side measures could focus on reducing companies' corporate income tax. Lessons can be learned from EMAS tax reductions in Italy[3]. Adapted to eco-labelling, we propose a proportional abatement of the company income tax, according to which percentage of the turnover comes from eco-labelled products, for instance:

[2] The document proposes a reduced VAT rate for housing insolation products, electronic household devices ("white goods" and "brown goods"), other eco-efficient products and services

[3] In Italy there is an income tax for all the businesses called IRAP (Imposta sui Redditi delle Attività Produttive). It is applied on every productive activity and to the valued added, including the costs of personnel. The tax is paid to the Regional Administrations (Regioni). The tax is fixed at a rate of 4.25% of the revenues. The Tuscany Region decided to abate the tax rate to: 3.50% for EMAS registered companies (0.75 percentage points reduction, an abatement of roughly 20% of the full tax) and 3.75% for ISO certified companies.

- 30% tax abatement for companies for which 100% of the turnover derives from eco-labelled products,
- 20% tax abatement for companies for which 70->100% of the turnover derives from eco-labelled products
- 10% tax abatement for 40->70%
- nothing below 40%

The corporate income tax reduction for eco-labelled products should be part of a general European fiscal policy approach towards the environment and should be implemented step by step to allow business to adapt continuously.

If these measures are judged as potentially effective and feasible by the Commission, the new Regulation could include requirements for Member States to adopt fiscal incentives of the above mentioned kind, in order to favour the diffusion of the EU Eco-Label. At the same time, the Commission could adopt an accompanying Decision or Recommendation to the new Eco-Label Regulation, specifying the ways in which the fiscal incentives can be conceived and applied, according to the relevant EU legislation.

B2.1.c) Potential impact

The potential impact of fiscal measures can be judged in general as being very positive for stimulating market penetration of eco-labelled products. However, the need for economic resources and organisational and co-ordination efforts by the European Commission will be considerable.

B2.1.d) IMPACT PROFILE

Increase in the number of registrations	***
Improvement of environmental performance	**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	***
Organisational and co-ordination effort by the European Commission	***
Organisational and co-ordination effort by the Member States	***
Economic resources needed	***

*** = considerable
** = moderate
* = low

Option B2.2. Green procurement: how to use it as an incentive to promote and foster the adoption of the EU Eco-Label

B2.2.a) Rationale

Green procurement (both public and professional) has been judged as crucial for stimulating eco-labelling performance. The assumption – in particular when it comes to public procurement – is that public authorities have a considerable steering potential towards public purchasers. That is (state) intervention backed by (legal binding) prescription towards green products may considerably increase the demand for eco-labelled products. According to Cadman & Dooley (2004) eco-label criteria could be used in private and public procurement calls; using them supports procurers and green procurement by reducing their need to search for information.

The "in-field" phase of the EVER study looked more deeply into this subject. About ¾ of the participating companies (strongly) agreed that the Flower has influenced their demands on their suppliers, whereas 43% of the non-participants answered in the same way. Once more nearly 74% of the participants observed an influence on the information exchange with commercial clients, 56% of the non-participants (strongly) agreed with that. Moreover, the inclusion of the EU Eco-label as a facilitating condition for public procurement is regarded as a (fairly or very) important incentive for the development of the scheme by 67% of the whole sample (including participants, non participants and stakeholders).

Finally, the on-site visit in Denmark showed a promising example of a state-owned, but nevertheless private procurement company, which plays a "change agent" role, i.e. offering public purchasers specific products based on eco-label consideration.

B2.2.b) Description and ways of implementation

- Reference to eco-label criteria in tenders: In fact it is already possible to refer *indirectly* to eco-labels by including eco-label criteria in the technical description, but a more *direct* path which allows – by changing framework conditions – explicit mention of the Flower (and other ISO type I labels) as part of public tenders could be more effective. However, this issue depends to a large extent on the outcomes of the future legal framework for public procurement currently under discussion in several Member States. In any case, the new Eco-label Regulation could include (at least) a provision that makes it mandatory for Member States to consider the EU Eco-label (together with equivalent certification schemes) as a favourable condition to access public procurement, e.g. by guaranteeing additional points in the selection procedure. The review of the Eco-label scheme should consider how the scheme could much more directly support the needs of public purchasers. For example, a more innovative approach can be used in the definition of criteria for product groups, by indicating few key criteria that can be suggested to purchasers as requirements for the tenders. These criteria could even be suggested on the basis of the environmental priority that the purchaser wants to address in its policy (e.g. for global warming the purchaser can focus on the criteria concerning greenhouse gases). It has to be noted that this approach can imply the risk of "rating" the importance of the different Ecolabel criteria referring to the same product group, which might be

counterproductive.

- Educational measures and pilot market areas: Member States should ensure that Eco-label references are included in training and manuals for public purchasers. EU policy makers should therefore create strategies to guarantee national educational activities. The focus should be on product groups that are of high interest for public purchasers. The construction of large buildings or urban areas, and creation of industrial sites could use this approach. Promising implementation strategies might be to identify outstanding areas for pilot initiatives. These market areas should identify public purchasing markets where no private market demand corresponds; for instance, in the area of lighting of public roads in order to stimulate innovators. Eventually, technical support measures can be very effective in this area at the present stage (see option B6)
- Big events as visible best practice in procurement: A series of large international events are often – directly or indirectly - supported by public means, e.g. Olympics in Athens 2004 and Torino 2006, Football World Championships 2006 in Germany, Expo 2000 in Germany. These events attract hundred of millions of people and are watched by billions. It might be wise to present the Flower in these by requiring that a certain percentage of the supplies are labelled with the Flower. In close relation with marketing strategy efforts, the eco-labelling administration could choose "symbolic product groups" in order to reach big event visibility, e.g. "green goals" with eco-labelled footballs in European or Football World Championships[4].
- Commercial procurement companies as "change agents": The Danish on-site visit analysed National Procurement Ltd. – a state-owned, but private procurement company. The core service of National Procurement Ltd. is a subscription arrangement offering public organisations advantageous purchasing terms and conditions among an assortment of specially selected products and services. In return, the suppliers get an attractive possibility to sell their products and services to the public sector on a contractual basis. These business relationships rely on "eco-label-thinking", i.e. integrate eco-label criteria in tenders etc. The Commission should explore the promotion and support of these types of procurement agencies.

B2.2.c) Potential impact

Linking both public and private procurement with the EU-Flower seems to be very promising yielding to an increase in the number of registrations and good environmental performances along the whole value chain. Organisational efforts are low when focusing on best-practice initiatives, but high when the legal framework is changed.

[4] The Soccer World Championship in Germany 2006 considers environmental issues in its Green Goal concept (see http://greengoal.fifaworldcup.yahoo.net/de/home/?flash=1)

B2.2.d) IMPACT PROFILE

Increase in the number of registrations	***
Improvement of environmental performance	**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	***
Organisational and co-ordination effort by the European Commission	**
Organisational and co-ordination effort by the Member States	***
Economic resources needed	*

Option B2.3. Regulation of other tools for product-related environmental claims, communication and guarantees, in order to support a better integration with the EU Eco-Label

B2.3.a) Rationale

Currently the regulation of the EU Flower is a "closed shop" issue, meaning that the regulatory framework does not inter-relate with other European regulatory efforts. In order to find synergies, a stronger interrelation with other product-related regulations could be promising. Consequently, also by means of the revision, the Commission should stop considering the EU-Flower mainly as a pure communication tool addressed just to end-consumers, but should start considering it as an environmental (integrated) product policy tool aimed at reducing the whole life-cycle impact of products and services through the delivery of appropriate environmental information to different stakeholders.

B2.3.b) Description and ways of implementation

We propose a set of measures that can be undertaken and implemented by the European Commission by way of enacting legislation and requirements parallel to the new Eco-Label Regulation:

- Regulation for green claims: If the option on self-validation were to be pursued, it is clear that a strong and clear regulation on advertising and ISO type II labels is necessary. Misleading claims, "wrong" validations and intentional confusing of consumers should be prohibited and pursued by penalties. We suppose that as well as the state, competitors of violators would assess the correctness of claims and indicate breaches of the rules. For ISO type II, we emphasise the high priority needed to strengthen the framework for preventing false claims all across the EU. In order to pursue a stronger integration and consistency with the EU Eco-label, for example, all the generic claims evoking a non-specified environmental quality ("Green Product", "Eco-product", "Environment friendly", etc.) should be forbidden, especially when they can potentially generate confusion with the EU Eco-label itself. To this purpose, an interesting possibility would be that of explicitly introducing the content of ISO standard 14021 (which already foresees many of the proposed provisions) into Directive EC/450 on misleading advertising. The UK's Green Claim Code and Green Claim Panel, which looks at verification procedures, might be taken as a good example of regulation for green claims.
- "New Approach" and Eco-labelling:. With the so-called New Approach – introduced in the EU in 1985 – the EU legislator changed its approach to regulation. The current developments under the Energy-using Products (EuP) Directive build on the New Approach. Within the EuP framework directive it is stated in § 8 (3) that "EuP which have been awarded the Eco-label pursuant to Regulation (EC) No 1980/2000 shall be presumed to comply with the eco-design requirements of the applicable implementing measure insofar as those requirements are met by the Eco-label". In the same line, the revision could explore the possibilities to use the New Approach for other self-validation opportunities (connected with Eco-label criteria) linked to the CE mark.
- Corporate reporting and Eco-labelling: The Commission could explore the possibilities of having the Eco-label incorporated in environmental reporting guidelines (ERM 2004a).

Several sets of reporting guidelines, both voluntary and mandatory, exist. Currently, environmental reporting and sustainability reporting are widespread - at least among big companies. What are missing in most of these reports are references to their products since they focus almost exclusively on production and environmental media issues. As a future vision, sustainable product reporting might become an issue to be explored by the European Commission.

Similar, green product performance with Eco-labelled products as an indicator might play a role for sustainability indexes and green or social investment funds. The Commission could screen the potential of future regulation in order to stimulate green assessment of firms based on Eco-label performances.

If the above-mentioned measures are approved and undertaken by the Commission, then the Eco-Label Regulation can be modified accordingly in the future, making reference to the regulatory acts that will be progressively developed.

B2.3.c) Potential impact

Changing EU and Member State regulation in order to support the EU Flower requires considerable organisational and co-ordination efforts. These efforts should be seen as long-term policy goals. Therefore potential for short-term increases in Eco-labelled products and an improvement of environmental performance is vague. However, backing the EU Flower with supporting regulation is essential.

B2.3.d) IMPACT PROFILE

Increase in the number of registrations	**
Improvement of environmental performance	**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	***
Organisational and co-ordination effort by the European Commission	***
Organisational and co-ordination effort by the Member States	**
Economic resources needed	*

Option B2.4. Mutual reinforcement of the Flower with other schemes

B2.4.a) Rationale

There is – depending on the product groups considered – a vast number of existing labels, from eco-labels, to self-claims, to environmental product declarations. It seems to be obvious that there is a great potential for synergy, which is currently not being tapped. The mutual reinforcement of the Flower with other schemes, in particular ISO type I ones, is promising.

The interviewed stakeholders in the EVER "in-field" research confirm that the EU Flower supports national eco-labels. Examples given are the orientation towards the EU Eco-label of some requirements developed by the German Blue Angel, the Catalan tourism label and some requirements of the Nordic Swan and of the Polish Eco Znak, all of which explicitly refer to (or adopt) the EU Eco-label criteria for the same product groups.

Stakeholders were also asked for two other relationships: the applications of the EU Eco-label as criteria for product tests of third parties (e.g. consumer tests) was supported by the large majority (81% yes, 19% no). Stakeholders slightly disagreed, however, about the use of the EU Flower for the development of sector-oriented eco-labelling approaches.

B2.4.b) Description and ways of implementation

- Mutual reinforcement of the Flower with other voluntary schemes: Beside the official ISO type I (or close to it) labels, other voluntary labels (like MSC, FSC, Ökotex 100, Viabono, Visit) exist. An opportunity could be to offer users of other schemes the possibility to use the Flower, provided that the Flower exists for the same product group. For more details see the chapter on linking the EU Flower with national labels within this report.
- Closer linkage to mandatory schemes: Beside the voluntary schemes, a closer linkage to the mandatory energy label is thinkable. Product groups relevant for the energy label might make (stronger) reference to the Flower; the current solution is weak (possibility to include the EU Eco-label within the energy-label). In addition, a more efficient division of labour between the EU Flower and the energy label should be explored. That is, for instance, to concentrate the EU Flower on impacts that are not covered by the energy label, or use the top efficiency class ("A" or higher) as Ecolabel criteria for energy consumption (when relevant), or eventually even remove those product groups that are mainly characterised by energy-related environmental aspects from the Eco-label area.

B2.4.c) Potential impact

The mutual reinforcement of the Flower with other schemes aims first of all to identify synergy among product labels. When mutual reinforcement is reached, increasing numbers of eco-labelled products and consequently, more improvements for the environment will be realised. Organisational and co-ordination efforts of the Commission will be modest.

B2.4.d) IMPACT PROFILE

Increase in the number of registrations	**
Improvement of environmental performance	**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**
Organisational and co-ordination effort by the European Commission	**
Organisational and co-ordination effort by the Member States	*
Economic resources needed	*

Option B.3. Changing content of the Ecolabel: possible measures for improving product-groups and criteria definition

B3.a) Rationale

The huge lack of availability and visibility of the eco-labelled products in stores is one of the largest barriers to create a consumer demand for eco-labelled product. Retailers want a wide range of labelled products in the stores before they will proceed to actively promoting the Ecolabel. Correspondingly, the range of Eco-labelled product on the business-to-business market is insufficient.

Furthermore, the EVER study, as well as previous studies, shows that in some cases the level of criteria has been a barrier for companies to adopt the EU Eco-label, especially with respect to the degree of documentation concerning the compliance with the criteria.

The EVER study has investigated the need for changing content to attract more license holders and possible ways to implement changes. The only option to obtain a relatively full support (average: 3,7) was extending the scheme with more product groups and services, to ensure that more companies can participate and thereby create product volume. At the same time, the EVER findings suggest a genuine satisfaction with current level of criteria.

B3.b) Description and ways of implementation

An effort should be done to make more products groups available and extending Ecolabel to services. But this is not enough. To ensure that more companies are attracted to the scheme, it must also be considered to reduce the number of criteria.

- More products groups available and extending Ecolabel to services

First of all, the extension of the product groups and services requires relevant economic resources, to be invested by the Commission and by the Member States.

When selecting the product groups and services, the following could be considered:

- Product groups and services where LCA data, EPD and other relevant documentation are available and the criteria can be developed fast (see also Option C1.2).
- Product groups and services where introducing an Eco-label will create awareness of environmental impacts and thereby can contribute to increased environmental performance.
- Intermediate goods as product groups should be considered even more than they are today.
- Products and services that are very environmentally friendly but for which there might only be one supplier or a very small market. These could be dealt with under a panel or similar process without the need for extensive criteria development (suggested by the EUEB Policy Management Group at their 8th meeting, February 2003).
- Similar products to those for which criteria are already developed e.g. outdoor paints next to indoor paints, so that manufacturers can apply for more than one similar

product group (suggested by the EUEB Policy Management Group at their 8th meeting, February 2003).
- Adopt existing national eco-label criteria for product groups and services that are not today included in the European scheme (see next Option).

All the measures proposed above imply that the EU Eco-Label is modified accordingly, in order to give the possibility to put them into practice.
For instance: the new Regulation should allow for the use of the EPD (and connected PCRs) as a reference to develop product criteria, at certain conditions (see Option C1.2); the application of criteria to similar product groups, even if only in a transition phase, should be explicitly foreseen by the new Regulation, etc.

- Reduce numbers of criteria and focus on the overall environmental impact

Reductions in the number of criteria for some product groups could be another way of attracting more companies to the scheme and create product volume. The EVER study indicates that this is a possible option for some stakeholders, although some participants are reluctant to reduce the number of criteria.

The new Regulation could establish that the number of criteria be reduced by focusing on the overall environmental impact of the final product, e.g. concentrating on some stages in the product life cycle or environmental hot spots (e.g. by way of a "streamlined" or "screening" LCA). In order to preserve the credibility of the scheme, this should be done by promoting and fostering a stronger relationship of the criteria with EU and/or national environmental priorities (e.g. EU Sustainable development strategy, etc.). In many cases, the existing list of requirements that has to be fulfilled is very long and adds many additional aspects to few key - environmental problems. Minimising the number of criteria will also make it easier to communicate to the consumers what the Eco-label stand for – which today also is a barrier. Within the EVER study, Eco-label participants supported that option, but non-participants were reluctant.

Another way of implementing reduced criteria is enabling, by way of specific provisions of the new Regulation, to introduce more scoring than hurdle criteria. An "easy to handle" scoring system where the criteria have points and the Eco-label can be achieved with different combinations of points. A set of "minor" criteria can even be optional (as it happen with the criteria on tourist accommodation). Hurdle criteria could be applied for consumables and simple services whereas a mixture of hurdle and scoring criteria could be applied for complex services and durables.

B3.c) Potential impact

This option can produce the following positive impact:

- More product groups and services will attract new license holders to the Eco-label scheme and thereby improve the environmental performance of the products.
- Reduced numbers of criteria will make it easier for companies to apply for the Eco-label and thereby create product volume.

- Eco-labelled services will create an indirect demand for eco-labelled products, e.g. eco-labelled hotels buying eco-labelled textiles.

A disadvantage connected with extending the Eco-label to services was mentioned by several interviewees and by some participants to the EVER Eco-label workshop: it will decrease the credibility of the scheme, because the service area is more complicated and the label could be not suitable for all services e.g. retailers (not enough labelled product on the market to be sold in the eco-labelled shops). Furthermore, since the criteria will be strongly focus on environmental management (as it happens with tourism), it might be difficult for consumers to understand the level of environmental performance in many service areas and there will be an overlapping with EMAS.

This option can be fully and effectively implemented by means of a considerable resource deployment by the European Commission and the Member States. The impact of this option will therefore vary according to resource availability.

B3.d) IMPACT PROFILE:

Increase in the number of registrations	***
Improvement of environmental performance	**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	***
Organisational and co-ordination effort by the European Commission	**
Organisational and co-ordination effort by the Member States	*
Economic resources needed	***

*** = considerable
** = moderate
* = low

Option B.4. Promotion and marketing of the EU Eco-Label: strategies and possible initiatives

B4.a) Rationale

Both the EVER study and previous marketing studies document that the lack of knowledge and recognition of the EU Eco-label from consumers, costumers and retailers is by far the largest barrier for the diffusion of the Ecolabel. In particular, the evidence collected by way of the EVER interviews shows that:

- The low awareness largely prevails as the most significant barrier: the lack of recognition and knowledge by different actors is perceived as a very significant barrier both by participants and non-participants, in the following order of importance: lack of recognition 1. by the consumers and the public at large, 2. by the public institutions (also through green public procurement), 3. by the intermediate customers and 4. by the retailers. On these barriers we reckoned the highest level of consensus of the whole in-field research.
- It is not just a problem of knowing the EU Eco-label, but also of choosing it on the market: the lack of competitive rewards by all the above mentioned actors is perceived as a considerable barrier. Interviewees confirmed that, even if customers are aware of the EU Eco-label, they are not eager to buy labelled product, providing a real reward to companies that applied. A frequently reported example refers to green public purchasers.
- This barrier is particularly high for new potential applicants: it is worth noting that the lack of recognition and reward by the final consumers is a relevant barrier for nearly all (88%) the companies not participating in the scheme (these lacks were indicated also as reasons to eventually abandon the scheme).

Correspondently, the most significant driver for implementing the EU Eco-label is increased knowledge among consumers and professional purchasers, and increased demand for labelled products through promotion and marketing.
It is interesting to note that the four most important support measures and incentives for the EU Eco-label refer to the need of diffusing the knowledge about the scheme and its logo and increasing the demand for Ecolabelled products. A very high percentage of all the interviewees (close to 90% for all the following options) believe that information and promotion campaigns and other actions aimed at increasing the knowledge and the demand of the EU Eco-label are the most effective measures to support the scheme and endorsing its success as a marketing opportunity (and, therefore, as a policy tool).

The EU Flower Week 2004 made a very good start in the process of making the EU Eco-label a well known and important factor on the European market, but it is still a huge challenge to obtain real market penetration for the Eco-label. In order to convince the market leaders and get real volume in the number of ecolabelled products, a continuation of promotion and marketing activities, bigger campaign budgets and more participating countries are needed.

The next few years are going to be crucial both for the promotion of the scheme and for the survival and success of the Eco-label. The current number of license holders, the established networks for the promotion of the Eco-label, the achieved knowledge level among consumers, NGOs, retailers and producers can easily be lost if no further promotion and marketing activity is carried out.

B4.b) Description and ways of implementation

A relevant effort should be made to increase promotion and marketing of the scheme by means of different kinds of initiatives, which can increase the awareness of consumers, professional purchasers, retailers, potential license holders and other stakeholders.

There are two different kinds of initiatives:

- Direct promotion and marketing activities e.g. information campaigns, co-marketing and dialogue fora
- Activities that support promotion and marketing e.g. tools and information materials, coordination centres and market analysis

- Information campaigns and co-marketing

To exploit the level of recognition and knowledge achieved e.g. by the Flower Week campaign 2004 and ensure that the current level is sustained and increased by further campaign activities, the Commission and the competent bodies should conduct a Flower Week or similar large information campaigns on a regular basis. Furthermore, less planning resources will be needed if campaigns are carried out on a regular basis, because experience and lessons learned can be exploited and the campaign network can be maintained.

It is recommended that future campaigns be conducted as co-marketing campaigns where competent bodies enter into partnerships (defining agreements) with license holders, retailers and stakeholders (as in the Flower Week 2004). The networks created in the Flower Week project and in other projects for the promotion and marketing of the scheme in Member States (see report 2) can be used as starting point for future campaigns.

Future information campaigns must stimulate both supply and demand. The supplying side (manufacturers and retailers) is the key to the results on the demanding side (the consumers) because the demand only increases when the eco-labelled products are found in places where consumers usually shop, and today lack of visibility of eco-labelled products is still a major barrier.

Network communication can be used to build partnerships between industry federations, manufacturers, retailers, public procurement organisations and environment and consumer organisations and thereby motivate more manufacturers to apply for the Eco-label and more retailers to distribute ecolabelled products and participate in future campaigns.

Stimulating the demand requires a combination of mass communication and dialogue activities. Heavy mass communication through television advertising, printed ads, etc. are recommended as very effective in raising knowledge on short terms. Personal dialogue with the consumers e.g. store sampling and exhibitions, can be even more effective in raising knowledge in the long run as well as changing of behaviour. Moreover, the personal dialogue has also proven to be the best method when communicating complicated messages.

Furthermore, PR activities are important to create public attention and debate about the EU Eco-label in the press. Future information campaigns should also be coordinated with other

events e.g. festivals, local community fairs or trade fairs, etc. to explore the synergies and be present where the companies and customers are (recommended at the EVER Eco-label workshops in Brussels).

When planning common information campaigns it is important that the national differences between the European countries are taken into consideration and therefore, allowing target groups, product groups and messages to be adapted to national circumstances.

Finally, it is important not only to communicate environmental benefits of the Eco-label, but also value-added for the consumers. It should be taken in consideration that most consumers put emphasis on three arguments when they consider environment-friendly purchasing: health, quality and lifestyle (as the Flower Week demonstrated).

The revision of the Eco-label Regulation can foresee that the European Commission promotes and catalyses the creation of networks in Member States. The new Eco-label Regulation can even include a specific requirement for Member States to promote and support such networks and initiatives.
In order to increase the credibility and effectiveness of the networks, it might be requested that they include NGOs and third-party organisations.

- Permanent budget post in the EU Commission

We suggest that campaign activities become a permanent budget post in the EU Commission in order to avoid the process of applying for e.g. LIFE funding. It could be a model similar to the one used for the Flower Week 2004, with national co-financing in order to ensure a feeling of project ownership at national level.

The promotion of the EU Eco-label should be effectively considered a shared responsibility between the Commission and the Member States, and shared funding is suggested (e.g. 50% from the Commission and 50% from Member States). The Commission could allocate a permanent budget for marketing activities for the EU Eco-label and from this budget the Member States should be able to apply for up to 50% funding of their marketing activities. Giving a higher percentage to new Member States should be considered too.
The percentage of co-funding between the Commission and the Member States can obviously be conceived differently, the basic concept remaining that of support the marketing and promotion activities of the Member States in a permanent way,

If the Commission were to earmark €3 million per year and the Members States were to contribute the other 50%, promotional activities similar to the Flower Week 2004 could be easily carried out each year in half of the Member States.

- Central marketing and promotional unit within the Commission

The establishment of a central unit that develops common campaign strategies for national adaptation and implementation and ensures coordination and synergy between national marketing efforts should be considered. The average result of 3.5 (from 1 to 5) for all the categories of interviewees in the EVER study indicates that there is an interest in a central unit within the Commission.

As shown by the Flower Week project 2004, we suggest a combination of a common EU approach with national variations in order to guarantee a well coordinated strategy and exchange of experience with support and guidance, while all national campaign managers can have the option of modifying the campaign to fit their needs exactly. The strategies must be adapted to local situations and needs, because different means are necessary for different product groups and target groups.

In line with the proposal of the EUEB Policy Management Group, we suggest to establish a reporting requirement for the Member States on which promotion activities they undertake and how much this costs and establish performance criteria for promotion activities at Member State level.
As suggested in the EVER Workshop, we propose that the Commission includes in the Ecolabel website all the experiences from Ecolabel campaigns are available (not only campaigns driven by the Commission, but also other national, regional and local information activities).

- Mandatory Member State Ecolabel promotion and national marketing centres

Making it mandatory for all Member States to promote and carry out marketing campaigns on the EU Eco-label every year, will improve the competitive capability of the Ecolabel, giving the potential adopter a greater opportunity of obtaining a very effective marketing support.

If all Member States in the future are requested to market the EU Eco-label and participate in common information campaigns, it would make a big difference for the prospects for the EU Eco-label. This will avoid failures that were registered in the past, e.g. the fact that Germany didn't participate in the Flower Week campaign 2004, made it very difficult to attract companies that are operating on the German market to the EU Eco-label scheme.

It is recommended, that besides the existing obligation to conduct national promotion activities for the EU Eco-label, it should be mandatory for all Member States to spend at least 20% of the annual fees perceived in each country for common promotion campaigns.

Collecting a proposal made at the EVER Ecolabel workshop, we suggest that all member states establish a national marketing centre within the competent body. Besides conducting national campaign and coordinating campaign activities with the EU marketing unit, the national centres should have a "hotline" for marketing guidance to license holders and a showroom with product examples, meeting facilities etc.

Furthermore, the marketing centres could organize yearly assemblies at the national level for all participants in ecolabelling and other interested parties and the centres could also host dialogue fora for producers and potential customers (see below).

- Dialogue fora for producers and potentially customers

This option builds on increasing dialogue through platforms where license holders and customers can exchange experiences and discusses business opportunities. This can help producers identifying the customers' expectations with respect to the logo, the environmental

information accompanying it, the product performance (both in term of environmental impact and quality), etc.

The fora can be both virtual (on the internet) or discussion panels like the Danish product panel concept. The fora should be coordinated and hosted by the national competent bodies.

- Tools and information materials for marketing and communication

We suggest that the Commission provides effective answers to the need for having tools and information materials (shown by the EVER in-field research): e.g. Point-of-Sale materials and adverts, targeting producers and retailers, as well as having catalogues displaying products with the Flower.

For example, as suggested in the EVER Workshop and by the outcome of the Flower Week 2004, we recommend that a toolbox of marketing means is made available to support license holders' and retailers' own promotion activities.

- Broader use of logo

To loosen the requirements for the look of the Ecolabel logo (size, shape, and colour) and where it can be placed (other than on the product) is another option to be considered.

At the EVER Ecolabel workshop discussing marketing of the European Ecolabel, it was concluded that the logo is not modern and simple enough, but also that changing logo will require very large budgets for marketing effort; especially in Member States where the old logo is well known.
Therefore, we cannot conclude that the EVER study provided evidence supporting the need or the opportunity to change the logo, but instead to change the way in which it is used, e.g.

- Liberalise the size (but oblige license holders to use a minimum size for the logo in promotion activities and advertising, to ensure visibility, as suggested in the EUEB Policy Management Group, 6th meeting),
- Liberalise where it can be placed (companies could even be allowed to use it inside private logos, to strengthen the message)
- Request that the Flower is always accompanied by the name "Eco-label", which is not very known (the name, or an explanatory sentence, can be included in the logo itself)

- Data on the Eco-label impacts on the market

To conduct periodical surveys would provide documentation on consumer demands, market shares and sales of ecolabelled product and, thus, make the market opportunities visible for potential license holders. This option is backed up by the EVER study as there is general consensus among the interview groups with an average result of 3.6 (all interviewees).

B4.c) Potential impact

This option is strongly recommended, as it can produce the following positive impact:

- Guaranteeing promotion and marketing campaigns will attract new license holders towards the Eco-label scheme.
- Information campaigns will increase knowledge about environmental impact of products and benefits of the EU Eco-label among potential license holders.
- Marketing campaigns will increase awareness of the environmental impact of products and thereby interest and demand for eco-labelled products among consumers and professional purchasers.
- Marketing campaigns will increase sales of eco-labelled products and thereby contribute positively to environmental-friendly consumption patterns.

This option can only be fully and effectively implemented by means of a considerable resource deployment by the European Commission and the Member States. In fact, it requires a large and continuous budget to raise and maintain the consumers, customers and other stakeholders' knowledge and interest in the EU Eco-label. The impact of this option will therefore vary according to resource availability.

B4.d) IMPACT PROFILE:

Increase in the number of registrations	***
Improvement of environmental performance	**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	***
Organisational and co-ordination effort by the European Commission	**
Organisational and co-ordination effort by the Member States	***
Economic resources needed	***

*** = considerable
** = moderate
* = low

Option B.5. Harmonisation of the EU Eco-Label with other eco-labelling schemes

B5.a) Rationale

The EU Eco-label exists side by side with many national labels: the Nordic Swan, the German Blue Engel, the French NF Environment, the Dutch Milieukeur, the Austrian Ecolabel, the Lithuanian Write Lily, the Polish Eco Znak, etc.

In general national labels are better known and, at least at present, preferred and are able to guarantee a high competitive potential to producers in many Member States. This can make it hard for the EU Eco-label to enter markets as the consumers find it difficult to differentiate between the labels.

Findings from the EVER study show that 87% of the participants and 75% of the non-participants would choose the European label in preference to a national label. Their main reasons relate to the applicability on the entire European market – "it's an international passport to sell everywhere" (inside the union) and it ease the communication, especially with consumers.
Also over 70% of the interviewed stakeholders do not recommend a national rather than a European label.
While some of the interviewees believe more in an EU label in the longer run, others see this as supplementary and find that both schemes should be kept.

In the short run, the advantages of keeping the national labels are that they cover product groups not covered by the EU Eco-label and that national labels are suited for – and in many cases preferred on – the local markets.

To meet the needs of a EU Eco-label and overcome competition between the European and the national labels, the EVER study clearly shows that harmonisation is the way forward.

With regards to harmonisation the EVER study shows that there is a widespread desire for harmonisation of everything except the logo:

- Identical institutions running the schemes
- Identical performance criteria for identical product groups
- Identical application procedures
- Identical costs
- Identical support for application
- Harmonised information from suppliers, test and other documentation

Furthermore, the EVER study shows a need for harmonisation/specification of how the verification of the documentation should be carried out. Today, it is up to the national competent body to set up rules for the process and this might indicate the possibility of different rules in different countries under the same scheme and thus different stringency of the verification. In some (northern) countries the EU Eco-label has less credibility, because it is believed that it is easier to get the label in other (southern) Member States.

B5.b) Description and ways of implementation

A relevant effort should be made to harmonise the existing eco-labelling schemes. There are the following three ways to proceed.

- National adoption of EU Eco-label criteria

The new EU Eco-label Regulation should in this case make a strong effort of harmonisation with respect to the national schemes, forcing their management bodies to adapt to the rules of the Commission. The new Regulation should make it mandatory for Member States (and national schemes) that, when the EU Eco-label and a national label have different criteria for the same product group, national labels either:

- withdraw that product group from their label (companies then would apply directly for the EU label), or
- adopt the EU criteria word for word (companies would then apply for the EU label and/or the national label as they wish, with a reduction if they apply for both)

Obviously, the feasibility of this measure strongly depends on the capability and willingness of the Commission to impose its rules on Member States. Political consensus on this measure from Member Countries might be very low.

- EU Eco-label adoption of national criteria

The new Ecolabel Regulation should foresee that, where a national label has criteria for product groups not covered by the EU Eco-label, the EU label adopts the national label's criteria. This would involve forming a working group that would examine the criteria (in the light of the EU Eco-label's methodological requirements), completing the market data etc. as necessary, and make a judgement as to whether the criteria are acceptable to the EU Eco-label. These would then be submitted to the Regulatory Committee (or to other bodies, in case of institutional modifications of the scheme) for adoption.
It would be important that at least for the first triennial period of validity, the criteria are exactly the same, as otherwise the process would create yet more situations where different criteria exist in different labels for the same product group. This process would also imply that when the criteria are first revised within the EU Eco-label after the triennial period, the national label would then seriously consider taking on board the revised EU criteria, using one of the two possibilities described above, and discontinue their own parallel revision of these criteria.
This measure, though, would be only rarely applicable, because in most of the cases there will be more than one national scheme having criteria for a certain product group. In the case there is more than one set of national criteria to be considered, the following measure could then be applied.

- EU Eco-label as "umbrella label"

Where both EU Eco-label criteria and national criteria exist for a product group (or more than one national scheme has criteria for the same product group), real harmonisation is needed, and this will mean working on and modifying the criteria.

As above, it will involve common interest groups to work on the harmonisation.
The most effective solution could be the following:

- the EU Eco-label could take into consideration the already existing sets of criteria and define "common baseline criteria" for that specific product group (agreed upon at the EU level by a qualified majority of the Member States or by way of other decision mechanisms, see the previous options)
- the national labels could then be allowed to add extra criteria (or strengthen the criteria proposed from the Commission) for national environmental "hot spots" or other needs to differentiate performance levels. There should be clear rules: for example, the additional or more restrictive criteria should be related to the pre-production and production phase (i.e. only to PPMs: process and production methods)
- once the European "common baseline criteria" are approved, all producers in EU Countries will be allowed to obtain the EU Eco-label for that product group (on the basis of the approved common criteria)

Therefore, after having harmonised the similar product groups existing in national labels, the EU label should act as an "umbrella label" by using the "common baseline criteria. From that moment on, there could even be no new development of Ecolabel criteria by the Commission, but only the harmonisation of newly developed criteria by the national labels (for product groups with European visibility).
Joint initiatives including promotional events, publication materials and newsletters should be continued.

B5.c) Potential impact

This option is strongly recommended, as it can produce the following positive impacts:

- it will increase the availability and visibility of products with the EU Eco-label in the stores.
- It will make more product groups available for potential license holders.
- It will make it easier for companies to apply for different labels as it will mean less testing and paperwork.
- It will help eliminate duplication and provide clearer information to the consumer on how different schemes compare in terms of environmental requirements.
- It could help raise a greater interest in eco-labelling schemes among companies and consumers.
- It will be easier to control the various stages of the process, saving time for both applicants and competent bodies and thereby reducing the cost of running the schemes.

A considerable obstacle to the harmonisation of the national labels and the EU Eco-label, found in the EVER study, is the lack of national administrative and political support.

This option demands resource deployment by the European Commission and the Member States and the impact will therefore vary according to resource availability.

B5.d) IMPACT PROFILE:

Increase in the number of registrations	***
Improvement of environmental performance	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	***
Organisational and co-ordination effort by the European Commission	**
Organisational and co-ordination effort by the Member States	**
Economic resources needed	**

*** = considerable
** = moderate
* = low

Option B.6. Direct support to applicants

B6.a) Rationale

The EVER study focused on the difficulties that companies have to tackle in the Ecolabel implementation process (i.e.: to obtain the label).
In this respect, the literature review emphasised the three following main barriers: the high costs of implementation, the difficulties met in involving and in getting relevant documentation from suppliers and the relatively short product lifecycles, that make the fulfilment of the Ecolabel criteria time-consuming and difficult.

The results of the interviews carried out in the in-field part of the EVER study partially confirm these findings:

- Procedural and organisational barriers were difficult to overcome for those who applied and obtained the EU Eco-label: the three most significant barriers in implementing the EU Eco-label identified by the participants in the scheme are the degree of formality and the documentation required, the difficulties in getting the relevant documentation from the suppliers and the costs of implementation.
- Cost is the highest barrier for potential applicants: if we focus on the opinion of the non-participants (i.e.: the producers that did not choose or were not able to apply for the EU Eco-label), the most relevant barrier in implementing the EU Eco-label is the cost of license and of implementation (including the consultants)
- Technical aspects are seen as less of a barrier: the lack of internal human resources and competence to implement the necessary requirements and the lack of external technical support and information are not mentioned by a very high number of interviewees (they are mentioned less by the non-participants). This is considerably different from the results of previous studies, which identified the "technicalities" of the scheme as a barrier. We have to say, though, that for the interviewed SMEs, these aspects are still a relevant barrier.

The results of the EVER Ecolabel Workshop confirmed that, among the most requested forms of policy incentives, the participants emphasised the need for economic support. In addition to that, technical support, data diffusion and exchange of experiences and knowledge (especially within the supply chain) were also identified as useful potential support measures and incentives.

B6.b) Description and Ways of implementation

Two different types of measures are proposed in order to provide applicants with direct support: technical measures, relating to the provision of know-how and tools and financial incentives, relating to the possibility of subsidising or reducing the costs that applicants are currently facing.

- Technical support

The results of the EVER study pointed out that the diffusion of knowledge about the Eco-label's requirements and criteria, and the information concerning the ways in which these can be fulfilled (including how to find intermediate goods or suppliers that comply with them) can be a powerful tool to foster the development of the scheme. This can be done, inter alia, by the following actions and initiatives:

- A centralised "expertise bureau" can be created within DG Environment, in order to provide technical support for the Eco-label process and, more specifically, to promote networks and linkages between Eco-label experts, companies and users in the Member States. The bureau should also serve as a sort of "on-line" support for Competent Bodies facing problematic situations. In cases which, for example, involve small companies facing relevant technical problems, the bureau should be able to provide solutions or to propose an adaptation or possible simplification of the criteria, according to the specificities of the small company. This bureau can also directly undertake some of the actions proposed here below.
- As has been done sometimes for some product groups, operational guidelines and official user manuals can be defined and published by the Commission (or by Competent Bodies on its behalf), to support potential applicants in understanding and applying the requirements. These tools should be filled with good practices and pragmatic examples of how to comply with the criteria and what kind of process/product improvement could lead to a better performance. It would be extremely useful if these tools could offer a very simple pre-assessment test that enables the interested companies to immediately focus on the key points of the criteria and to understand if it can comply and achieve the EU Eco-label.
- Training initiatives can be sponsored and promoted jointly by the Commission and the Competent Bodies, in order to raise the awareness and competence of the companies on the Flower and to involve its (such as public purchasers). These training initiatives should be organised not as "stand alone" occasions, but to diffuse the abovementioned technical tools.
- A database can be created to favour the development of the EU Eco-label, to enable a wider and more diffused "use" of its achievements (not only to applicants) and to improve supply chain management by applicants (and potential applicants). The database could, first of all, contain all the datasets and the indicators derived from the LCAs that have been carried out in order to define the criteria for each product group. This will be a stimulus for new applicants to understand how criteria were developed, a great technical support for many actors (potential applicants, companies that are using LCA and EPD for benchmarking, companies with a national label, NGOs,…) and will foster performance-based competition. In addition to that, and in order to ease and support the potential applicants in managing one of the most problematic aspect of the EU Eco-label (as it emerges from our interviews), the database can also contain data and information on categories of intermediate goods, availability and average prices on the market and even suppliers that are able to satisfy the Ecolabel requirements over the previous phases of the supply chain and provide guarantees on these aspects.

- Financial support

As anticipated, cost of implementation and adoption of the EU Eco-label still is one of the most relevant barrier for the diffusion of the scheme (especially for potential new applicants). Some proposals can be made to support companies in overcoming this barrier, at different operational levels. The fee system was particularly criticised by the interviewees in the EVER studies, due to the fee levels but, mostly, due to the contrast with the "polluter pays principle".

- In many Member States (e.g. the newly accessed countries) the possibility to rely on direct financial funding (in order to support promotion or pilot projects involving interested companies) can help in diffusing the Eco-label among the "first movers". This kind of support is still essential for the SMEs, which usually suffer from a relevant lack of resources. Support funding can also be still effective in "mature" contexts (like Italy, France or Denmark), to counterbalance the costs connected with the Eco-label adoption. In addition to that, direct support funding is essential to trigger and sustain the development of the Eco-label in new product groups: without support funding (coming from the Life Environment programme and from Structural Funds), the EU Eco-label would not have been so successful in the tourism sector in the Southern EU Member States.
- Different measures can be foreseen to ease the economic burden connected with Ecolabel adoption: subsidising schemes (especially for small companies), rebates for eco-labelled products, favourable conditions for companies with an Eco-label to obtain public funds for investments in technological innovation, process or product upgrading, etc.
- The fee structure can be modified as follows:
    - Cost of assessment and verification should be reduced (also by simplifying the application and verification procedure and introducing flexibility in the requirements, see option B1)
    - The reduction of the annual registration fee for SMEs should be increased from the currently 25% to 50%; the annual fee should not be paid by companies that already have the EU Eco-label for one product and want to obtain the label for another product (even belonging to other product groups)
    - The license fee (0,15% royalty) should be reduced or cancelled for small companies; yearly upper limits should be fixed to a level that enables the collection of funds for sustaining the scheme, but not entailing an excessive effort for those companies that are able to achieve large market shares. If the license fee is not applicable beyond a fixed turnover, than the incentive of having the Eco-label on "big market share" products will be higher.
    - The link with national labels and EMAS costs should be considered for those companies participating in both schemes (see option C1)

B6.c) Potential impact

The effectiveness of the measures described above strongly depends on the resources that will be available to develop them. Supposing that all the proposed initiatives and actions are going to be fully implemented, we can estimate that the impact on the increase of EU Eco-labelled products can be considerable. These measures are "mutually reinforcing" and totally

synergetic. They are able to attract and provide incentives, especially to SMEs, by enabling them to overcome some of the most common difficulties they have to tackle.

As for many of the proposed options and measures, the impact on the environmental performance is linked to the increase in the number of products with the Flower.
Financial support schemes are able to produce relevant indirect effects especially for the consumers (e.g. rebate schemes and their potentially positive effects on prices). Considerable "indirect effects" can also be generated by technical measures, e.g. use of the database and tools by other companies (non applicants) and stakeholders.

No doubt, this option implies a great effort in terms of economic resources, both by the European Commission and by the Member States.

B6.d) IMPACT PROFILE:

Increase in the number of registrations	***
Improvement of environmental performance	**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	***
Organisational and co-ordination effort by the European Commission	**
Organisational and co-ordination effort by the Member States	***
Economic resources needed	***

*** = considerable
** = moderate
* = low

Option B.7. Gradual extension of the EU Eco-label, towards sustainability

B7.a) Rationale

The relevant literature emphasises that:

- consumers show an interest for a possible "sustainability label", few consumers currently buy products with a third-party certified label regarding social issues
- it is feasible to design and set up a "sustainability label", even though this would imply considerable modifications to the current EU Eco-labelling scheme (reduced number of basic criteria, applied on a much wider scale)
- when the EU Eco-label also deals with aspects that are really close to the individual sphere of the consumer, they have more chance of succeeding on the market (the so-called "proximity" effect)

The EVER in-field research showed that:

- Consumer health and safety is already dealt with by many companies, other sustainability issues are not (e.g. social responsibility, fair trade)
- There is only a moderate consensus on a possible EU sustainability label (very low among non-participants)
- In any case, a "soft" solution should be adopted

During the EVER workshop on the revision of the EU Eco-label, the involved stakeholders agreed upon the following indications:

- the motivation for introducing a label including other pillars of "sustainability" in the long run is undisputable: it would benefit both companies and consumers
- there are many doubts and oppositions on timing (the incoming revision seems to be too early), methodological choices and operational ways to do it
- consumer health is an issue that can be easily and effectively integrated into the EU Eco-label
- any eventual attempt of introducing social responsibility issues must be carried out with a very "soft" approach, the EU Eco-label must continue to be a label essentially based on environment-related issues

B7.b) Description and Ways of implementation

On the basis of the findings of our study, we do not recommend the setting up of a new scheme for a "sustainability label" during the forthcoming revision of the EU Eco-label.
The empirical evidence and the positions expressed by the actors involved or interested in the scheme (participants, non participants and stakeholders) clearly indicate that this solution might be premature and too innovative for the current needs of the scheme.
Instead, we propose a gradual introduction into the current scheme of some modifications that can start to pave the way towards some of the eventual needs of an EU sustainability label, stimulating the attention of companies and consumers on some of the connected issues.
The revision could therefore take a first step in this direction, by:

- focussing on the issue of consumer health and safety, strengthening the guarantees that the label provides in this area, and improving the consumer's perception of these guarantees

- developing baseline criteria on social impacts for the new product groups (in parallel with the LCA studies) or within the revision of the existing product groups, in order to experimentally test their feasibility, consistency and acceptability by the interested companies and stakeholders (e.g. child labour, fair trade, etc.)

In order to achieve these objectives, the EU Eco-label should be transformed into a scheme that explicitly refers to "environmental friendly, healthy and safe" products. The basic marketing concept should be as close as possible to that of *total product quality*.
In order to achieve this result, the revision should mainly modify the approach to be followed in the development of the criteria.
The European Commission will have to define a common methodology that will be applied to assess the health and safety-related impacts and to define consistent criteria.
Consumer health and safety mainly concerns the user phase, so an LCA approach could be over-engineered for this purpose. It has to be emphasised, though, that in many cases, health and safety performance in the user phase depends on the pre-production and production choices made by the providers in the supply chain. In light of that, it could be useful to adopt an approach aimed at identifying the "critical points" of the supply chain, that can influence the product performance (such as the HACCP approach in the food sector, which requests the producer to identify, assess and manage each and every circumstance in which a food product gets in contact with potential contamination sources).
Moreover, it has to be emphasised that, for the same reason, supply-chain management by the licensee will be a key factor to guarantee the health and safety performance of the product. This should be considered in defining the criteria for the different product groups.
Once the methodology is defined, it will have to be adopted and applied in the criteria development for new product groups and, progressively, in the revision of existing product groups. The verification system on the applicants will presumably rely mostly on laboratory tests for the product performance and on an assessment of their management control on the supply chain.

As concerns the development of criteria on other social-related issues (child labour, workers' health and safety, non discrimination, etc.), the revision of the scheme can provide for a common guideline on how to develop these criteria. The "social-related" criteria will be developed in parallel with the "official" ones. We are not proposing that these criteria be approved and implemented, but only that their feasibility, effectiveness and acceptability should be tested.
Previous experience and literature clearly show that an LCA approach is totally inadequate in the case of social issues. In this prospect, actually, the criteria should refer to aspects concerning the whole organisation (such as: child labour, welfare, non-discrimination,…) rather then on aspects related to a specific product. Moreover, social issues have a very broad scope and are therefore not easily quantifiable. This means that in order to have a "sustainability label", a much less demanding approach, only considering basic criteria should be used, but on a much wider scale. Even more than in the case of health and safety, companies should have a good chain management system for guaranteeing a good social performance, since they have also a responsibility for what happens in other parts of the production chain. For many companies, monitoring a very complex chain would be very time consuming and expensive.
As one can argue, these potential problems should be practically tackled before starting any official labelling on "sustainability".

B7.c) Potential impact

The "enlargement" of the EU Eco-label to include consumer health and safety issues has the potential to stimulate the interest of many companies, especially those that already have experience in managing and improving their performance in this area – see the EVER results). This will represent a limited change in the scheme, implying easy-to-handle requirements and soft effects on the supply chain, and therefore it will not be a disincentive or a barrier for SMEs.
Moreover, the option has the potential to raise the interest of many consumers and increase the knowledge of the label (and the diffusion of the scheme).
For these reasons, the option can be effectively used for a "big push" to development of the scheme.

The advantages connected with the proposed option are the following:

- the fact that the EU Eco-label is officially extended and explicitly promoted as a label that deals also with consumer health and safety can potentially attract the interest of those companies that place more emphasis in their marketing strategies on the consumer than on the environment (e.g. toys, electric appliances, etc.)
- the same can be true for many consumers: as literature and previous surveys demonstrate, the consumer is more eager to buy products that have a direct impact on his/her "individual sphere" (this is called the "proximity" effect). If the Eco-label becomes a certification that links the impact on the environment with the impact on consumer health and safety, its marketing potential would be much higher
- the inclusion of consumer health can offer an effective opportunity and a good reason to expand the scheme towards the food sector (e.g. exploiting synergies with the organic products), which is identified by many stakeholders as the most interesting option for spurring the diffusion of the EU Eco-label
- a gradual approach will allow for a step-by-step path towards sustainability, with no need to jeopardize the current scheme, and will test consumers' response to the "new issue" of consumer health and safety
- the experimental development of other socially-related criteria, which will not be officially adopted in a first phase, will provide a great chance of testing the potential effectiveness of ad-hoc assessment methodologies

The main disadvantages are:

- the Eco-label will not rely on the marketing "appeal" of the sustainability concept, but only on consumer health and safety (it would be a weak signal for sustainability "supporters")
- including consumer health and safety as a fundamental part of the certification process (and for every product group), can raise industry opposition, as product health and safety is already dealt with by private certification and by mandatory regulation
- developing socially-related criteria in an experimental way can imply a good deal of effort and resource investment, with scarce or unsatisfactory results (assessment methodologies may turn out to be not applicable)

B7.d) IMPACT PROFILE:

Increase in the number of registrations	***
Improvement of environmental performance	*
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**
Organisational and co-ordination effort by the European Commission	***
Organisational and co-ordination effort by the Member States	*
Economic resources needed	*

*** = considerable
** = moderate
* = low

Option B.8. Abandoning the EU Eco-label

B8.a) Rationale

The basic reasoning behind this option is the same as it is for the options relating to the "sudden death" and "slow death" of EMAS.
Actually, the same considerations can be proposed for the two voluntary schemes managed by the European Commission:

- the EU Eco-label is considered by some stakeholders and practitioners as partially unsuccessful and missing some of its targets (i.e.: broad diffusion)
- the size of the problem which the EU Eco-label faces cannot be overcome in the short run
- any substantial improvement of the situation will require decisive measures which come at a high cost (politically and financially) and which are uncertain to succeed.
- there is no need to continue with the scheme, since in many Member States a national label already exists and, on the other hand, other forms of environmental labels (Type II and III) can be effectively proposed and managed within the ISO framework

The motivation for the closure of the scheme is seen in:

- avoiding further costs associated with the EU Eco-label
- freeing up resources which are 'locked' in the administration of EU Eco-label
- opening up opportunities for new initiatives in the field of environmental product management, communication and marketing
- increasing the power of the EU to influence the future of privately managed schemes and national labels in Europe
- potentially expanding product-related environmental management in European companies through a focus on other more effective means

B8.b) Description and Ways of implementation

As proposed for EMAS, in order to implement this option two different ways are possible:

<u>- "Sudden death"</u>

For implementing a "sudden death", the following steps will be necessary:

- The Commission should conduct a high level policy exchange with the Member States to discuss the policy shift. Since some Member States might resist heavily, it would be important to create a group of supporters of the idea.
- The termination would have to be underpinned by a systematic and thorough collection of arguments. That might include a cost-benefit analysis of the closure the scheme.
- The closure of the scheme is likely to be best done by adding a new provision in the current regulation which sets an end to the duration of validity to all provisions of the regulation. The end of the validity would be set in such a way that current Eco-label participants are allowed to enjoy the benefits of the scheme up until the end of their registration period.
- The closure of the EU Eco-label would include the dismantlement of the institutions linked to the scheme (competent bodies, EUEB, etc.)

- "Slow death"

The "slow death" option aims at abolishing the scheme while at the same time to avoid frictions with Member States, heavy criticism of other EU institutions and major discontent by relevant communities.

The easiest way to 'terminate' EU Ecolabel eventually is to slowly reduce all resources allocated to the scheme. That means: no further money spent on promoting and marketing the scheme, no further backing for any public supporting measures (like administrative relief or green procurement), not even direct financial support to participants, etc.

As in the case of EMAS, the selling message of this approach might be that Eco-label after more than 10 years of existence should be able to stand on its own two feet. In practical terms the Commission can start with such a move by reducing staff and resources devoted to the scheme.

Under this option, the revision process itself should be guided in such a way that would not lead to further costs. Especially, the revised regulation should not require any additional commitment of public resources. Possibly any such commitment would even have to be reduced.

B8.c) Potential impact

In contrast to the other options laid down in this report, this option obviously does not have a positive potential impact on EU Ecolabel participation.

Relevant disadvantages of this option are

- The Commission's credibility might suffer, from it abandoning its own scheme.
- The benefits linked to Eco-label adoption by industrial companies (see report 2 of the EVER study) will be lost.
- The opportunities for improving the scheme, described in the Options above, will not be pursuable.
- Liability issues might arise especially if the transition period is set too short. Eco-label participants than might claim damages due to the fact that they invested in the scheme relying on the fact that they could enjoy specific benefits afterwards.
- IPP itself might suffer a loss of credibility, with the loss of one of its cornerstones.
- It would be difficult to gain acceptance of the move among the current proponents of EU Eco-label.
- DG Environment looses an instrument on which it has major influence.
- Closure of one of the only two voluntary instruments which the DG Environment has, might be interpreted as a return to command und control policies.

B8.d) IMPACT PROFILE:

	A15
Increase in the number of registrations	**(*)**
Improvement of environmental performance	**(*)**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**(*)**
Organisational and co-ordination effort by the European Commission	***
Organisational and co-ordination effort by the Member States	**
Economic resources needed	*

*** = considerable
** = moderate
* = low

PART C:

Synergy and integration

Option C1: synergy and integration between EMAS and the EU Eco-label

C1.a) Rationale

One of the main aims of the EVER study was to analyse and assess the possible synergy and potential for integration between EMAS and the EU Eco-label and other policy instruments and tools at the EU and national level.
Few reports, surveys and other pieces of literature have investigated and reported experiences on issues as synergies and possibilities of integrating EMAS, Ecolabel and other product-oriented policy instruments (such as other types of labelling or other IPP initiatives). A significant bulk of empirical evidence can be extracted from several projects dealing with the practical implementation of IPP (Integrated Product Policy) both at the company and at the policy level.
In support of this option, we can report that:

- some studies recommend improving the link between the EU Eco-label and Environmental Management Systems – and in particular with EMAS;
- several studies and applicative projects recommend fully integrating the "product dimension" into the Environmental Management Systems (including EMAS) by means of various assessment and management tools (LCA, LCC, LCM - Life Cycle Management, POEMS – Product Oriented Environmental Management Systems…) or other forms of labelling (especially type III: environmental profiles or EPDs); an interesting fact, is for example, that 75% of the companies that have published a certified EPD are also implementing an ISO-certified or EMAS-registered management system (only 6% of these companies is currently also EMAS registered).
- a restricted number of very operational pilot projects show that this integration can be useful and effective, although currently, in most of the cases, the product dimension is not very well developed within Environmental Management Systems (not even in those implemented after 2001 within EMAS II, in such a way to take into account the product-related "indirect aspects").

Thanks to the evidence collected by the in-field research, the EVER study is able to provide further facts:

- As anticipated, to some extent, the product dimension is already part of EMAS: 72% of the EMAS participants declare that their environmental management systems influence product performance in other phases of the life-cycle and/or in the supply chain. Only 6% state that this influence is "great" (for the others it is "considerable"). The environmental improvement produced by EMAS on product-related indirect aspects (such as the transport phase), though, is still low if compared with the one on direct aspects. The overall impression derived from the interviews is that the potential for integrating the "product dimension" in EMAS is interesting for companies, but far from being fully exploited.
- There is a certain awareness of the potential benefits emerging from a stronger link and synergy between EMAS and the EU Eco-label: 46% of the respondents on both sides (i.e. companies participating in one of the two schemes) sees potential synergies between EMAS and the EU Eco-label. The synergies that could be implemented with the new revision of the schemes are found at the operational, marketing and institutional level, at the same (high) level of interest.

- "Synergy" does not necessarily mean merging the two schemes: slightly more than half of the participants to one of the two schemes (52%) believe that EMAS should become a mandatory requirement to obtain the EU Eco-label; only 14% think that the EU Eco-label should be fully integrated with EMAS, so as to become a mandatory requirement to obtain registration; while a higher number of respondents on both sides (46%) thinks that the Eco-label could become an additional requirement in a more product-oriented EMAS. As a general note, we have to underline that for all the above mentioned answers there is a lack of knowledge, implying a high number of "non respondents" or "don't knows".
- ISO type III labels can be a synergetic tool for both schemes: the majority of respondents (among the participants to one of the two schemes) consider the EPD (or other environmental profile) systems as complementary to EMAS and to the EU Eco-label. As for the previous evidence, it should be noted that a high number of participants on both sides were not able to answer, due to a lack of knowledge on type III labelling.
- Many opportunities were identified (and appreciated) for pursuing integration with ISO type III labels: when it came to operational, marketing and institutional synergies, the respondents showed a generally positive attitude towards many of the proposed opportunities to rely on the complementarities and to exploit the synergies (e.g. common data collection, possibility to support both EMAS and the EU Eco-label with data on the product life cycle, possibility of connecting the development of an EPD or environmental profile to the opportunity of using the EMAS logo on products and/or of communicating product performance in the EMAS statement, etc.).

Linking the two schemes, and also liking to other tools and schemes, was strongly supported by participants in both the EMAS and the Eco-label Workshops, held within the EVER project. The most interesting suggestions collected from the participants, concern the potential integration of the different tools, including EMAS, the Eco-label, LCA thinking, Ecological profiles and voluntary EPD schemes, which "*would create a unique and flexible tool*", as a stakeholder said.
According to the indications emerging from the EVER workshops, a "stepwise" approach with product related requirement adding-on to the existing EMAS requirement should be considered. This should be combined with some further benefits and awards for the participants going through this route.
As an EMAS workshop participant concluded: *"I support stronger cooperation with product-related schemes and regulations, because EMAS + EPD + Eco-label could be very good marketing tools for organisations"*.

C1.b) Description and Ways of implementation

This option relies on two different sets of measures. The first is aimed at fostering and implementing the highest possible level of synergy between the two schemes, while keeping them separate. The second foresees a hypothesis of a new "three step" environmental certification scheme, promoted and managed by the Commission, of which EMAS and Eco-label are two steps.

C1.1. Mutual reinforcement between EMAS and the EU Eco-label

The basic concept underlying this first set of measures is that the revision of the schemes should aim as much as possible at pursuing two objectives:

- on one hand, EMAS and Eco-label must include truly favourable conditions for the organisations that are already participating in one scheme and want to join the other one (and, even more, it must become really convenient to implement them together)
- on the other hand, the two schemes should be more coherent in principle and consistent in practice, also with respect to their requirements, in order to convey to the organisations and to the stakeholders an univocal message of "environmental excellence" (even if by means of different tools)

Obviously, the general purpose is to make it very clear that participating in the two schemes is a "win-win" strategy under various points of view.

In order to achieve these objectives, many actions can be proposed at different levels.

- Requirements:
  - Starting from the EU Eco-label, in the text of the new Regulation it should be explicitly foreseen that, if a company is EMAS registered, all the tests and laboratories analyses on the "would-be" Eco-labelled product can be made in-house (if the company has the appropriate structure) and, consequently, the company should sustain no additional cost.
  - It should also be established that, if a company is registered in EMAS, all the Eco-label requirements concerning the operational and management activities are taken for granted, with no need of further verification, i.e. data collection and processing, checks and guarantees on supply chain management and control, procedures relating to the production planning and operational control, management of environmental aspects (e.g. procedures for separate waste collection foreseen in the Eco-label criteria for paper products), etc.
  - To strengthen the coherence between the two scheme, it can be envisaged that the new Eco-label Regulation also includes some of the basic (and very easy to comply with) EMAS requirements, such as the need to publish an environmental policy, carry out a periodical management review and, even more than that (and slightly more difficult) to periodically conduct an internal audit. It has to be noted that this approach is already applied by the Commission, in an identical way, in the latest New Approach Directive encompassing a "CE" mark (e.g. on building materials). In the case of the EU Eco-label, the ratio for these requirements would be to guarantee the reliability and credibility of the environmental commitment (avoiding that a company that has an Eco-label ignores other relevant site-related environmental aspects) and, at the same time, to push Eco-label companies towards EMAS. In this way, as a matter of fact, having an EMAS management system will automatically cover all the additional requirements.
  - Another Eco-label-specific requirement on supply chain can really empower EMAS: if a company that wants to obtain the Eco-label selects EMAS registered suppliers, than all the criteria regarding the provision of information and guarantees on the relevant life-cycle phases must be taken for granted (it would be enough to demonstrate that the supplier is qualified and to show documents concerning the data and indicators requested for the compliance with the relevant criteria, with no need of further guarantee).

- As concerns the new EMAS, first of all we propose that the Regulation makes it absolutely clear that the highest achievement for the "environmental indirect aspects" relating to the product life-cycle, if possible, is to obtain an EU Eco-label. With that done, all the requirements relating to product indirect aspects of that particular product that has obtained the EU Eco-label (not the whole range of products offered by the company) should be taken for granted and continuous improvement in the product area can be pursued just by maintaining the EU Eco-label.
- EMAS III should also clearly specify that, whenever possible, the Eco-label criteria of a certain product group (especially when they concern the organisation's direct aspects) must be used, whenever feasible, for determining the most significant environmental aspects by those organisations operating: in that product group, in its supply chain or in similar and contiguous product groups
- It should also be foreseen that, when an EMAS applicant operates in a product group for which Eco-label criteria are available, the environmental review of the indirect aspects must include a gap analysis and a positioning with respect to these criteria
- In the two previous cases, the EMAS organisation should also be requested to use relevant Eco-label criteria as targets for their environmental programme (or at least to consider them as a quantified and measurable benchmark, with respect to which it can fix specific targets for "getting closer")
- Finally, the new EMAS regulation must give applicants and participants a strong indication to favour the selection of Ecolabelled products and services as intermediates or auxiliaries, whenever possible. This should be at least strongly suggested, but could even be imposed on EMAS organisations (especially to those operating in non-industrial sectors).
- A last proposal aims at promoting external communication, in order to allow consumers and stakeholders to have access to more complete information on the environmental performance of EMAS and Eco-label participants. It should be made mandatory for companies having an Eco-label to indicate a website or an e-mail where the consumer can request more information on the company and its general environmental aspects and, in parallel, it should be made mandatory for EMAS organisations to include in the Environmental Statement, advertising, business paper, etc. a reference to which further information and data on products and their life cycle can be requested (website or e-mail). In this way, both EMAS and the EU Eco-label can also raise the awareness of their participants about the other scheme.

- Verification:
  - EMAS and the EU Eco-label should have the same procedures for verification. This was one of the most interesting indications emerging from the interviewees and from the workshop. In this way, organisations interested in both schemes will have common verification and documentation controls, exploiting a high level of synergy. Making an integrated verification process available for an organisation (company) aiming at both EMAS and the Eco-label will save the organisation both time, paperwork and money. At the same time it will raise the credibility of the Eco-label verification procedures (which were sometimes criticised during the interview phase), since they will be identical all over the EU.
  - The previous measure implies that the verification process for the Eco-label is radically changed. The first and most important consequence will be that of recognizing a role for Eco-label verifiers and using the EMAS accreditation system to accredit them. In this way, it would be very easy to set up qualification requirements for verifiers doing an integrated verification. This measure will also imply a relevant

effort in order to homogenise as far as possible the verification approaches and to achieve a relevant alignment of documents – such as application dossiers - required for verification. These beneficial consequences will be generated not only for the companies, as less time and resources will be needed for verification and controlling processes by the awarding body or verifier.

- Finally, we can mention a "side-effect", which is strictly connected with the previous measure: a "market" will be created for the verifiers, and this will naturally produce promotion and marketing efforts by the newly accredited verifiers to push this certification opportunity on the industrial market. This will amplify the current awareness of the Eco-label (and its competitive opportunities) within companies.

- Institutional framework:

- In order to improve coherence and consistency between the two schemes, the revision process could envisage that competent bodies are the same for EMAS and the EU Eco-label (as already happens in few Member States). This would guarantee a higher possibility for common development strategies and, potentially, imply fewer resources spent.
- A common institutional set-up should ensure common "institutional support", e.g. for information about synergies, criteria documents, background documents, guidelines, web-sites and other information material, making the synergies of EMAS and the Eco-label known to the user community through a common guidance document.
- Moreover, this can guarantee links between the registration and/or awarding procedures for the two schemes. In order to back this up, the Commission could even foreseen that only one register is available for the public, including participants in the two schemes (e.g. with two separate sections).
- From the institutional point of view, it will be absolutely crucial to ensure rewarding opportunities for organisations with both an EMAS and the Eco-label. They should be further rewarded especially as concerns the implementation, verification and maintenance costs and fees (see the options proposed for each scheme). Moreover, specific and very attractive forms of incentive and subsidy can be foreseen for those participants in EMAS or Eco-label that decide to join the other scheme.
- Finally, a relevant institutional measure would be to ensure integration of EMAS and the EU Eco-label in common public green procurement policies.

- Marketing:

- Increasing the synergy between the two scheme will offer a great opportunity and a good reason to propose a change in the logo of both EMAS and the EU Eco-label. As anticipated in the previous parts of this reports, both logos were criticised by some interviewees for not being very attractive, self-explanatory, appealing for the stakeholders, etc. A radical change was not suggested because of the relevant efforts already made to make them known to the public, and not to loose the current levels of diffusion and awareness. But if the revision strongly aims at pursuing synergy between the two schemes, then this objective can also be achieved by "reforming" both the logos and by making them truly complementary and explicitly "adding-on" one to the other. An impressively effective message can be sent to the consumers and the stakeholders if only one modular logo is conceived for the "environmental certifications" of the European Commission. The full logo will appear for those companies having both EMAS and Eco-label, while only the specific module will be used by participants to one of the scheme. Obviously, this system must be conceived in such a way to absolutely avoid confusion among consumers and stakeholders.

- Another useful measure concerning the schemes' marketing could be making it mandatory for Member States to promote, diffuse, advertise and disseminate the two schemes together. For example: advertising on media should always refer to both schemes, information material should be prepared and distributed in an integrated way, promotion initiatives should always be complementary, etc. This measure will multiply the marketing opportunities, empower the message on the consistency and the potential synergy between the schemes and, last but not least, save resources.

C1.2. Proposal for a "three level" EU environmental voluntary scheme

In order to pursue a more intense and effective integration between the two schemes, and to accept some relevant suggestions emerging from the EVER study, we finally propose a deeper innovation of both EMAS and the EU Eco-label, bringing about a new scheme and relying on different certification opportunities.

The new scheme can be based on a "gradual" approach which foresees three progressive levels of recognition by the European Commission of the organisation's environmental management. The basic concept of this option is to consider environmental management systems as a first step, concerned with the organisation and the way in which it manages its environmental aspects, and then to build on this first level to offer more opportunities for recognizing efforts and initiatives relating to the product's (good or service) environmental management and communication. The top level of the scheme is a recognition of the environmental quality of the product with respect to its competitors.

The new scheme is based on some of the previously described options (so the reader should be aware of what is proposed there).

The technicalities of the new scheme could be summarised in the following methodological and practical steps:

- First level:
  - The first level is concerned with environmental management.
  - EMAS III will represent the first level of the scheme: organisations will be able to obtain a registration for their environmental management system (i.e. with the exception of the environmental statement).
  - In order to obtain first level registration, the interested organisations will have to comply with the requirements of EMAS III. As we have seen, these requirements could eventually be lowered or widened, according to some of the above presented options, to ensure that a considerable number of organisations will easily apply for registration.
  - For example, the "code of principles" approach (see option A7) could be usefully adopted for these purposes, guaranteeing that a wide range of organisations will be interested and able to participate in the first level of the new scheme.

- Second level:
  - The second level will be mostly related to external communication.
  - At this stage, organisations will be allowed to use environmental communication and reporting tools and have them certified by the European Commission.

- These tools could be related: a) to the overall performance of the organisation and/or b) the product (good or service) environmental performance.
    - In case a), the second level will rely on what is currently foreseen for the Environmental Statement, eventually transformed in a more regulated report (see option A5, among the measures proposed for the option "EMAS as a reporting and communication tool").
    - In case b), the second level will rely on the Ecological profiles (e.g. those defined by the EuP Directive) and EPD systems (ISO type III). As foreseen by the option "EMAS with a stronger product dimension" (see option A10), organisations will be able to develop a product environmental declaration and have it recognised by the European Commission on the basis of approved international or national standards. In addition to that, the organisation will have to develop an EPD or Ecological Profiles according to a common PCR (Product Category Rules), approved by the European Commission. This will be necessary, in order to ensure the comparability among the different EPDs and Ecological profiles.

- Third level

- The third level will concern product (good or service) environmental quality, or "excellence".
- The third level foresees the possibility of certifying the environmental quality of the product as "better" or comparatively preferable to similar products, with identical functions and directly competing on the market. The aim of this third level is to make it possible to have a "comparative EU Eco-label" when the criteria have not yet been developed according to the conventional procedures.
- The EU Eco-label will therefore be awarded to the best performing products, selected on the basis of the data and information voluntarily provided by means of the EPDs or Ecological profiles by interested companies.
- More precisely, the Eco-label will be awarded to the relatively best performing products within the same product group. A product group will be delimited by all the products referring to the same PCR (Product Category Rules). In fact, belonging to the same product group and basing on the same PCR, the product performances will be comparable.
- Each year, all the EPDs and/or Ecological profiles that will be published by EMAS organisations (those entering the second level and, therefore, based on recognised standards and harmonised PCR), could be submitted for the EU Eco-label by interested companies and will be analysed and compared by a special task force within the European Commission. This task force will set the performance limits that identify the best performing products. The task force can be composed of the current members of the EUEB, and/or other stakeholders.
- The following year, all the products complying with that limits will be awarded with the EU Eco-label. If, in the meantime, other organisations achieve the second level of the scheme and their EPDs show relevantly better performances, the performance limits will be revised accordingly. Companies will have a time-lag to comply with new performance limits (as for the current EU Eco-label scheme).
- If EU Eco-label criteria already exist for a certain product group, those will be automatically adopted as performance limits. They will be revised only when a new organisation entering the second level of the scheme publishes an EPD or an Ecological profile showing relevantly better performances.

The objectives of this "three level" approach are the following:

- Widening the scope and number of environmental management systems certified (registered) according to an EU-based regulation (EMAS III).
- Enabling those organisations that are mostly interested in communicating with the stakeholders and in marketing their products to use an appropriate and effective tool (EPD, which is currently not very widespread), under the "umbrella" of the European Commission.
- Widening the scope and number of organisations using an "environmental quality" label on their products, by way of a strong enlargement of the current EU Eco-label (by enabling companies operating in product groups where criteria have not yet been developed to obtain the EU Eco-label on different – comparative and provisional – bases).
- Speeding up the process of drafting and approving criteria for awarding the Eco-label for many new product groups, by way of a self-prompting scheme, based on the possibility for any organisation operating in any product group to develop and propose methodological assumptions (PCR) and publish an EPD (based on a LCA approach) that will enable the Commission to rapidly define consistent performance limits.

The access to the three levels of the scheme can be defined in different ways.
A first hypothesis is to make level 1 mandatory for nay organisation that wants to have access to level 2 and 3. An alternative hypothesis can be that level 1 is not mandatory, but in this case equivalent guarantees on the environmental management should be requested (e.g. in the requirements of level 2).

C1.c) Potential impact

A moderate impact on the number of both EMAS registrations and Ecolabelled products can be foreseen for the present option.
Both the proposed measures, in fact, should stimulate and motivate those companies that are interested in emphasising, respectively, the product dimension and the environmental management capabilities. The current numbers of the two schemes, though, demonstrate that these are not overwhelming trends.
The introduction of the ISO type III approach in the "three level" scheme could make it attractive for many more companies, but this is expected to happen only in the long run.

The impact of the option on environmental performance is expected to be moderate, insofar as the additional and "mutually reinforcing" requirements for the two schemes could well lead to a higher attention to the product (for EMAS) and to the site (for the Eco-label) performance.
We can foresee that indirect aspects would especially affect the actors in the supply chain (customers and suppliers). In both cases, these effects can be considerable.

In order to introduce such radical new elements into the schemes, the amount of organisation and co-ordination efforts required by the Commission and the Member States will of course be significant – especially if a new "three level" scheme is created and implemented.

C1.d) IMPACT PROFILE:

	C1.1.	**C1.2.**
Increase in the number of registrations	*	*
Improvement of environmental performance	**	**
Indirect effects (positive consequences for other actors: supply chain, other organisations, consumers,...)	**	**
Organisational and co-ordination effort by the European Commission	**	***
Organisational and co-ordination effort by the Member States	*	*
Economic resources needed	*	**

*** = considerable
** = moderate
* = low

Comparative assessment and ranking of the options

A) Revision of EMAS

1. *Comparative Assessment, Impact index and Effort Index*
2. *Interrelation and Synergy Index*
3. *Final recommendations: top options and support options*

1. The concluding part of this report aims to assess the impacts of the proposed options and, on the basis of a comparative assessment, to rank the most desirable options for the revision of the EMAS regulation.
As a first step, table 1 provides an overall assessment of both the positive and the negative impacts on the scheme in terms of efforts to be made in order to implement the different options.

This table also includes the options relating to possible synergy and integration between EMAS and the EU Eco-label (see part C of this report).
The options A15 "Sudden Death" and A16 "Slow Death" are not included in the following tables[5].

If we focus on the positive consequences that the proposed options can produce, we can firstly identify some "direct effects" on the scheme. These effects are related to the increase in the number of registrations and on the potential improvement in the environmental performance. By summing up the "stars" (* symbol) of each option, referring respectively to the impact on the increase of the EMAS registrations and the impact on environmental performance, we can attribute a value to these effects. By multiplying the two values for each option, we can estimate an index that provides a measure for the direct effects. For example, if we consider the first option (A1 "Institutional incentives"), we can estimate that the connected direct effects are high in terms of number of registration (*** = 3) and rather low in terms of potential improvement of environmental performance (* = 1). Therefore, we can assume that this option will foster the adoption of the current EMAS (implying a small improvement on environmental performance) to a high number of new participants, therefore it will bring moderate direct effects.

As we have seen, there are also some indirect effects linked to the implementation of the options we propose. These effects are connected with positive consequences for actors other than the participants themselves, e.g. the fact that EMAS can be effectively used by public purchasers as a simple tool for selecting suppliers on an environmental basis, the fact that the product dimension can stimulate the adoption of good environmental management practice in the supply chain, etc.

[5] Both options aim at closing the EMAS scheme. They are based on a fundamental judgement that the benefits of closing the scheme may prevail the disadvantages. By contrast, the following tables are based on the assumption that continuation and improvement of the scheme are the better way forward. The tables compare the various options according to their potential for improvement and the efforts and resources needed for such improvements. Therefore, they reflect considerations which cannot be applied to the two options for ending the scheme.

In order to obtain a complete picture of the most effective options, we must therefore sum up the direct effects with the indirect ones. This produces an Impact Index, that is finally able to provide a synthetic measure of all the beneficial effects generated by each option.

Another crucial factor in identifying the "top options" concerns the efforts that both the European Commission and the Member States will have to make in order to design and fully enact the proposed measures, as well as the economic resources that will be needed. In order to obtain an estimated value related to these efforts, we can simply sum up the number of "stars" (* symbol) that are attributed to each option for the above mentioned three levels of effort: organisational efforts by the EC, organisational efforts by the MSs and economic resources. By computing and comparing the Effort Indexes, we can identify the most "cost-effective" options.

Table 1: Comparative assessment, impact index and effort index

	A1. Institutional incentives	A2. Promotion and marketing	A3. Embedment in legislation	A4. Global EMAS	A5. Communication tool	A6. Mandatory EMAS	A7. Code of principles	A8. Standard of excellence	A9. Targeting SMEs	A10. Product dimension	A11. Cluster approach	A12. Integration of CSR issues	A13. Banking and insurance	A14. EMAS for P.A.	A17. Business as usual	C1.1. Mutual reinforcement with Ecolabel	C1.2. "Three level" EU voluntary scheme
a) Increase in the number of registrations	3	3	2	1	2	2	3	1	2	1	2	1	1	1	1	1	1
b) Improvement of environmental performance	1	1	2	1	1	1	1	3	1	2	1	1	1	1	1	2	2
c) Direct effects (a x b)	3	3	4	1	2	2	3	3	2	2	2	1	1	1	1	2	2
d) Indirect effects	3	2	2	1	1	1	2	1	1	2	2	2	2	2	1	2	2
e) Impact index (c + d)	**6**	**5**	**6**	**2**	**3**	**3**	**5**	**4**	**3**	**4**	**4**	**3**	**3**	**3**	**2**	**4**	**4**
f) Organisational and co-ordination effort by the EC	1	2	3	2	2	1	3	3	3	1	2	3	1	2	1	2	3
g) Organisational and co-ordination effort by the MS	3	3	2	1	2	2	1	1	3	1	1	1	1	2	1	1	1
h) Economic resources needed	1	3	1	1	1	1	1	1	3	1	1	1	1	1	1	1	2
i) Effort Index (f + g + h)	**5**	**8**	**6**	**4**	**5**	**4**	**5**	**5**	**9**	**3**	**4**	**5**	**3**	**5**	**3**	**4**	**6**

2. A second step of the comparative assessment regards the possibility of implementing the options together, by pursuing potential synergies. This will be a crucial aspect for the revision of the scheme: in fact, the proposed options should be evaluated and selected also on the basis of their capability to reinforce each other and to strengthen their effects by relying on the complementarities with other options. To this purpose, we propose a cross-analysis of the relationship between each option and all the others. The analysis is aimed at emphasising if and how the options can be used in a mutually reinforcing way, or if they rather have to be considered as alternatives to one another.
Table 2 reports the results of the cross-analysis. In the cases where, as it can be seen, there is a strong mutual reinforcement between some options (scoring 2), we suggest implementing

them together. The options that are most synergetic with all the others should be considered as particularly effective in the light of the revision.

Table 2: Interrelation Table and Synergy index

	Institutional incentives	Embedment in legislation	Global EMAS	Communication tool	Code of principles	Promotion and marketing	Product dimension	Banking and insurance	Integration of CSR issues	Cluster approach	EMAS for P.A.	Targeting SMEs	Standard of excellence	Mandatory EMAS	Mutual reinf. With Ecolabel	3 level EU voluntary scheme	Business as usual
Institutional incentives		2	0	1	-1	2	1	1	1	1	1	1	2	0	0	0	-1
Embedment in legislation			0	2	-1	1	1	1	0	1	2	1	2	2	1	1	-1
Global EMAS				1	2	1	2	0	1	0	0	1	1	-1	0	0	0
Communication tool					-1	1	2	2	2	0	0	1	1	0	1	2	-1
Code of principles						1	-1	0	1	0	-1	2	-1	-1	1	1	-1
Promotion and marketing							1	1	1	2	1	1	1	0	1	1	-1
Product dimension								0	0	1	0	0	1	0	1	2	-1
Banking and insurance									1	1	0	1	2	0	0	0	-1
Integration of CSR issues										0	0	0	1	-1	0	0	-1
Cluster approach											1	2	0	0	0	0	-1
EMAS for P.A.												1	0	1	0	0	-1
Targeting SMEs													-1	-1	0	0	-1
Standard of excellence														-1	0	0	-1
Mandatory EMAS															-1	-1	-1
Mutual reinf. with Ecolabel																1	-1
3 level EU voluntary scheme																	-1
Business as usual																	

Note:
2 : strong mutual reinforcement
1 : synergetic
0 : neutral
-1 : non compatible

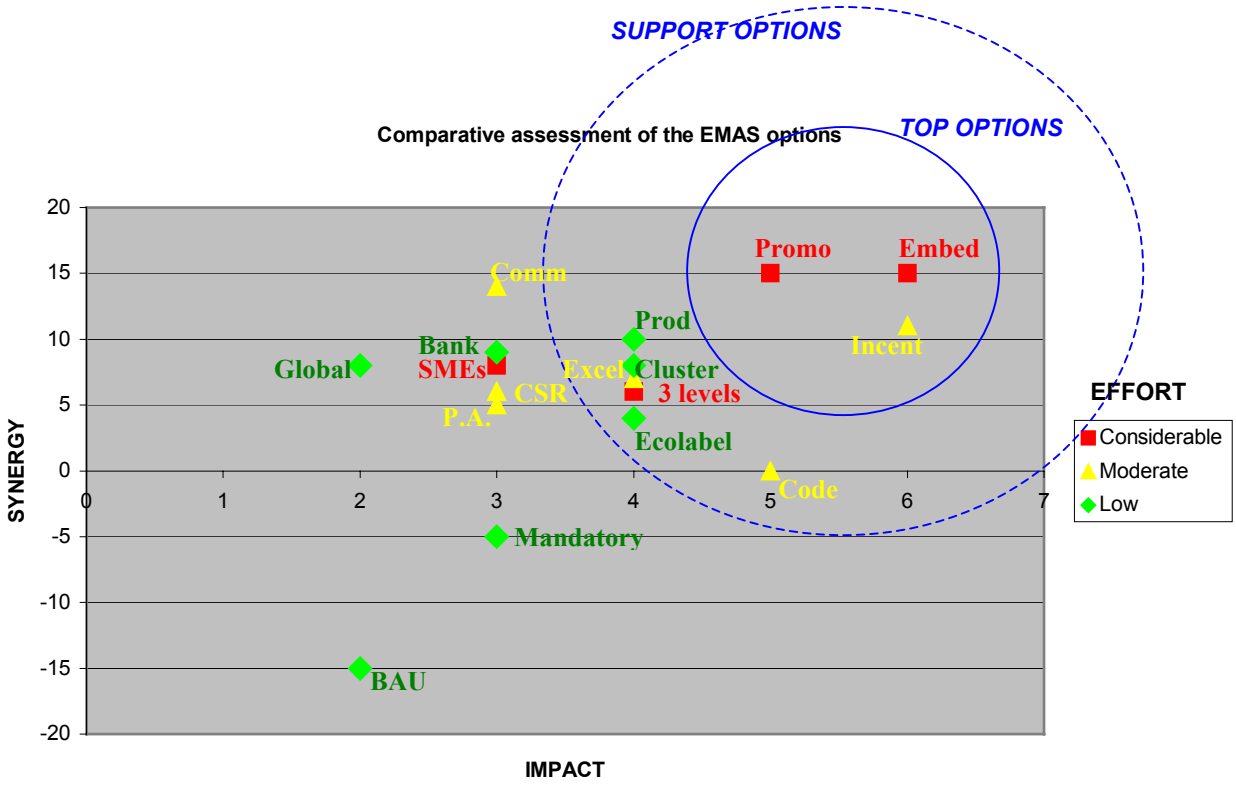
In order to identify the "top options" for the EMAS revision, we also create a Synergy Index, which estimates the capability of each option to be used in co-ordination and co-operation with the others. Even if it is a rough measure, this Index is able to measure the extent to which each option is synergetic, neutral or not compatible with the rest of the options.
For each option, the Synergy Index is calculated simply by summing the corresponding cross-values with all the other options (in rows and columns).

A comparison between the three proposed Indexes provides an overall picture of the different impacts produced by the options.
In Table 3, the options are coloured according to the efforts needed for their implementation (on the basis of the Effort Index), adopting a "traffic light" approach:

- Green light for easy-to-implement options
- Yellow light for options implying a moderate effort
- Red light for options implying a considerable effort

Table 3: The option "traffic light"

	A1. Institutional incentives	A2. Promotion and marketing	A3. Embedment in legislation	A4. Global EMAS	A5. Communication tool	A6. Mandatory EMAS	A7. Code of principles	A8. Standard of excellence	A9. Targeting SMEs	A10. Product dimension	A11. Cluster approach	A12. Integration of CSR issues	A13. Banking and insurance	A14. EMAS for P.A.	A17. Business as usual	C1.1. Mutual reinforcement with Ecolabel	C1.2. "Three level" EU voluntary scheme
IMPACT INDEX	6	5	6	2	3	3	5	4	3	4	4	3	3	3	2	4	4
SYNERGY INDEX	11	15	15	8	14	-5	0	7	8	10	8	6	9	5	-15	4	6
EFFORT INDEX	5	8	6	4	5	4	5	5	9	3	4	5	3	5	3	4	6



3. A final step can be undertaken to provide a ranking of the proposed options, according to their potential effectiveness and costs.

The above reported graph is an attempt to map the options, according to:

- their whole impact (measured on direct and indirect effects, by the Impact Index on the X axis)
- their potential for synergy (measured by the Synergy Index on the Y axis)
- the necessary efforts (indicated by the colours, with the "traffic light" approach)

As it can be easily deducted from the graph, the "top options" are:

- A1. Institutional incentives
- A3. Embedding in legislation
- A2. Promotion and marketing

It should be noted that these three options are synergetic with one another, as clearly emerges from their description (see part A).
But other key support options can be recommended, in order to strengthen the impact of the previous ones or, more in general, to improve the effectiveness of the revision process. We can split these options in two sub-groups.

The first group is composed of some support options that can be strongly synergetic with the top ones, and that can strengthen their effects:

- A10. Product dimension
- A11. Cluster approach

The second group refers to support options with a lower Synergy Index (because of their higher innovativeness), but which can be usefully taken into consideration for a more radical revision process:

- A8. Standard of excellence can be an option to strongly differentiate EMAS from ISO 14001
- C1.2 Three level EU voluntary scheme and C1.1 Mutual reinforcement with the EU Eco-label are aimed at exploiting all the possible ways to better integrate the two voluntary schemes managed by the European Commission
- A7. Code of principles can be particularly effective in upgrading EMAS with respect to the other certification systems and, at the same time, make it simpler to participate in the scheme.

B) Revision of the EU Eco-label

1. *Comparative Assessment, Impact index and Effort Index*
2. *Interrelation and Synergy Index*
3. *Final recommendations: top options and support options*

1. As has been done for EMAS, we can further develop the Impact profiles of all the proposed options, in order to assess their potential effectiveness. The table reported below provides a general comparative assessment of the different options in sight of the EU Eco-label revision. Once again, options relating to "Synergy and Integration" (Part C) have been included.
On the basis of the computation of the values relating to the direct and indirect effects, we can propose the synthetic assessment indexes for the selection of the different options.
By summing up the stars that have been attributed to each option for the two potential impacts, we can obtain the following Table 1. The Impact Index was created using the same approach as that used for the EMAS-targeted options: the number of stars (* symbol) relating to the potential to increase the number of Eco-labels has been multiplied by the number of stars relating to the potential improvement of environmental performance, resulting in a value that estimates the "directs effects".
As could be expected, among the options that could potentially exert the most significant impacts, especially in terms of increase in the number of Eco-labels (as a component of the direct effects) and in terms of indirect effects, are those referring to Fiscal Incentives and Green Procurement.
Relevant impacts are also produced by options that foresee to modify the existing scheme. In particular, the option encompassing a change in the content (especially with reference to the widening of the product groups) would provide a considerable "push" to the scheme.
Finally, Promotion and marketing and Direct support were very much requested by the interviewees and the participants in the EVER workshop.

A second index can be proposed, as for EMAS, with respect to the efforts needed to implement the different Eco-label options. This index was created, as in the previous chapter, by summing up the "stars" that have been attributed to the (negative) impacts in terms of organisational, co-ordination and economic efforts, necessary to implement the different options.

Table 1: Comparative assessment, impact index and effort index

	B1.1: Structures and decision powers	B1.2: Outsourcing and "privatisation"	B1.3.: Streamlining the application process	B1.4.: Degree of centralisation of administration	B2.1.: Fiscal incentives	B2.2.: Green procurement	B2.3.: Regulation	B2.4.: Mutual reinforcement with other schemes	B.3.: Changing content of the Ecolabel	B.4.: Promotion and marketing	B.5.: Harmonisation of eco-labelling schemes	B.6. Direct support to applicants	B.7.: Gradual extension towards sustainability	C1.1. Mutual reinforcement with EMAS	C1.2. "Three level" EU voluntary scheme
a) Increase in the number of registrations	2	1	1	2	3	3	2	2	3	3	3	3	3	1	1
b) Improvement of environmental performance	2	1	1	1	2	2	2	2	2	2	1	2	1	2	2
c) Direct effects (a x b)	4	1	1	2	6	6	4	4	6	6	3	6	3	2	2
d) Indirect effects	3	1	1	1	3	3	3	2	3	3	3	3	2	2	2
e) Impact index (c + d)	**7**	**2**	**2**	**3**	**9**	**9**	**7**	**6**	**9**	**9**	**6**	**9**	**5**	**4**	**4**
f) Organisational and co-ordination effort by the EC	1	1	1	1	3	2	3	2	2	2	2	2	3	2	3
g) Organisational and co-ordination effort by the MS	1	1	1	3	3	3	2	1	1	3	2	3	1	1	1
h) Economic resources needed	2	1	1	1	3	1	1	1	3	3	2	3	1	1	2
i) Effort Index (f + g + h)	**4**	**3**	**3**	**5**	**9**	**6**	**6**	**4**	**6**	**8**	**6**	**8**	**5**	**4**	**6**

2. Furthermore, an interrelation table is proposed also for the EU Eco-label, in order to emphasise what kind of relationship exists between all the proposed options.
As it has been previously explained, the cross-analysis between each couple of options aims at evaluating the possibility of implementing them together and provides an assessment value that varies from 2 (strongly reinforcing) to –1 (non compatible or even alternative).
As it emerges from Table 2, the "Outsourcing" option is the "more incompatible" with the others, owing to the fact that, if the scheme is privatised, many of the supporting measures cannot be undertaken by the Commission (promotion and marketing, direct support, etc.).
On the opposite, strong mutual reinforcement is acknowledged between many options that aim at promoting and supporting the scheme with different forms of external incentives and that promote the integration and harmonisation with other schemes.

Table 2: Interrelation Table and Synergy index

	B1.1: Structures and decision powers	B1.2: Outsourcing and "privatisation"	B1.3.: Streamlining the application process	B1.4.: Degree of centralisation of adm	B2.1.: Fiscal incentives	B2.2.: Green procurement	B2.3.: Regulation	B2.4.: Mutual reinf. with other schemes	B.3.: Changing content of the Ecolabel	B.4.: Promotion and marketing	B.5.: Harmonisation of eco-labelling schemes	B.6. Direct support to applicants	B.7.: Gradual extension towards sustainability	C1.1. Mutual reinforcement with EMAS	C1.2. "Three level" EU voluntary scheme
B1.1: Structures and decision powers	0	1	1	1	1	1	1	1	1	0	1	0	-1	-1	
B1.2: Outsourcing and "privatisation"		0	0	-1	-1	-1	1	0	-1	-1	-1	0	-1	-1	
B1.3.: Streamlining the application process			1	1	0	0	1	1	1	1	1	0	0	0	
B1.4.: Degree of centralisation of administration				1	0	0	1	1	2	0	1	0	0	0	
B2.1.: Fiscal incentives					2	1	1	0	2	1	1	1	1	1	
B2.2.: Green procurement						1	1	2	2	1	2	1	1	1	
B2.3.: Regulation							1	2	1	1	1	1	0	0	
B2.4.: Mutual reinforcement with other schemes								2	2	2	1	1	0	0	
B.3.: Changing content of the Ecolabel									2	0	0	1	1	1	
B.4.: Promotion and marketing										1	2	2	2	2	
B.5.: Harmonisation of eco-labelling schemes											1	0	0	1	
B.6. Direct support to applicants												2	2	2	
B.7.: Gradual extension towards sustainability													0	0	
C1.1. Mutual reinforcement with EMAS														1	
C1.2. "Three level" EU voluntary scheme															

Note:
2 : strong mutual reinforcement
1 : synergetic
0 : neutral
-1 : non compatible

An additional step is to further develop the Synergy Index and use it to "map" the proposed options according to the assessment performed.

As in the case of EMAS, the Synergy Index aims at synthetically measuring the capability of each option to be designed and implemented together with other options, in order to strengthen its potential effectiveness. The Synergy Index is created in a very simple way: for each option, the algebraic sum of all the corresponding cross-values is used as a synthetic assessment of its compatibility with all the other ones.

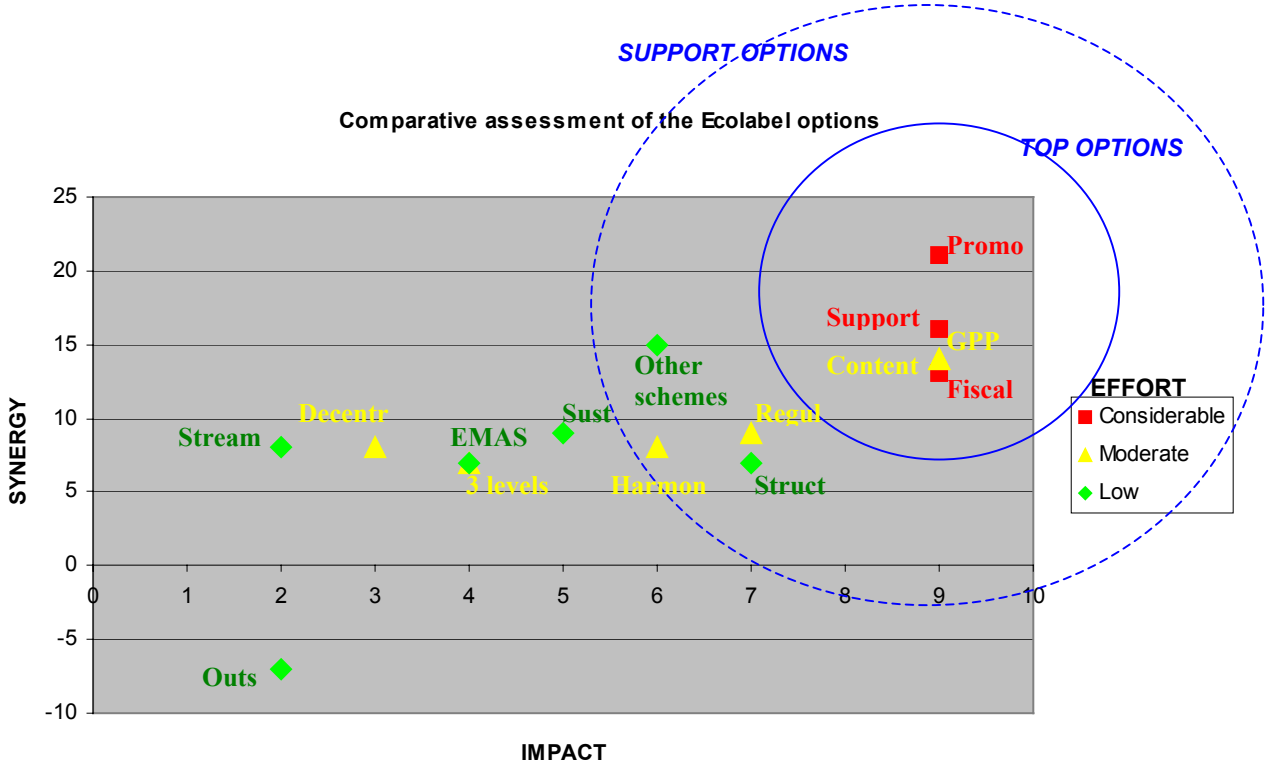
Table 3, proposed below, provides an overall picture of the three indices.

The options are coloured according to the efforts needed for their implementation (on the basis of the Effort Index) according to a "traffic light" approach:

- Green light for easy-to-implement options
- Yellow light for options implying a moderate effort
- Red light for options implying a considerable effort

Table 3: The option "traffic light"

	B1.1: Structures and decision powers	B1.2: Outsourcing and "privatisation"	B1.3.: Streamlining the application process	B1.4.: Degree of centralisation of administration	B2.1.: Fiscal incentives	B2.2.: Green procurement	B2.3.: Regulation	B2.4.: Mutual reinforcement with other schemes	B.3.: Changing content of the Ecolabel	B.4.: Promotion and marketing	B.5.: Harmonisation of eco-labelling schemes	B.6. Direct support to applicants	B.7.: Gradual extension towards sustainability	C1.1. Mutual reinforcement with EMAS	C1.2. "Three level" EU voluntary scheme
IMPACT INDEX	7	2	2	3	9	9	7	6	9	9	6	9	5	4	4
SYNERGY INDEX	7	-7	8	8	13	14	9	15	14	21	8	16	9	7	7
EFFORT INDEX	4	3	3	5	9	6	6	4	6	8	6	8	5	4	6



3. On the bases of the Indices elaborated above, we finally map the options according to the three dimensions.

As one can see in the graph above, the "top options" that are able to provide a "big push" to the Eco-label scheme, and can be implemented in a very synergetic way, are the following:

- B.4.: Promotion and marketing
- B.6. Direct support to applicants
- B.3.: Changing content of the Eco-label
- B2.2.: Green procurement
- B2.1.: Fiscal incentives

These options can be usefully supported by other key options, which imply a slightly lower implementation effort:

- B2.4.: Mutual reinforcement with other schemes
- B2.3.: Regulation
- B.5.: Harmonisation of eco-labelling schemes
- B1.1: Structures and decision powers

EVER:
Evaluation of EMAS and Eco-Label for their Revision

Report 2:

RESEARCH FINDINGS

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26 December 2005

Introduction

The EVER study has been carried out on behalf of the European Commission, DG Environment by a consortium of consultants led by IEFE – Università Bocconi, (IT). Other partners in the consortium have been Adelphi Consult (DE), IOEW - Office Heidelberg (DE), SPRU - Sussex University (UK) and Valør & Tinge A/S (DK).

The fundamental aim of the EVER study has been to provide recommendations for the revision of two voluntary schemes managed by the European Commission: EMAS and the EU Eco-Label.

The recommendations have been elaborated by the EVER consortium relying on two kinds of evidence:

- evidence collected by way of a "desk research", based on a literature review on existing evaluations, analysis and other studies focused on the two schemes;
- evidence collected by way of an "in-field" research, carried out through consultation and interviews with a diverse and broad group of actors representing the main stakeholder and organisation categories, as well as all Member States.

The Recommendations and Options for the revision of the two schemes, resulting from the research phase, are motivated, described and assessed in Report 1 of the EVER study.

The present report presents the findings of all the research activities on which those Recommendations and Options are grounded. The reader will therefore find in the following chapters an accurate and in-depth description of the findings resulting from both the "desk" and the "in-field" research.

In the attempt of guaranteeing the readability of this report, only the most significant findings of the thorough "in-field" research are included. The reader will find the details on the full results of the "in-field" research in the following Annexes to the EVER study:

- Annex I "Interviews: methodology and summary of the results" includes an explanation of the approach followed in the selection of the sample and offers a brief summary of the main results of the interviews.
- Annex II "Workshops for the revision of the two schemes", includes detailed reports on the outcomes of the workshops organised and held in Brussels on Sept. 26th and 27th . During these workshops, the findings of the research phase were presented, discussed and enriched through a stakeholder-engagement exercise, involving a relevant number of experts, institutions, companies, practitioners and NGOs.
- Annex III "Case studies based on 'on-site' visits", describes the empirical evidence collected with respect to five interesting experiences on the application of EMAS and the EU Eco-Label.
- Annex IV "Detailed results of the interviews" includes all the results of the direct interviews from the complete questionnaires.

Although this report is the result of a common and co-ordinated effort by all the members of the EVER consortium and by the different research teams, each partner had the main responsibility of one (or more) research area(s) of the study, with particular reference to the literature review. Each chapters of this report corresponds to one of the research areas of the EVER study, that were originally foreseen and requested by the call for tender.

In the Index of the report, each chapter will be therefore followed by the specification of the partner who had the responsibility of that research area. This does not necessarily mean that the chapter was written without the essential co-operation of other partners and under the co-ordination of the consortium leader. In some cases there was a joint responsibility of a research area between two partners.

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Part A: EMAS

A1. CONTRIBUTION OF EMAS TO THE IMPROVEMENT OF ENVIRONMENTAL PERFORMANCE

In this chapter we discuss the impact of EMAS on the environmental performance of organisations. The first paragraph of this chapter presents a number of methodological problems that make it necessary to be very cautious when drawing conclusions from research efforts in this area. The second paragraph evaluates the impact of EMAS on environmental performance. The third paragraph briefly reviews literature that has addressed the effect of other EMS schemes (e.g. ISO 14001) on environmental performance. Finally, the fourth paragraph presents the conclusions of our analysis and discusses policy implications.

A1.1. METHODOLOGICAL ISSUES

The widespread adoption of formal environmental management systems in companies has triggered a large number of research projects, evaluations, dissertations and doctoral theses on the operation, effectiveness and cost-efficiency of EMSs. Only a small part of this literature, however, aims to assess the environmental effectiveness of the EMAS scheme using a robust methodology. Three main approaches can be distinguished:

1. Quantitative analysis of eco-efficiency and impact indicators: Quantitative measures of impact on the environment are either published by companies themselves or by external bodies. They constitute the most objective indicator of environmental performance but are difficult to compile, compare and analyse. The scope of environmental effects they address is limited, as their focus is on the direct environmental impact of specific facilities, usually not including product lifecycle or organisational re-design and innovation aspects.

2. Environmental management indicators: Indicators relating to environmental management are for example the number of non-compliance events, accidents, nuisance complaints, and prosecution cases brought against an organisation. These indicators are relatively easy to compile and can give an indication of changes in environmental management and performance. They do not, however, provide a comprehensive assessment of actual environmental impact.

3. Interview and survey data: Interviews and surveys with EMAS organisations typically address questions about the perceived impacts of EMS implementation on environmental performance. While this approach makes it possible to explore organisational effects of EMAS implementation and a broader range of environmental issues, it relies on subjective data and is vulnerable to biases and imprecision in respondents' answers.

Whether and to what extent EMAS improves the environmental performance of organisations is difficult to assess and a matter of significant controversy in the literature. This may appear surprising, given that the continual improvement of environmental performance is a key objective of the EMAS regulation and given that EMAS organisations are required to publish environmental data. The difficulty of assessing the link between EMAS and performance stems from a number of methodological challenges:

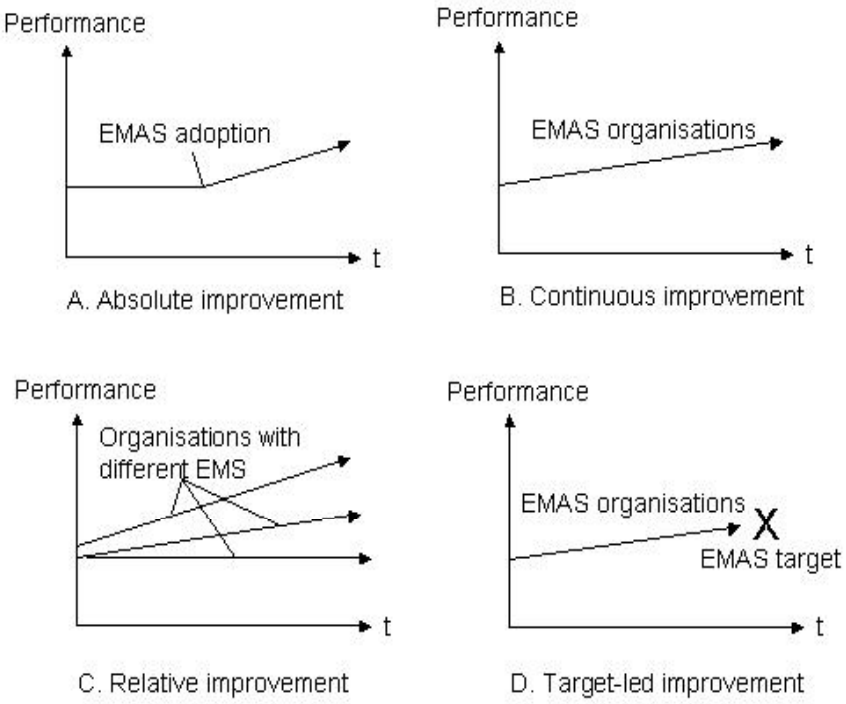
- *Defining performance improvement:* Performance improvement can be operationalised in very different ways, for example as absolute reductions of emissions or improved eco-efficiency; as short-term or long-term improvement; an upwards performance trend or one which is better than that of similar organisations; and so on. In practice, organisations will usually see improvement on some indicators and worsening on others. Therefore, evaluating overall performance trends is difficult and involves controversial judgements about the relative importance of different issues.
- *Establishing cause/effect relationships*: The environmental performance of companies is characterised by a strong inherent variability, e.g. due to short and medium term changes in capacity utilisation, raw material prices, product characteristics, etc. This makes it difficult to assess whether a change in performance is caused by EMAS or by other factors. Shifts in performance may also be the outcome of larger business decisions (e.g. outsourcing or re-location of resource-intensive production steps, plant modernisation) or external pressures (e.g. environmental legislation, media reporting). There may also be uncertainty about the direction of causality because organisations with good performance may be more (or perhaps less) likely to adopt EMAS.
- *Data availability:* Although environmental statements provide quantitative data on performance of EMAS organisations, there are a number of problems with the availability of data: lack of harmonisation (indicators, measurement units), different reporting levels (process, site, firm, group), lack of time series data, insufficient information on products, processes and output etc. Because organisations that have not adopted EMAS usually have no or very limited obligations to report environmental performance, comparisons between EMAS and non-EMAS organisations are difficult to make.

These difficulties and the range of approaches to address them explain that studies have come to different results. Although the literature does not provide a simple answer to the question of EMAS effectiveness, a number of recent studies have produced interesting insights, which will be summarised in the following paragraphs.

A1.2. THE IMPACT OF EMAS ON ENVIRONMENTAL PERFORMANCE

We have adopted the following structure for the classification of effects of EMAS:

- Absolute improvement: in this sub-section we focus on whether EMAS certification is associated to absolute improvements in participants environmental performance.
- Continuous improvement: in this sub-section we assess whether EMAS certification is associated with a *continuous* improvement in participants' environmental performance, i.e. whether EMAS helps to sustain a positive improvement trend over time.
- Relative improvement: the aim of this sub-section is to determine the nature and extent of the differences between the environmental performance of EMAS certified organisations and those with other types or no EMSs.
- Target-led improvement: In this section we discuss the link between EMAS certification and a company's environmental target setting and achievement, both in the context of the EVER interviews and previous studies.



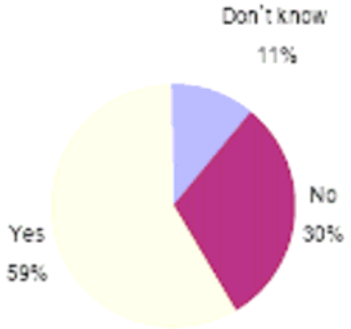
A1.2.1. EMAS and absolute improvements in environmental performance

a)- Interview results

The validity of interview results on the EMAS / performance link is limited by the fact that less than two thirds of EMAS participants interviewed could confirm that their organisation measures its environmental performance on a regular basis.

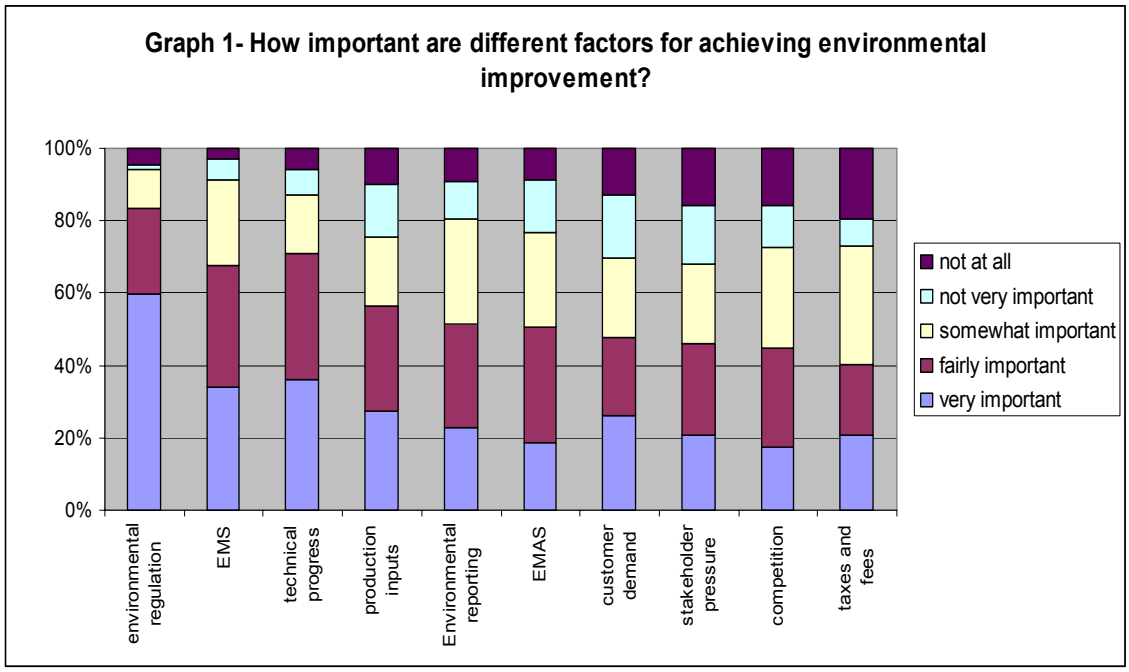
Does your organisation measure its environmental performance on a regular basis?:

Average:	1.5286
Standard Deviation:	0.7
Min:	1.0
Max:	3.0
Number of observations:	70.0
No answer:	0.0

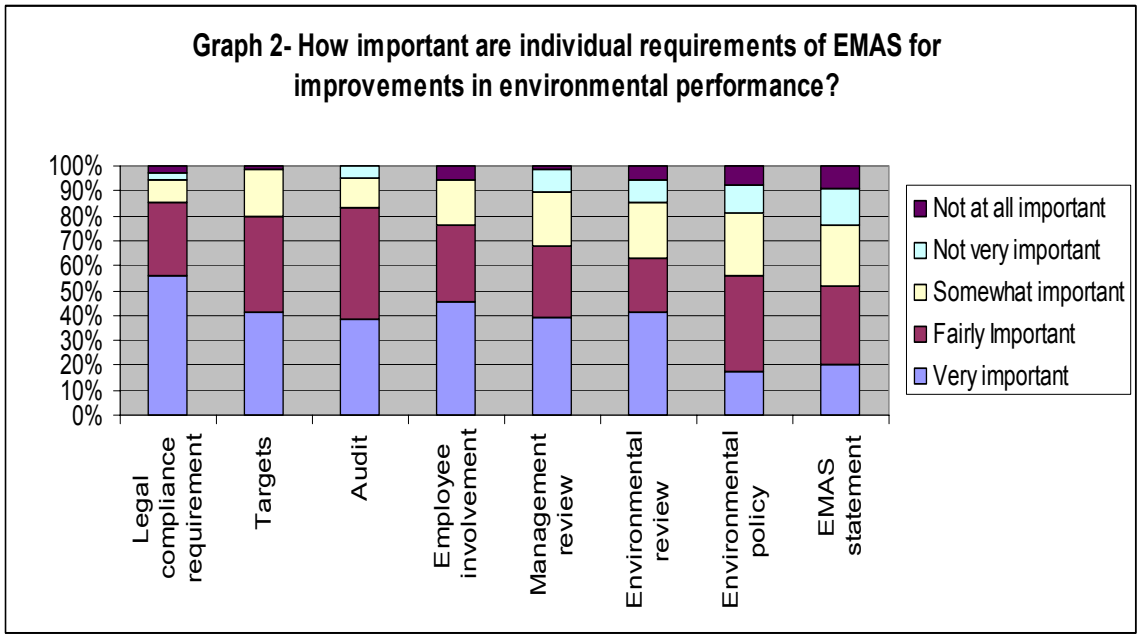


Almost all EMAS participants (94%) claim to have experienced improvements in environmental performance in recent years (47% of respondents report that their environmental performance has "improved much"). When asked about the extent to which different factors contribute to environmental improvement in organisations, 76% of respondents consider that EMAS is important (18% consider it very important, 31% fairly important and 26% somewhat important). Nevertheless, other factors, especially "environmental regulation" and "technical progress" are reported to have a

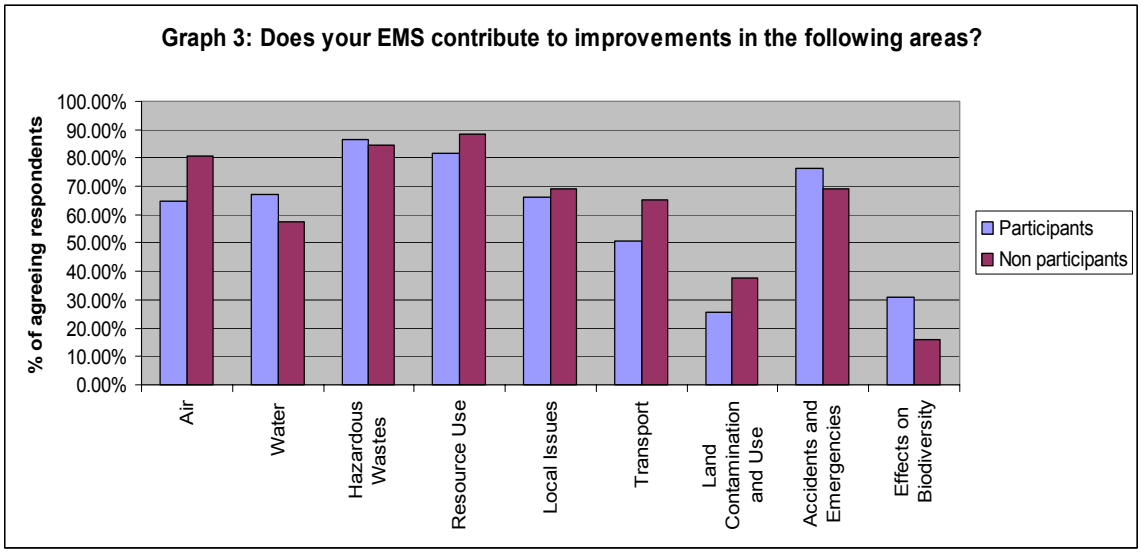
more important effect on environmental performance (with 59% and 36% of respondents considering these factors "very important").



Asked to identify individual EMAS requirements that help achieve improvement in practice, participants rate the requirement for legal compliance, employee involvement, targets, and the audit most highly. Environmental policy, statement and review are elements also seen to make an important contribution, but are ranked slightly lower.



According to the respondents, EMAS contributes to improvements particularly in the areas of *solid and hazardous waste* (mentioned by 86% of respondents), *resource and energy use* (82%), and *incidents and accidents* (76%). Improvements in the areas of emissions to air (65%) and releases to water (67%) are also important. On the other hand, the contribution of EMAS was more limited in the areas of contamination and use of land (26%) and effects on biodiversity (31%).



In summary, the interviews show that EMAS is perceived to have a positive effect on environmental performance, especially in facility-related aspects such as waste, water and air pollution. There are, however, other drivers of environmental performance which are more important (regulation and technical progress) and of similar magnitude (cost of production inputs, customer demand, stakeholder pressure, competition).

b) Literature review

There is a certain consistency in the broad direction of the findings, even though some studies (e.g. UNI/ASU 1997) adopt a generally more optimistic tone than others (e.g. FEU 1998; Wagner 2002). In general, researchers found that a majority of respondents reported a moderate level of environmental effectiveness stemming from EMS adoption, although a considerable variability between companies was also observed (Steinle and Baumast 1997).

Key findings include:

- In their survey of 27 German EMAS registered companies and analysis of 200 environmental statements, the Research Centre on European Environmental Law (FEU) found that EMAS implementation brings an improvement in regulatory compliance (FEU (1998)).
- A survey of German EMAS companies found that the adoption of the management system has had a positive impact in a range of areas (especially waste generation, resource use and water consumption), but was unable to quantify the magnitude of improvement (UNI/ASU 1997).
- Using the same list of environmental aspects in a survey of French EMAS sites, (Schucht 2000) obtained similar results (reduction of liquid effluents and water pollution is reported as another important effect in the French case). While EMAS registration was seen as a

driver towards environmental improvement, it was perceived to have less importance than other factors such as regulatory or technological ones.

- Steger (2000) concluded that EMS (including EMAS) support compliance but pointed out that it is difficult to determine the actual environmental effects of better compliance because non-compliance is often concerned with formal infringements rather than material breaches. He found, however, little evidence that EMS are a strong autonomous driver for performance improvement. Most respondents in his study held the view that objectives of the company could also have been attained without an EMS. He also found that external stakeholders tended to have a more positive view of the costs and benefits than companies themselves.
- In their econometric analysis of the data obtained through a survey of 2000 European companies, Johnstone et al. (2004) found that EMSs (including both ISO 14001 and EMAS) played "*a distinct role in encouraging firms to undertake measures to improve their environmental performance in a number of areas*" (p. 703). The impact of EMS was particularly important in the generation of waste-water and air emissions and in the reduction of environmental impacts from accidents. On the other hand, those environmental areas with direct financial implications (such as resource use or waste management) appeared to be less affected by EMAS.

A1.2.2. EMAS and continuous improvements in environmental performance

a)- Interview results

On average, the EMAS organisations interviewed have been registered for 5.4 years, ranging from one to ten years.

The results of the EVER in-field research is positive in this area: the large majority of respondents (89%) hold the view that their EMS contributes to environmental improvement year on year. 27% consider that it does to a "great extent", 40% to a "considerable extent" and 9% to a "certain extent".

b)- Literature Review

Robust quantitative evidence about the longer term impact of EMAS on performance does not yet exist because of a shortage of time series data. However, researchers have tried to assess whether EMAS helps promote environmental innovations, which can be considered as an indication of investment in technologies that will facilitate long-term, sustained environmental improvement (even though the EMAS regulation does not explicitly define EMAS as a tool to promote innovation). The findings of these studies can therefore be considered as a proxy for the effect of EMAS on continuous improvement. Environmental innovation is usually taken to include product, process and organisational change (Renning et al, 2003).

- Rennings (2003) found in a survey of 1277 EMAS certified German facilities and 12 in-depth case studies that environmental managers consider the implementation of EMAS as a substantial contribution to the introduction of environmental innovations, especially organisational ones. The adoption of EMAS was also perceived to play an important role in the implementation of process and product-related environmental innovations, particularly in procurement and product planning.

- In a subsequent survey of production managers in 588 German facilities, this time evaluating different Integrated Product Policy initiatives, Rennings et al (2004) found a weak but significant positive influence of ISO 14001 and EMAS on environmental product innovations. This result suggested that "*a certified EMS induces companies to review their existing procedures for potential improvement with respect to environmental product innovations*" (p. 14). The influence of EMS certification was, however, found to be weaker than other IPP initiatives such as waste disposal or take-back systems.

A1.2.3. EMAS and target-led improvements in environmental performance

a)- Interview results

The majority of EMAS participants assert that their organisation attains its environmental improvement targets "often" (67%), while about a quarter said they "always" (23%) meet their targets. Only a small group state that targets are met only "sometimes" (7%) or "rarely" (1%).

From the EVER interviews it appears that targets are usually set on the basis of economic and technical feasibility rather than public policy objectives: 60% of respondents do not take into account policy objectives when setting their environmental targets, 27% do in some areas, 7% in most areas and 7 % in all areas. Company targets tend to be related qualitatively to environmental impacts on the local, regional and global level by, respectively, 45%, 44% and 42% of respondents. Quantitative linkages between targets and environmental impacts occur less often (30% agree for the local level, 14% for the regional level and 22% for the global level).

b)- Literature Review

The findings of the literature review, in this case, are not very consistent with the EVER in-field research, as they identify significant difficulties in this area by EMAS organisations (which were not emphasised by the EVER interviewees to a relevant extent).

In his comprehensive review of 24 empirical studies (mostly based on self-assessment questionnaires), for example, Steger (2000) found that "*companies basically ignored the complicated EMAS provision on setting their environmental goals*" (p. 29). However, a review of the targets that were actually set revealed that "*many companies are already beyond the compliance in their emission standards and are reducing their pollution continuously anyway*" (p. 26).

A1.2.4. EMAS and relative improvements in environmental performance

a)- Interview results

The previous section has summarised the interview responses of EMAS participants. In this part, these answers are compared with responses obtained from organisations that have not adopted EMAS to determine divergences between both groups. This comparison is not valid in a statistical sense because of the small sample size of the non-participants, but it reflects the views of a large number of practitioners across Europe. It is also important to note that the most of the interviewed non-participants were large companies and companies that are also pro-active in environmental

management[1]: 55% have adopted ISO 14001, 22.5% operate a less formalised, non-standardised or company-based EMS and only 22.5% do not have any kind of EMS.

A comparison shows the following results:

- There is little difference in the overall performance trend reported: 94% of EMAS participants report improvements in their environmental performance in recent years, (and 47% said they had "improved much"), compared to 96% (and 38%) of non-participants.
- Interestingly, both groups hold the view that their environmental performance is better than that of other organisations in the sector, with EMAS participants being only slightly more confident about their leadership role: The responses by EMAS participants are: "much better" (27%), "somewhat better" (40%), "similar" (9%), with 24 % unable to provide an answer. The corresponding figures for non participants are: "much better" (23%), "somewhat better" (34%), "similar" (20%), somewhat worse (3%), with 20% unable to provide an answer.
- When we focus on the environmental aspects where EMAS and other EMS are perceived to contribute positively to improvement, we find that the pattern for participants and non-participants is again quite similar. Only with regard to biodiversity, the share of EMAS participants stating that their EMS has contributed to improvement is considerably higher.
- In the case of continuous improvement, results are also almost identical: 22% and 44% of non participants report that their EMS contributes to a great/considerable extent to year-on-year improvement, versus 19% and 44% in the case of EMAS participants.
- Differences between both groups emerge on the issue of target-setting. The share of non-participants claiming to take public policy targets into account when setting their environmental goals is considerably higher (10% in all areas, 31% in most and 21% in some) that that of EMAS participants (6% in all areas, 6% in most, 28% in some). Target achievement, however, is higher amongst EMAS participants (23% say they 'always achieve their targets' is 23%, compared to 13% of non-participants).

In summary, the interviews have revealed few differences between EMAS participants and other (mostly environmentally pro-active) organisations with regard to the issues addressed, except that EMAS organisations were slightly more confident about their environmental performance, but made less use of public policy targets.

b)- Literature review

The interview results are broadly in line with findings from other studies:

- Hertin et al. (2004) performed regressions and times series analysis on European industrial companies and production sites with different EMS policies. Their main finding was that the link between a company's EMS and environmental performance (measured with eco-efficiency indicators) is weak and ambiguous: companies with a formal EMS performed better on a number of indicators, but worse on several others and only a small number of correlations were statistically significant. They were also unable to find significant eco-efficiency differences between EMAS and ISO 14001 certified companies. These findings were broadly confirmed in a subsequent study of European firms in seven sectors (Sorrell et al, 2005).

[1] This can mostly be explained by the willingness of different companies to take part in the study.

- Analysing a sample of 306 German manufacturing firms, Wagner (2002) found no significant differences in energy efficiency between firms with and without EMS (EMAS and ISO 14001), neither for the year 2001 nor for the period 1991 to 2001.
- In their analysis of almost 800 production sites across England and Wales (using assessments of operator performance made by Environment Agency enforcement officers), Dahlström et al (2003) found that "having an EMS improves certain procedural aspects of environmental management" such as recording and use of information, knowledge and implementation of authorization requirements, plant maintenance, management and training and process operation. Crucially however, they did not find a link between the presence of an EMS (including EMAS) and actual performance measured as the likelihood, as assessed by enforcement officers, of suffering from incidents, complaints and non-compliance events. The study also found that "there is no conclusive evidence to show that EMAS is better at inducing continuous improvement than ISO 14001, or vice versa" (p.196).

In summary, researchers have found it difficult to establish statistically significant differences in the environmental performance of EMAS participants and organisations with either other EMSs or without EMS.

A1.2.5. Effects of EMAS on global environmental impacts

a)- Interview results

Additional to the previous analyses, the possible effect of EMAS on global environmental impacts was investigated in-depth within the EVER study, pursuing two different aims.
A first aim of the EVER in-field reserch was to examine whether or not there have been changes in the organisations' informational behaviour to better define their targets in view of environmental public policy targets (especially concerning global targets).
The study shows interesting findings: while still two-thirds of the companies and institutions participating in EMAS and of the EMAS drop-outs do not derive their environmental targets from higher-ranking policy targets such as the Kyoto protocol or the Agenda 21, companies that never participated in EMAS show a contrary behaviour. To them, policy targets seem to gain more and more relevance for some (21%), most (31%) or even all (10%) environmental aspects. This might be due to EMAS' more predetermining character. To find additional explanations for these findings, an in-depth analysis of the consultants' influence on defining environmental targets may be helpful. Eventually, it should be analysed which way of defining, especially quantifying targets, shows the more substantial contribution to continuous improvements of environmental performance.

"In setting quantitative targets, does your organisation use environmental public policy targets (i.e. Kyoto Protocol, Local Agenda 21) as a reference?"

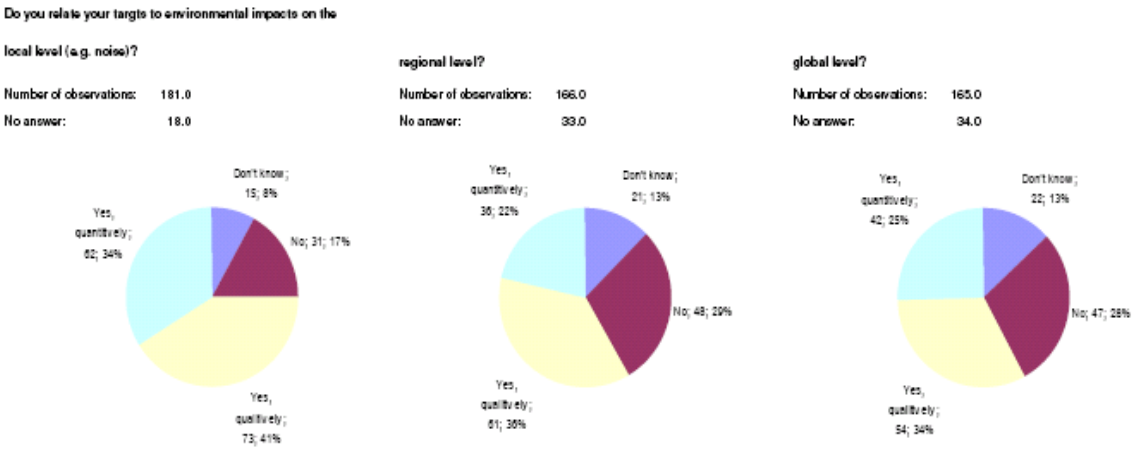
	Participants: Companies	Participants: Public Institutions	Drop outs	Non-Participants	Aggregated
Yes, in all areas	6 %	-	-	10 %	7 %
Yes, in most areas	6 %	33 %	33 %	31 %	16 %
	12 %	**33 %**	**33 %**	**41 %**	**23 %**
Yes, in some	28 %	-	-	21 %	23%

areas					
Yes	**40 %**	**33 %**	**33 %**	**62 %**	**46 %**
No	**60 %**	**67 %**	**67 %**	**38 %**	**54 %**

A second important aim of the in-filed research was to invesitgate on the relationship between targets setting and environmental impacts at different scales (wth a particular attention to the global scale).
EMAS-stakeholders (public authorities, consultants, etc.) estimate that one-half to three-quarters of the organisations participating in EMAS relate their environmental targets to impacts especially on the local, but also on the regional and the global level. In their opinion, EMAS participants would formulate quantitative and qualitative targets in equal measure. The answers of the participating companies almost exactly back the stakeholders' estimation: one-half to three-quarters of the companies relate targets to impacts, but in a more qualitative than quantitative manner. Almost the same holds for the interviewed public institutions participating in EMAS: two-thirds to three-quarters of the institutions derive predominantly qualitative targets from environmental problems. Half of the companies that left EMAS answered with "no"; when they relate their targets to emvironmental impacts, they mostly leave it at qualitative formulations. According to the organisations, the reason for not being able to quantify their targets is the lack of information within public authorities. They miss reliable and quantified data concerning the actual environmental condition as well as applicable tools and methods to determine a single organisations contribution. Again, companies that participate in another EMS show a deviant behaviour: 60% to 80% of those companies derive rather quantified targets from environmental impacts, especially on the global level (see above).
In principle, EMAS seems to be supportive to relating targets to environmental impacts (probably because of its structured guidance through the process of identifying problems and tasks), but this is true especially for the local impacts (73,4%), while the relation with global impacts is a lot weaker (54,3%).

"Do you relate your targets to environmental impacts on the local (e.g. noise), regional (e.g. acidification) or global level (e.g. global warming)?"

Aggregated answers:



Mostly considered local impacts:	Mostly considered regional impacts:	Mostly considered global impacts:
Noise Odor Dust	Emissions to air Releases to water Waste	Emissions, esp. CO_2 Global warming/climate change

Visual impact		
Thresholds/Orientation	Thresholds/Orientation	Thresholds/Orientation
MAC-values	Electrosmog regulation and other legal requirements Regional plans	Management Principles of Sustainable Development Kyoto Protocol/Emissions trading CO_2 equivalents, VOC directive International Material Data System (IMD)

b)- Literature Review

Often, organisations appear to be overstrained with identifying environmental aspects to be improved and benchmarks for improvements that are both relevant for and applicable to their specific situation, especialy those relating to global effects (Ankele 1998; Ankele/Steger 2000: 79). It seems obvious that the organisation in question might derive orientation from environmental public policy targets ("target-based" approach) as well as from actual environmental impacts – adverse or beneficial – on the local, regional or global level ("problem-based" approach). But studies show that organisations are rather inward-looking, focusing mostly on internal material flows (Ankele/Kottmann 2000: 12f.) with direct effects on cost savings. The correlation with higher-ranking policy targets and/or actually caused environmental global problems is rarely taken into account (Ankele/Kottmann 2000: 10ff., 22ff.). Consequently, literuature does not emphasise a relevant effect of EMAS at the global level.

A1.3. IMPACTS OF 'OTHER' EMS ON ENVIRONMENTAL PERFORMANCE.

In this section we briefly present a review of key studies on EMSs other than EMAS (mostly ISO 14001). Although the EVER study aims to evaluate the EMAS scheme, including this literature seems appropriate because the ISO 14001 standard has been more widely adopted and is therefore better researched and both standards have many elements in common.

Key findings include:

- The majority of Swiss managers of ISO 14001 certified companies surveyed by Hamschmidt (2000) perceived the impact of EMS adoption on environmental performance as positive but relatively small.
- Anton et al (2004), also found that 'the adoption of a more comprehensive EMS has a significant impact in terms of reduction of the intensity of toxic releases' and pointed out that the importance of these measures tends to especially visible on companies with initially poor environmental records (p. 652).
- Ammenberg et al (2003) found, after analysing a network of SMEs in the Hackefors Industrial district in Sweden, that the improvements brought forward by EMS certification were significant.
- Welch et al (2002) detected statistically significant differences between Japanese fully ISO 14001 certified companies, those in process of ISO 14001 certification and non-certified ones regarding the implementation of environmental measures and strategies such as green purchasing. However, the authors pointed out that the direction of causality between ISO 14001 certification and environmental strategy is not clear, as it could be the case that environmentally advanced companies are more likely to become ISO 14001 certified.

- Researchers of the University of North Carolina concluded from a survey of US facilities that have implemented EMSs that 'results suggest strongly that the introduction of an EMS does make an observable difference to a facility's environmental performance' (NDEMS 2003, p. 286).

In summary, the reviewed research on EMSs other than EMAS broadly suggests that their adoption contributes to a better environmental record of the organisation. This is particularly visible on management indicators (e.g. implementation of environmental measures, environmental management procedures etc.), but also seems to hold true for outcome indicators (e.g. overall environmental efficiency and impact), although this is more difficult to show. What appears to be important is the quality of an EMS (Coglianese and Nash, 2001) and the environmental management style (Thornton, Kagan and Gunningham, 2003), rather than the presence of such a system. Studies of EMS in operation show that most corporate EMSs focus on on-site production efficiency. The most significant improvements appear to have been made in the areas of waste management, energy use and water consumption.

There is also a widespread view in the literature that EMSs have largely failed to broaden the scope of environmental management because they tend not to systematically address wider environmental concerns, for example transport and logistics, sourcing of raw materials, and product design.

A1.4. KEY INDICATIONS

The research summarized in this review needs to be interpreted with caution because the nature and magnitude of the effects of EMAS on environmental performance is difficult to assess. Taking into account the caveats presented above, the following key results emerge:

- Both the interviews and the reviewed literature suggest that EMAS has a positive effect on environmental performance, especially in a number of facility-related aspects such as water pollution, air emissions, waste management and resource use. Organisations that have adopted EMAS tend to find that it is a useful tool that supports their efforts to improve performance, also over a longer period.
- However, EMAS is not one of the most important determinants of environmental performance and it appears not to be a strong autonomous driver for improvement. The elements of EMAS that were considered by participants and stakeholders to be most important for achieving improvement in practice are: requirement for legal compliance, technical progress, employee involvement, targets, and audit. Whether an organisation achieves a better performance (with the help of EMAS) seems to depend predominantly on these factors. This – and the different levels of eco-efficiency from which organisations begin to work for improvement - can explain that most studies have not found that organisations with EMAS have an overall better environmental performance than other firms.
- There is also little evidence to suggest significant differences between EMAS and ISO 14001 regarding the way and the extent to which they facilitate performance improvement. This may be a consequence of the methodological and data difficulties discussed earlier rather than a proof of their equivalence.
- Although there is little evidence that EMAS participants make more improvements than organisations adopting ISO 14001 (or other EMS standards), it is important to note that several requirements identified by a majority of interviewees as "fairly important" or "very important" for "improving performance in practice" are specific to EMAS. These are:

environmental review, requirement of legal compliance, employee involvement, environmental statement, and audit (of performance).

- Basing on both the literature review and on the in-field research, it can be asserted that the effects of EMAS implementation on the global environmental impacts is very low.

A2. INDIRECT EFFECTS LINKED TO THE EXISTENCE OF EMAS

In order to fully understand and comprehend the effects and benefits of the EMAS scheme one has to take into account effects which EMAS has on other companies and organisations apart from its participants. There is a wide range of potential effects which will be taken into account and analysed in the following. Apart from EMAS providing a benchmark for the industry, the chapter will look at EMAS as a model for low scale environmental management approaches, at EMAS drop-outs, at EMAS promotion programmes and non-adopters of EMAS, at the supply chain and at general knowledge exchange stimulated by EMAS.

A2.1. EMAS AS BEST PRACTICE FOR EMS IN THE EUROPEAN UNION

The European Commission and the Member States have tried to position EMAS as the best standard for environmental management, especially by setting the following requirements:
1) compliance with environmental regulations,
2) environmental statement,
3) employee involvement,
4) consideration of indirect effects and
5) setting up and maintaining a validation procedure.

Little evidence could be found in the literature that this positioning was successful. Some evidence shows that EMAS is not seen as a benchmark. For instance, companies ranked EMAS on the last position in a non-representative survey conducted in Germany in 2004, aimed at analysing instruments applied for implementing sustainability in companies (Biebeler 2004).
In the EVER interviews, only 62% of the whole sample (including participants, non participants and stakeholders) thinks that EMAS is regarded and used as "best practice" for environmental management among industrial sectors or other types of organisations. Many participants also mentioned that EMAS was little known in their sector and therefore not seen as a benchmark.
It seems that especially outside the EMAS-community, the advantages of EMAS are not widely known.
Also, EMAS is seen as competing with ISO 14001. Many interviewees mentioned that EMAS does not distinguish itself enough from ISO 14001. As a consequence, it is also difficult for EMAS to present itself as a benchmark. Most interviewees believe that this can be enhanced by making EMAS a real "standard of excellence", e.g.: by strengthening the requirements regarding the use of performance indicators, by making it a more "performance-driven" scheme or by enabling benchmarking on performance between participant and non-participant organisations.

A2.2. ENVIRONMENTAL MANAGEMENT APPROACHES AND EMAS

For the last years, alternative and simplified environmental management approaches have grown in and outside the EU. In the following, the term "environmental management approaches" is used for all schemes which base on a P-D-C-A model but do not require the implementation of a complete management system (i.e.: these schemes are approaches towards environmental management but not full management systems).
An overview of the most important environmental management approaches can be found in the annex to this chapter. The BEST report (DG Enterprise, 2004) provided a first overview of these approaches. Two projects financed by the German Federal Agency for Environmental Protection and the German Ministry for the Environment investigated more in detail the upspring and reasons for success of selected environmental management approaches (www.ems-database.org).

As a result of these studies, it can be asserted that EMAS has stimulated the demand for environmental management in organisations and the environmental management approaches are a reaction to this demand.
The character of the reaction, however, is quite different. Some environmental management approaches have been set up as "staged approaches". They want to offer a stepwise approach to ISO 14001 and EMAS and, in theory, they are not competitors to the formal environmental management systems (see also the excursus below). Other environmental management approaches present themselves as alternatives to EMAS, i.e. they directly compete with EMAS and ISO 14001. A third group of approaches finally present themselves as systems which aim for markets not really covered by EMAS. They therefore perceive themselves not as competitors to EMAS/ISO 14001.

Most of the environmental management approaches have been partly inspired by EMAS and clearly refer to EMAS in their internal structure. In the following synopsis, selected environmental management approaches are compared with EMAS[2].
As demonstrated by the synopsis, most environmental management approaches keep substantial parts of a formal environmental management system. At the same time, almost all environmental management approaches reduce the required work for documentation compared to EMAS/ISO 14001. Also, internal audits and the consideration of indirect environmental aspects are usually not required. Costs for certification are lower or certification is not required at all.

In the EVER interviews, most stakeholders did not consider the environmental management approaches as competitors to EMAS but underlined their advantages for companies. The majority of the interviewees, for example, support the idea of a staged approach: 56% of the participants said that a staged-approach would be somewhat to very important, and over 60% of the stakeholders agreed with this opinion. SMEs in particular supported the idea (almost 60 %).

The most frequently mentioned advantages were:
- Simpler implementation,
- Less costs for companies,
- Focus on achievable benefits,
- Less formal requirements than EMAS.

One important argument raised by some stakeholders is that companies can more easily implement environmental management approaches because some of them include guidance for companies (e.g. sector specific material, etc.). So the environmental management approaches demand less competencies in companies applying them than EMAS.
Furthermore, often the environmental management approaches are tailored to the needs of specific target groups. Mostly, they meet the needs of small companies because they offer them ready made solutions e.g. checklists. The companies can easily apply these solutions which reduces the required resources for environmental management.

One can conclude that a positive (non intended) effect of EMAS has been that it laid the basis for a wide range of environmental management approaches. Quite many environmental management approaches are a reaction to the EMAS regulation.

[2] A comprehensive overview can be found on http://www.ems-database.org

Elements of management system		Ecolighthouse	Ecomapping	Ecoprofit	Ekoscan	Environmental Diploma Gothenburg	Green network	PREMA	Environmental Certificate for the skilled Trades (QUH) Germany	ISO 14001	EMAS
Commitment	commitment of top management										
	environmental policy or env. guidelines										
Evaluation of aspects / initial review	direct environm. aspects										
	indirect environm. aspects										
	indicators										
	assessment criteria										
	responsibilities of staff										
	processes										
legal and other requirements	proof of legal compliance										
	consideration of stakeholder demands										
Environmental management programme(s)	objectives and targets										
	environmental measures / action plan										
	competences and deadlines										
	regular update?										
Processes	processes defined and documented										
	organisational structure defined and documented										
Training / education	determination of training needs										
Communication	internal communication										
	external communication										
	operational control										
	monitoring and measurement										
	corrective and preventive action										
Periodic internal auditing	system audit										
	performance audit										
	compliance audit										
	management review										
	env. report / statement / releases										
	periodic information				n.a.	n.a.		n.a.			
Integration of additional management aspects	quality										
	occupational safety										
	health										
	management of chemicals										
	sustainability										
	other additional management aspects										
Combination with existing management systems	ISO 9001: 2000										
	EFQM										
	TQM										
	OHSAS 18001										
	SSC / SCP										
	oher management systems										
	continuing the existing system at the same level										
	continuing the existing system at a higher level									n.v.	n.v.
	upgrading to ISO 14001 / EMAS possible									n.v.	n.v.

	required / yes		not required / no
	partially required	n.a.	not available
	voluntarily	n.v.	not valid

Excursus: Staged Approaches as a mean to promote EMAS?

Since the introduction of BS 8555, staged approaches have been discussed intensively as an option to allow companies to implement an environmental management systems in an easier way. Staged approaches allow the stepwise implementation of an environmental management system with or without the intermediate recognition of the companies' advances. Several approaches have emerged within the EU, especially: the Acorn Method / BS 8555 developed in Great Britain, the Green Dragon from Wales and E+5 in Spain. EMAS is used as "reference model" for all three staged approaches because organisations can achieve EMAS validation at the highest stage of each approach.
In theory, staged approaches offer several advantages for the implementation of EMAS: a clear guidance on the way how to achieve validation, flexibility concerning the speed in implementing the necessary steps to establish the environmental management system, and - ideally - a competitive climate between the participants towards the achievement of the validation.
Little evidence, however, could be found that a staged approach leads a large number of companies to the implementation of an environmental management system. Neither the Acorn Method/ BS 8555 nor the Green Dragon nor E+5 have significantly increased the number of ISO 14001 registrations or EMAS validations. Most companies have remained at the lower levels of the staged approach and have not moved forward to certification / validation.
As a matter of fact, research on "alternative" environmental management approaches has found comparable rates of companies and organisations proceeding to EMAS/ISO 14001. Therefore, a distinction between staged and alternative approaches seems rather artificial. In practice all environmental management approaches seem to constitute to a small extent a stepwise approach to an environmental management systems with the difference of how many steps are involved (for more details see Kahlenborn/Freier forthcoming).

Staged approach	Number of EMAS/ ISO 14001 certifications / companies achieving highest level	number of participating companies	per
Acorn Project /Great Britain	25 ISO 14001 certification, 1 EMAS validation	190	2004
E+5 / Spain	21	48 (in origin however far more)	03/2005
Green Dragon / Wales	10	527	10/2005

Source: White Young Green 2004, www.emas5.com, www.greendragonems.com

In the interviews, the opinions about a staged approach were controversial: about half of the stakeholders were favouring the statement that a staged approach would facilitate the implementation of an environmental management system and the other half was opposing it. The most important arguments *in favour of a staged approach* were:

- easier implementation,
- awareness raising in the beginning of an EMS implementation,
- better control of costs and benefits.

The stakeholders underlined the importance of a staged approach especially for SMEs.

The strongest arguments *against a staged approach* were that

- it would not reduce costs and
- makes the understanding of the scheme not easier.

In the interviews one important argument was raised which is often skipped when the role of staged approaches is discussed: It is not the necessarily the main objective of a staged approach to increase the

number of validated/certified companies with a full EMS. Instead, staged approaches allow companies to undertake measures appropriate to their environmental risk and their capacities. Therefore, not surprising many companies, especially SMEs, remain at the lower levels of a staged approach.

A2.3. SUPPLY CHAIN EFFECTS

One intention of EMAS policy makers was to increase the outreach of EMAS by including the so-called "indirect environmental aspects" in the EMAS II regulation. Organisations were encouraged to take environmental aspects in their supply chain into consideration. One can distinguish mainly between two forms of supply chain effects:

- Green public procurement in the public sector and
- Supply chain management in the private sector.

In the literature, supply chain effects of EMAS are sparsely mentioned: Seuring / Mueller (2004) revised more than 100 international papers for a literature review on green supply chain management. EMAS did not appear in these papers; meanwhile ISO 14001 was only mentioned ten times.
In selected industries however, the situation is different. In the German automotive industry, ISO 14001 is implemented on a wide scale, including as a selection criteria for suppliers. In comparison with ISO 14001, EMAS is only implemented on a limited scale because it is not internationally valid (Koplin et al. 2004). Mainly internal barriers – lacking capabilities – have been identified as the main reason why companies do not include environmental concerns in their supply chain management (Bowen et.al. 2001). The above mentioned German project on environmental management approaches in SMEs found that the efforts to diffuse environmental management approaches using a supply chain approach had only limited positive results in the E+5 project in Spain and the ACORN project in Great Britain.

The situation for public procurement is similar: EMAS has not been widely used as award criteria in public tenders. Only recently, opportunities have been created for green public procurement because the respective EU procurement legislation has changed. The new procurement directives allow that environmental criteria such as EMAS are included in tenders as award criteria if the subject of matter is related to the environment.

In this study, it was found that the majority of EMAS companies did not feel encouraged by their clients to adopt EMAS. So, upstream effects of EMAS - clients encourage their suppliers - to green the supply chain by implementing EMAS could not be observed. Downstream effects - EMAS companies support their clients adopting environmental measures - however occur.

The majority of answering companies agreed with the statement that they support their suppliers to adopt environmental measures. More specifically: 77% of the EMAS participants support their suppliers in the adoption of measures and initiatives for environmental improvement and 72% declare that the environmental management system influences the product performance in other phases of its life-cycle and/or in the supply chain. It is difficult to examine the character and outreach of this support because more qualitative data were not systematically asked for. Some companies mentioned that they had undertaken surveys in order to gather information about environmental measures in supplier companies. These surveys not always resulted in changed procurement practices.

The approach of EMAS-registered public organisations to green procurement is dealt with in paragraph A6. As a general indication, we can say that this approach is not developed very much so far.

Public and private organisations mentioned the following reasons why they do not adopt green procurement measures:

- It is difficult to change the complex procurement procedures in order to include environmental criteria,
- Other criteria like general customer satisfaction and long-term commercial relationships are more important – for environmental reasons organisations would not change their suppliers.

In the public sector, additional barriers exist: The number of EMAS companies is too small to target just EMAS companies in tenders, even in Germany with the largest EMAS population. Also, for legal reasons it is not allowed to design a tender preferring only EMAS companies. It is necessary to consider EMAS as one award criteria and to apply other more general selection criteria regarding the environment.

Selected examples from the interviews show, however, that green procurement is possible in public and private organisations. An industrial park developed environmental guidelines for resident and external companies – all service companies working in the park have to undergo environmental training and have to comply with the guidelines. The on-site visit in a German municipality also shows that green procurement can be implemented: recycling paper, environmentally-friendly cleaning and electricity for public buildings are purchased. Lists with environmentally-friendly building material are used.

Summarising up, some examples of successful supply chain management in the public and private sectors were found in the study. However, the expectations linked with the EMAS II regulation have not fully been met. It is difficult to identify downstream and upstream environmental effects in the supply chain of EMAS participants. It was found that EMAS companies at least show an interest in the environmental performance of their suppliers. Reasons for lacking supply chain effects are complex procurement procedures and lacking internal capabilities of companies. In the public sector, the legal situation regarding green procurement is perceived as difficult. This perception in itself constitutes an additional barrier.

A2.4. EFFECTS IN NON-EMAS COMPANIES

The EMAS regulation has contributed to the diffusion of environmental practices in companies. A high number of companies learned about environmental management by participating in EMAS promotion projects (without becoming eventulally EMAS participants) or by participating at EMAS but eventually dropping out. Both effects have not been systematically investigated yet.

Up to now, about 2,800 organizations have left the EMAS system since 2001. The following table presents the number of drop-outs by country:[3]

[3] The table does provide only indications. The figures are only partly reliable. There are no precise statistics on EMAS drop outs.

Country	number of drop-outs
Austria	178
Belgium	2
Denmark	110
Finland	10
France	20
Germany	2,124
Ireland	1
Italy	75
Netherlands	13
Norway	37
Spain	57
Sweden	146
United Kingdom	53
Total	2,826

Source: EMAS Helpdesk

Systematic statistics provided by the Competent Bodies about the characteristics of and reasons for dropping out do not exist. The German Chamber of Industry and Commerce Niederrhein found that the majority of small companies left EMAS before the first validation cycle in Northrhine-Westfalia; companies mentioned as the most important reason for leaving the EMAS system the insufficient cost-benefit ratio. It has not been systematically investigated, what happens in these companies after they drop out of the EMAS system.
A study by Loew and Clausen (2005) found that out of 30 EMAS validated companies taking part in a long-term EMAS study more than half left the EMAS system. Half of these companies went for ISO 14001 certification and half of them maintained a company-based management system without external auditing.

The interviews with EMAS drop outs undertaken in this study show a similar picture. Although the number of interviewed companies (7) is too small to allow generalizations, they indicate which changes undergo the environmental management systems in the companies. In general, the environmental management system is partly or fully maintained depending upon the needs of the companies. For example, a small crafts company only maintained the indicators for resource use while others maintained the full management system. Therefore, one can argue that EMAS has lead to the long-term establishment of environmental practices in these companies because they continue to undertake environmental measures.

Even organisations not entering the EMAS system could benefit from taking part in promotion projects. The EVER in-field research show that promotion projects are perceived as moderately effective in terms of EMAS registrations, but they seem to have considerable indirect effects, e.g.: external and “impartial” observers (the EMAS stakeholders) estimate that only 50% of the companies participating in promotion projects achieves EMAS registration (this percentage varies according to the Member State), but 90% of the stakeholders is convinced that the other 50% of the companies benefited from participating in a promotion project and, thanks to this, improved their environmental management.

A short glance at the EMAS website of the EU DG Environment is sufficient to know that in almost all member states, EMAS-related activities exist at a large scale. EMAS promotion projects are financed by the EU, the member states or regional / local initiatives. At the EU level, the three main

sources of funding for EMAS related activities are: 1) the PHARE programmes for the accession countries, 2) LIFE-Environment funds and 3) the Regional funds. Aggregated quantitative data are not available even for each single source of funding. This is why it turned out very difficult to quantify the number of projects or companies participating in projects. Given the high number of promotion projects, far more companies than currently in the EMAS register have been in contact with EMAS and probably benefited from this participation.

A2.5. KNOWLEDGE EXCHANGE EFFECTS

One further reason why companies could benefit from EMAS promotion projects is that companies exchange environmentally-related knowledge. The experience from some Italian group-based projects indicates that companies benefited from networking and knowledge exchange (IEFE 1998). This is an important feature of group-based approaches as the German project on alternative environmental management approaches found out.

Another knowledge-related effect of EMAS is that the EMAS statements are an important source of knowledge for companies: A quantitative study undertaken in Germany found that EMAS companies frequently use the environmental statement of other companies in order to get fresh ideas for their environmental measures (Rennings et al. 2005).

In the EVER interviews, it was found that measures for exchanging knowledge about environmental management systems are: regular meetings of similar organisations in the private sector or institutions in the public sector and group based-implementation of EMAS which is conducted in some Member States (Italy, Denmark, Spain, Germany,…). Particularly interesting, in this prospect, is the implementation of EMAS according to a cluster-based approach. In order to get more information on how this approach is applied, the reader can refer to Annex III of this report, regarding the EVER Case Studies.

To sum up, the investigation of further effects of the EMAS Regulation proved to be useful in order to provide a more general picture about the benefits generated by this scheme. These benefits occur on the policy, institutional and company levels beyond the effects of EMAS for participating companies.
Taken together:

- the effects EMAS has had on the creation of alternative, low scale systems,
- the continuing effects on drop outs,
- the effects on participants of EMAS promotion projects (which did not register under EMAS),
- the (though limited) effects in the supply chain, and
- the effects on knowledge exchange

it well might be estimated that two to three times the current number of EMAS participants has benefited from EMAS and uses an environmental management system or parts of it due to EMAS. The number of companies which has improved its environmental performance due to EMAS without being an EMAS participant is likely to be even higher.

A3. DRIVERS AND BARRIERS FOR EMAS DEVELOPMENT

Since the introduction of the scheme in the early 90s, the adoption of EMAS has been spurred by some factors and conditions that can be hereby identified as "drivers"; while "barriers" are those factors that both prevented organisations from joining the scheme and tackled its maintenance over time. The present chapter explores such drivers and barriers, assessing their relevance in general terms as well as with respect of specific contexts (e.g: SMEs), and examines the support and incentives that can strengthen the drivers and overcome the barriers.
To that aim, different sources are taken into account, such as the existing literature on the issue, the outcome of the interviews carried out by the EVER consortium within the project, and some findings emerging from the EVER-EMAS workshops discussions.

A3.1 DRIVERS

While some literature findings are specific of a certain sector/geographical context, there are some general trends shared by most of the evidence gathered. The "desk" research activity has taken into consideration a wide range of material dealing with the identification of drivers for the adoption of an EMS (i.a.: Strachan 1999, Perkins et al 2004, Watzold et al 2000, Cesqa sincert 2002, Hamschmidt 2000, Morrow et al 2002, Aalders 2002, MSWG EVEMS 2004, DG Enterprise 2004, Anton et al 2004, Malmborg 2003, Iris 2000, De Leo et al 2003, etc). The findings of such a broad analysis are not univocal, but there are some "trends" that characterise most of the analysed evidence. We will illustrate such trends, providing some examples as well as hints emerging from studies evidencing different outcomes.

Given the broadness of the material being analysed, the work has been angled towards a focus on:

a) more recent studies
b) material dealing specifically with the EMAS registration (and then the material regarding EMSs as a whole or other types of certification, such as Iso 14001).

However, we have to point out that the literature review has been tackled by the lack of data as regards EMAS-specific evidence, as most of the material refers to generic EMSs.

A first indication drawn from the literature review regards the extreme heterogeneity of factors "driving" companies towards EMSs (and, specifically, towards EMAS). These vary significantly in connection with different aspects, like the size of the organisation (SMEs vs large companies), its sector (e.g: manufacture vs Public Administration), the national or regional contexts, and so on.
For instance, drivers can be either economic/strategic or "environment-led"; they can deal with the internal sphere of an organisation (e.g: optimisation of organisational activities), or be "external" such as the desire to gain a competitive advantage or benefit from fiscal/normative incentives and facilitations.
The following table summarizes some of the motivations behind the adoption of EMAS that have been identified by the literature review, or within the carrying out of the interviews for the EVER project:

Figure 1

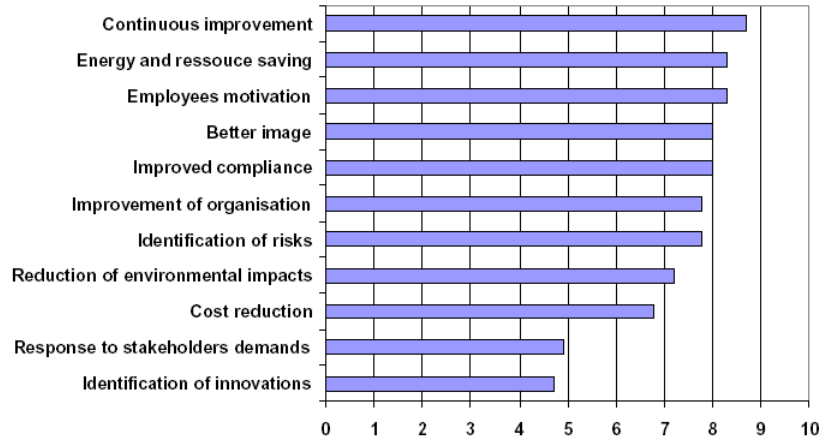
Reduction of environmental impacts

Savings from energy and resources consumption
Image improvement
Legal compliance
Satisfy requests by customers
Obtain competitive advantages
Regulatory and monetary incentives (de-regulation, tax relief)
Better organisation and management of activities
Keeping up with competitors
Improve relationship with stakeholders and local communities
Better risk management
Satisfaction of requests from corporate headquarters
Improve rating in access to public funding and procurement procedures

The evidence gathered in the literature review shows that economic and strategic drivers seem to prevail in spurring companies towards the EMAS registration. We can mention, for example, the outcome of a German UBA research (Clausen et al, 2002): economic and competitive motivations (such as energy/resources savings, better image, etc.) are very important.

Figure 2

Motives for participating in EMAS:



Another example refers to a study conducted within the pilot project in Saxony-Anhalt found that companies were mainly motivated by an expected improved competitiveness and advantages on markets and image as well as reduced use of energy or water and reduced production of waste water and waste (Schmittel, et.al. 1999).

As far as EMSs are concerned, the Best Project (DG Enterprise, 2004) stresses that the reasons for adopting an EMS (including EMAS) mostly encompass other strategic factors, not directly linked to competitiveness or the market response, such as the hope to get benefits from local authorities: public recognition, material advantages (cheaper insurance, easier access to finance, privileges in public procurement), regulatory relief/deregulation and so on (even when these benefits are not available yet).

Again, Perkins and Neumayer (2004) agree that the cost-reductions, benefits and profitability of EMAS are major drivers, but he adds that they are unlikely to be the only ones, as firms often adopt

organisational innovations for managers' quest for external legitimacy, and specifically, the need to conform to widely held beliefs of rational and efficient management practice. Hence, the participation in EMAS is likely to be shaped by two sets of factors: those influencing the financial costs, benefits and profitability of the scheme, and "ideational forces" such as the requirements of external stakeholders.

Moreover, Anton (2004) found that also the prevention of "negative" strategic factors is often a powerful driver for EMAS adoption, such as liability threats and pressures from consumers, investors and the public.

Even if the prevalence of economic and strategic factors is a general trend characterising most studies, there are cases where also environmental aspects seem to play a crucial role. As an example, we can cite a survey carried out on French EMAS registered organisations (Schucht, 2000): the results, reported below, evidence how the improvement of environmental performance is regarded as the main motivation for EMAS adoption, more important than improvement of image, legal compliance and so on.

Figure 3

Companies' Motivations to Participate in EMAS[10]

	1	2	3	4	5	6	average grade	number of enterprises which replied
improvement of environmental performance of the enterprise	12	6	2	0	0	0	1,5	20
improvement of the company's image	10	6	4	0	0	0	1,7	20
improvement in the co-operation with public authorities	9	3	4	4	0	0	2,2	20
expectation of simplified administrative procedures (e.g. licensing requirements)	5	2	6	2	4	1	3,1	20
assurance of legal compliance	10	6	3	1	0	0	1,8	20
cost reduction	7	6	2*	1*	2	2	2,6	20
gain of competitive advantages	5	6	6	1	2**	0	2,5	20
gain of preferential treatment from clients (e.g. get more orders)	4	5	6	2	3	0	2,8	20
motivation of employees	5	8	5	0	0	0	2,0	18
gain of preferential treatment from insurance companies	4	4	3	2	4	3	3,4	20
gain of preferential treatment from banks	4	1	3	3	3	6	3,9	20
anticipation that the company will be compelled to participate in the future	5	2	8	1	3	1	2,9	20
Scale: 1 = "very important" to 6 = "no importance"								
* - one firm tagged 3 and 4 (average grade calculated with 4)								

Source: Questionnaire to French EMAS registered sites

Also the UNI-ASU study found that the most important aim of companies adopting EMAS was to improve the environmental performance of the company. An improved company's image and assured legal compliance come in second and third place[4]. Other reasons were: improved relations with authorities, regulatory relief and the anticipation of public pressure. Less important reasons were a preferential treatment by clients and insurance companies (UNI/ASU 1997).

A peculiar and very important "external" driver is represented by the communicational dimension of EMAS. Indeed, this is one of the main features differentiating the EU scheme from other forms of certification such as Iso14001.

[4] Only few studies identify in the seek for legal compliance a strong motivation for EMAS adoption, the largest part of the literature is sceptical about this driver. Schwaderlapp (1998) for example, found that compliance with legal requirements was not a motivation for the introduction of EMAS. The EVER interviews, as we will see, surprisingly showed instead that this is a powerful drive both for EMAS participants and non participants.

As reported by the relevant literature on environmental reporting and EMAS statements (e.g.: Gorla et al. 2001, Imperial College, ISO 14001solutions and IEFE 1999, Grafé 1996, Jones 2000, etc.), the willingness to communicate with the stakeholders can be a powerful driver for EMAS participation. Some of the analysed studies put an emphasis on the fact that, in some cases, EMAS has been preferred over ISO 14001 thanks to the possibility to use and diffuse credibly validated environmental information (Gorla et al. 2001).
It has to be noted, though, that in contrast with this motivation, few companies are proactively using the EMAS environmental statement as a communication tool towards the stakeholders and the market (the reasons are analysed in the Excursus on the Environmental Statement, proposed in chapter A4).

The analysis of existing evidence was not limited to the (however prominent) EU context, being for instance inclusive of the uptake of the ISO standard and its drivers in different contexts such as the US and China (Fryxell et al 2004, Delmas 2000 etc.), for comparative purposes.
As in the case of EMAS for the EU context, it emerges that economic and strategic drivers play a key-role, even if their relative importance varies according to the study, the geographical context, etc.
For instance, the main drivers for Iso-certification in China (Fryxell 2004) were reported to be to ensure regulatory compliance, to enhance the firm's reputation, and to improve environmental performance, in that order, while motivation to achieve cost reductions is less emphasized.

A key finding emerging from the literature review is that of the prevalence of "external" drivers over "internal" ones.
For instance, we can report the Cesqa Sincert research, carried out in 2002 in Italy: main motivations for the uptake of Iso are image improvement and legal compliance (53% and 55% of respondents, respectively, rate such drivers as "very important"), while a better organisation and rationalisation of activities is regarded as less important.

Again, Hamschmidt (2000) asserts that the principal driver for the uptake of an EMS (including EMAS) is external (enhancement of the corporate image), while internal factors such as the systemisation of existing activities and risk minimisation follow in lower positions.
Other sources, such as the FEU study part I (1998: 19) provides a more *balanced* view about the motivation of enterprises to participate in EMAS. The investigated companies in this study were participating in pilot studies. Expected "external" benefits such as an improved image, improved legal compliance or competitive advantages are as important as the expected "internal" benefits such as an integrated concept for environmental protection at the corporate level.

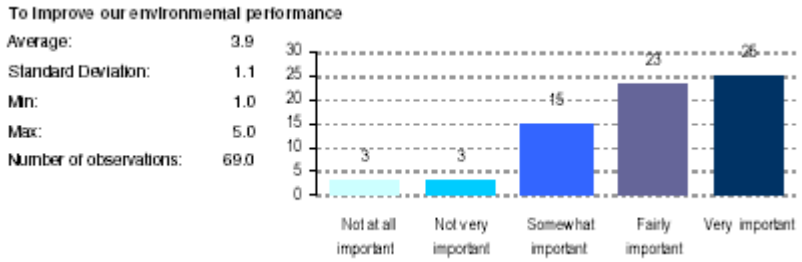
As far as the EVER "in-filed" research is concerned, we can note that, while some of the conclusions confirm general trends emerged in the literature review, in some cases there are discrepancies between the outcomes of the desk-research and the interviews themselves (see Figure 5).

A first important aspect to be pointed out is that interviewees seemed to give great importance to the "compliance" and to the "environmental" issues as drivers for the adoption of EMAS. Indeed, "better management of legal compliance" and "improvement of environmental performance" are singled out as the most effective drivers, with average scores of 4,0 and 3,9 on a maximum of 5[5].

[5] In many cases the results of the interviews in terms of preferred options or answers are expressed with a score that ranges from 1 to 5. According to the different questions, "1" means "not important at all" or "strongly disagree" and "5" means "very important" or "strongly agree". See Annex IV of the EVER Study, concerning the "Detailed results of the interviews".

Figure 4

"Why did you decide to participate in EMAS?"



If we consider, for example, the environment-related driver, we can see that more than 37% of participants identified it as "very important", and an extra 33% rated it as rather or somewhat "important", while the figures depicting a scarce importance of the environmental issue are statistically not relevant.

Together with "compliance" and "environmental improvement", according to the EVER interviewees, other key drivers seem to be more of an "internal" nature, dealing with better organisation and overall level of the activities see Figure 5 below).

Contrary to the literature review findings, competitive variables lag behind (the improvement of competitive capabilities is indicated only as the seventh driver in terms of importance, and the willingness to keep up with competitors as the eighth).
We should stress, however, that these strategic/economic drivers, even if they lag behind in comparison with other types of motivations, have nevertheless achieved fair "overall" scores: indeed, all drivers seem to have a "positive" motivational effect on companies (with scores higher than 3), exception done for those drivers that are closely linked to the public sector and the environmental regulation (regulatory relief, public funding, green public procurement etc), since these kind of potential benefits are today very little available and, therefore, perceived by the interviewees.

Figure 5

The most relevant motivations to adopt EMAS:	
better management and guarantee of legal compliance	4,0
Improvement of our environmental performance	3,9
better risk management and environmental liability prevention	3,7
Improvement of our organisational and managerial capabilities in the environmental area	3,6
improvement of the relations with our stakeholders and the local community	3,5
improvement of competitive capabilities or satisfaction of a specific request by customers	3,4
keeping up with our main competitors/members of our trade association	3,2
satisfaction of a request by our corporate headquarters	3,1
benefits from regulatory relief	2,9
increase of our rating in having access to public funding or procurement procedures	2,3

Indeed, as today, neither non participants do not consider drivers such as GPP procedures and public funding or regulatory relief as relevant in spurring them towards EMAS registration. However, there is widespread awareness that modifications in that field might play a crucial role. When asked what they believe should be done to increase the competitive capabilities of EMAS, interviewees stressed the importance of including the scheme as a requirement in Green Public Procurement (4,2), as well as of considering it as a favourable condition for obtaining public funds (e.g: for R&D, or innovation).

It is interesting to devote a specific part of the analysis to a specific category of companies: SMEs.
Again, there is a lot of evidence on the issue (Piper 2005, Baylis et al 1997, Biondi et al. 2000, Rowe et al 1996, IEFE 1997, Goodchild 1998, ISO strategic SME group 2005, etc), most of which is gathered in a 1999 study by Ruth Hillary.
It emerges that one of the driving forces spurring SMEs towards EMAS and other EMSs is the specific request of important and large customers, as small firms are more dependent on precise demands by clients representing an important share of their activities (e.g: increasing pressure down the supply chain for improved environmental management is being felt in Germany, Ireland and the UK). Moreover, other important drivers emerging in most of the studies and research being analysed regard legal compliance, improvement of public image and the possibility of benefiting from special funding or incentives from the legislation and the Public Administration.
Overall, external and economic/strategic factors maintain their prevalence even in the "sub group" of SMEs.
It is worth noting how a frequently mentioned driver behind SME participation in EMAS is the potential for cost savings. While on one hand the lack of financial resources is regarded as one of the main barriers preventing SMEs from adopting EMAS, on the other many small companies believe that improved management processes under EMAS will help save money by lowering consumption of energy and raw materials and by reducing waste (EPE, 2005).

We can finally draw some conclusions on drivers, as to sum up the main findings emerged in the study:

- Drivers for EMAS (and EMSs, more in general) are heterogeneous, and their relative importance varies according to the sector, size, location of the organisation, etc.
- While the literature review emphasises a prevalence of economic/strategic and external drivers, the EVER interviews seem to provide a picture in which the role played by environmental and internal drivers is not marginal at all
- Some features are typical of Small and Medium Enterprises, like the relevance of specific requests by important customers

We propose a final comment with respect to a specific category of EMAS organisations. As we will see in the Public Administration – targeted chapter (see A6), these actors have different goals compared to profit-oriented organisations, so that some drivers (such as political consensus or issues linked to specific Agenda 21 processes) are typical of their context, while on the other hand cost-related issues maintain their relevance.

A.3.2 BARRIERS

The present paragraph investigates the factors that prevent organisations from implementing EMAS (and other EMSs), or tackle its maintenance once the first registration has been achieved.

The EVER study acknowledges the existence of different "keys of interpretation" for such a broad issue: indeed, barriers are heterogeneous in nature and forms: they can be broken down following different types of criteria, as hindrances can be either internal or external, organisational or economic, general or category-specific (e.g: SMEs), and so on.
This paragraph is structured in two sub-paragraphs, the first analysing external barriers, and the second focusing on internal ones. However, in the analysis of the evidence emerging from both the literature review and the interviews carried out within the EVER study, we will provide a broad, multi-dimensional picture of the issue, highlighting useful distinctions between organisational and economic, generic or SME-tailored barriers, etc.

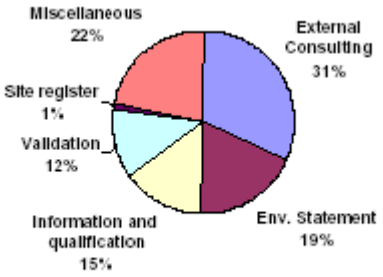
A.3.2.1 External barriers

External barriers encompass a wide set of factors, ranging from the cost of implementation (and other economic factors) to the lack of support and guidance, from hindrances linked to the institutional framework and the verification/registration process to the lack of market recognition, and so on.

Most of the evidence gathered within the review of existing literature on these issues regards the relevance of economic factors, scarce customer awareness/interest and lack of recognition by public institutions as factors hindering the will of organisations to achieve the registration, and to maintain it over time.

The cost of implementation, for instance, seems to be a relevant barrier, especially for SMEs where financial resources are more limited (Hillary 1999, Biondi et al. 2000).
The widespread agreement over the importance of such a barrier is confirmed by many studies, like a survey on the uptake of EMAS and Iso14001 (Strategic SME Group, 2005) showing how the lack of financial resources (33%) and the costs of certification (23%) are among main barriers for the implementation of an EMS.
Furthermore, the evidence gathered (Indagine Triveneto 2001, BMU/UBA 1999, Biondi et al. 2000) suggests that external consulting and verification costs are those with a stronger impact on organisations, and are felt like a heavier burden compared to other costs such as those related, for instance, to the necessary modifications regarding production processes, or linked to product innovations (See Figure 6 below).

Figure 6



Cost categories for EMAS implementation[3] (Source: BMU/ UBA 1999).

Moreover, not only achieving the registration is expensive, but also maintaining EMAS or other EMSs. We can quote Delmas, who states that "the annual cost of maintaining ISO 14001 is a more important constraint than are design and registration costs"; this might be an explanation of the "crisis" of certifications in some countries characterising recent years, as many organisations drop EMSs as costs overweight benefits.

It is very difficult to find in literature precise data on the costs linked to the EMAS registration and sustained for maintaining the scheme.
On the one hand, to give an idea of the financial resources required, we can mention the "EMAS toolkit" (European Commission, 2000), which provides figures with the average expenditures for different size-categories of organisations:

€ 10,000 for very small companies (< 10 employees)
€ 20,000 for small companies (< 50 employees)
€ 35,000 for medium companies (50 <250 employees)
€ 50,000 for large companies (> 250 employees)

On the other hand, studies on EMS costs (Hamschmidt Dyllick 2001, Cesqa Sincert 2001) suggest that the above mentioned figures might be underestimated. The discrepancies in the outcome of different investigations are due to many factors, not least the fact that most organisations do not have a system for the accounting of environmental costs.
Clausen (2002) collected evidence from previous studies on the costs of EMAS implementation in different countries, as reported in the table below:

Figure 7

Size / Member States	Small < 100 emp.	Medium < 500 emp.	Large > 500 emp.	Average
Austria (BMUJF 1999) [2]	109.000 €	225.000 €	153.000 €	-
Denmark (Kvistgaard 2001) [2]	-	-	-	62.000 €
Germany (UBA 1999) [2]	37.000 €	84.000 €	85.000 €	59.000 €
Other Countries				
Switzerland (Dyllick, Hamschmidt 2000)	56.000 €	93.000 €	322.000 €	172.000 €
Hungary (INEM 2001) [2]	3.200 € up to 6.200 €	5.800 € up to 11.000 €	more than 11.000 €	-

Moreover, the previously mentioned Cesqa Sincert study shows how the average annual investment for the implementation of an EMS amount to about 1,9% of sales revenue for SMEs, and 5,2% for larger organisations.

The problem rises from the coupling of two factors like the relevance of the costs for a business activity and the uncertainty of their precise entity. This is consistent with the evidence emerging from the EVER workshop on SMEs and EMAS, where it has been argued that one of the main problems faced by SMEs when considering the possibility of registering in EMAS is the existence of "a priori" undefined costs, mostly related to the implementation phase.

One of the few variables that are indirectly "linked" to the evaluation of the costs of registration, that can be gathered from literature, concerns the time-length organisations take to achieve EMAS registration: it appears that 64% of registered sites take more than 10 months to implement the scheme, and the elements taking the most time are the "environmental management system" (39%) and the "environmental review" (29%).

Costs related to the implementation and maintenance of EMAS, however, are not the only barriers singled out by the literature review, as most of the studies analysed identify as main hindrances also

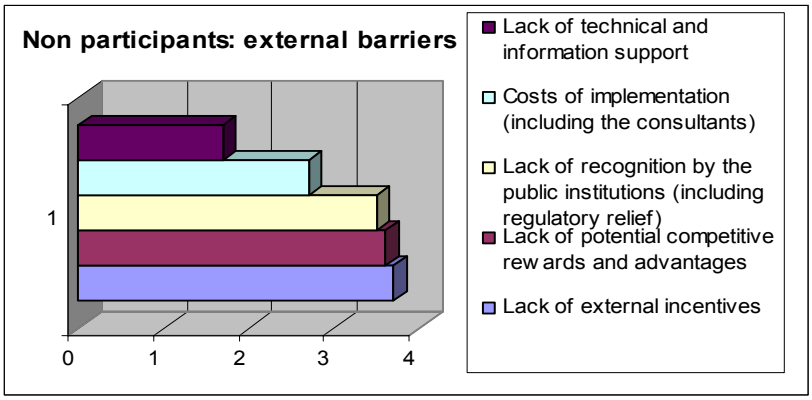
the lack of customer interest and awareness (Kvistgaard 2001, Brouhle 2000, Best project 2004), with the subsequent need to promote EMAS and its logo (De Leo et al., 2003), and the lack of recognition and positive rewards by public institutions (Regione Toscana 2005, De Leo et al. 2003).

The lack of public recognition and interest affecting EMAS (and its logo) is well known, and most studies and surveys are in line with such assumption (Ends surveyed that only 6% of respondents admit EMSs being the main environmental factor orientating purchasing habits). Obviously, scarce awareness means scarce market response.
This goes for all kinds of organisations, but is probably more tackling for SMEs, which have to put a greater effort to implement the scheme, due to their limited resources. Participants of the EVER Workshop on SMEs and EMAS argued that "an important proportion of SMEs who have invested the effort and resources to register in EMAS do not receive any relevant benefits or appreciation… and finally drop out with a negative impression of the scheme".
Brouhle (2000), besides asserting that the awareness of EMAS among the general public nears zero, goes a step forward analysing the scarce level of EMAS knowledge that characterizes firms themselves, as well. He mentions a research study by UNI/ASU, establishing that over one quarter of executive managers did not know about EMAS (Freimann and Schwedes, 1999), and another study by the Institute for Research in Social Choices, which identified 33% who had no knowledge of EMAS and another one third who claimed to know it only partly.

As far as rewards provided by public institutions are concerned, such incentives can be either of regulatory nature or aiming to promote a wider uptake of the scheme through public procurement, funding support and technical and information support (EC Incentives report, 2004). However, to date, the business community is particularly critical about the lack of external incentives.
The evidence emerging from the literature review clearly shows how in those national contexts (e.g: Germany in a first phase of the development of the scheme, Italy in more recent times) where the public sector is more keen on supporting the diffusion of EMAS through promotional campaign or incentives for registered organisations, the uptake of the scheme is much higher compared to other countries where such positive institutional framework does not exist. We can mention, for instance, a study carried out by De Leo (De Leo et al, 2003) on Italian and German sites. De Leo states that among chief reasons of the success of the German policy we have i) an effective program of information and technical assistance to companies; ii) information to the public; iii) financial aid, iv) administrative simplification and deregulation.

A relevant part of the EVER interviews has been devoted to the identification and assessment of barriers preventing organisations from adopting EMAS. Most of the results are in line with what emerged within the literature review, but in some specific aspects we can draw slightly different conclusions.
It is particularly interesting to analyse the point of view of the organisations that are not participating in the scheme. The following figure shows how non-participants rated the importance of external barriers in discouraging EMAS registration:

Figure 8



It clearly appears how the role of public institutions is crucial: the lack of external incentives (3,7) and lack of recognition by the public institutions (3,5) are actually perceived as the most relevant hindrances by most of the interviewees. Moreover, a scarce interest by consumers and the subsequent lack of competitive rewards (3,6) is indicated as a strong barrier, as well, being this consistent with the findings of the literature review. The interview phase, however, provided some surprises, such as the scarce importance given to the cost of implementation (2,7). Despite high costs associated with activities such as external consulting, most organisations suggest these being not the reason why non-participants decide not to implement EMAS.
Moreover, the interviews investigated the relevance, once the registration has been achieved, of the barriers tackling them in maintaining EMAS. In this respect, the opinion of EMAS participants is quite interesting. The in-filed research outcomes show how the lack of competitive rewards and the lack of recognition/rewards by public institutions are the main hurdles faced by organisations, while costs, once again, are not considered as a relevant barrier by the EMAS participants (see Figure 9 below).
It has to be noted that none of the barriers are perceived as particularly important (most of the scores are close to or less than 3).
A last important comment should be devoted to the role of the bodies involved in the implementation of the scheme: neither the Competent Bodies nor the verifiers seem to be perceived as a potential or factual barrier in playing their role for the functioning of the scheme.

Figure 9

The most relevant external barriers:	
Lack of competitive rewards and advantages	3,2
Lack of recognition by the public institutions (including regulatory relief)	3,2
Lack of economic incentives (including funding)	3,1
Lack of recognition by the stakeholders	2,9
Lack of recognition at the international level (outside the EU)	2,9
Too expensive (including costs of verification and registration)	2,7
Difficulties in communicating EMAS to stakeholders and customer	2,7
Too difficult to maintain the EMS under the organisational and managerial point of view	2,6
Difficulties linked to the role of the CB	2,2
Difficulties linked to the role of the verifier	2,1

A.3.2.2 Internal barriers

Internal barriers are a vast category, comprehending factors such as lack of resources (time and human capital), difficulties in the understanding and perception of the EMAS scheme, drawbacks in its implementation process, the culture itself of organisations, and so on.

A first relevant hindrance met on the way for EMAS registration, according to the relevant literature, is represented by the difficulties in effectively understanding the scheme and its requirements and identifying relevant environmental aspects. Indeed, it appears that many organisations are unable to accurately understand EMAS, especially as far as the Initial Environmental Review and the EMS are concerned, and to identify relevant aspects. The difficulties met in correctly identifying relevant aspects is highlighted by many studies (Hillary et al 1999, Regione Toscana 2005). IRIS (2000) shows that 49% of companies find it challenging to identify relevant environmental aspects, and more than 1 out of 4 fail to identify some significant environmental aspects. Moreover, it has been assessed by some studies (e.g.: BMU/UBA 2000) that many companies evaluate the relevance of environmental aspects by the so-called "rule of thumb", and not by an objective and reproducible method. The drafting and the diffusion of the EMAS statement represent other difficult requirements in the EMAS implementation process for many companies to understand and correctly implement.
This is often due, especially as concerns SMEs, to a lack of competences and knowledge within the organisation (Biondi et al., 2000).

However, other studies assert how this is not merely a matter of lack of competences. The problem can assume a different connotation: MacLean (2004) defines it a matter of "harmony" within an organisation (e.g: interaction between business executives and EHS managers) on business priorities. No surprise if, given such situation, it is very difficult to set performance objectives and to hence recognise relevant aspects within EMAS to be dealt with (MacLean 2004).

The evidence collected also shows that another relevant internal barrier is represented by the lack of resources. It is clear that, besides financial resources, there are other resources that organisations need for the achievement and implementation of an EMS and, hence, EMAS.
Among them, we can mention, for instance, the availability of management time, or the adequacy of human resources, being these personnel with proper skills, expertise and technical background (Kvistgaard, 2001, Bonora et al 2001).
This is, once again, felt as a relevant problem for SMEs. This is confirmed by the incessant call, emerging from many studies, for measures capable of simplifying and supporting the implementation and maintenance of EMSs, including EMAS, by SMEs (e.g.: Hillary 1999, Regione Toscana 2005, Ammenberg et al. 1999, etc.).
We can report, as one of the most recent example, the findings of the study carried out by the Strategic SME group (2005) in which lack of time was identified as one of the top three most important barriers when implementing an EMS (including EMAS) by 36% of SME respondents. Secondly, the respondents identified lack of staff resources (31%) and thirdly lack of know-how in the enterprise (21%).

The lack of resources can be even worsened by the high demands of documentation. The risk is that of focusing all (limited) resources on documentation, instead of following and developing the environmental objectives and the environmental performance. Moreover, employees in charge of the EMS might feel demotivated believing the documentation requires too much of their time, and "instead of documenting the problems, they pretend not to see them" (Malmborg 2003).

A final internal barrier highlighted by the literature review is "indirect" and can be identified in the fact that the implementation of EMAS might have backlashes, for instance, by disclosing certain "environmental non compliances" that would have otherwise remained uncovered, with the subsequent legal proceedings and additional costs. Therefore, the fear of having to sustain higher costs, instead of saving money as a consequence of the implementation of the EMS, may prevent many firms from adopting EMAS, Iso 14001 or other similar systems. With this respect, the only empirical evidence is related to a non-EU context: a survey in the US on the uptake of Iso14001, shows how 40% of firms consider potential legal penalties from voluntary disclosure as a constraint to the adoption of the EMS (Edwards et al, 1999), while other studies show even higher figures for such barrier (e.g: 60% in Delmas' US-based survey).

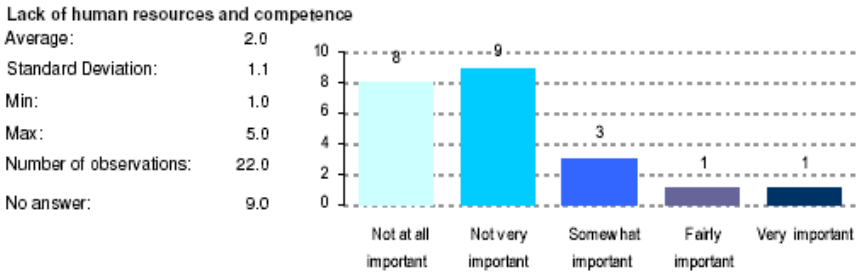
The EVER interviews support the idea that barriers preventing organisations from joining EMAS are mainly external, as none of the internal ones achieves a score higher than 3 both for participants and non participants. Only stakeholders signalled some internal barriers as moderately important. Figure 10 below summarizes the results of the interviews, as far as "internal" barriers are concerned:

Figure 10

The most relevant internal barriers:	Non participants	Stakeholders	Participants
Difficulties originating from the set up and functioning of the EMAS scheme	2,5	3,1	2,7
Difficulties in implementing the requirements	2,3	3,2	2,6
Difficulties related to disclosure through the Environmental Statement	2,2	3	2,3
Difficulties in involving, motivating or obtaining the commitment of personnel	2,2	2,6	2,8
Lack of human resources and competence	2	3,5	2,9

As regards non participants, we can note that, surprisingly, lack of human resources and competences is not considered as a relevant hindrance, at all. Only one respondent out of 22 regarded it as "very important", while for 17 interviewees (almost 80%) the barrier is not important at all or not very important:

Figure 11



But what emerges from an outlook on non-participant answers is the generalised disregard for internal factors, as far as tackling the uptake of the scheme is concerned. We can note that the figures are slightly different with respect of stakeholder interviewees, as most of them believe that internal factors play a greater role in hindering the adoption of EMAS by the organisations they

work or interact with. For instance, lack of human resources and competences is seen as a pretty harsh barrier (3,5), being this in line with what emerged within the literature review.
On the other hand, if we focus on EMAS participants, we note that internal hindrances are not considered as particularly harsh, as none of them obtains a relevant rating: the lack of human resources and competences is however considered as the most relevant internal barrier (2,9).

We can hereby report some conclusions on the findings regarding barriers preventing organisations from adopting EMAS and maintaining it over time:

- Barriers can be either external or internal
- Relevant external barriers are represented by economic factors (e.g: cost of implementation), a scarce consumer awareness and interest (thus a limited market response) and a lack of recognition and incentives by public institutions.
- The entity of EMAS costs is difficult to assess and data on the issue are not univocal, but some costs (e.g: external consultants) are reported by literature to be an excessive burden, especially for SMEs
- Different causes of the scarce awareness of EMAS have been identified, ranging from a lack of promotional activities at all levels (e.g: EU campaigns) to a "confusion" deriving from the spreading of many certifications and labels
- Public institutions' recognition and awards are overall perceived as lacking, even if there is evidence that, wherever applied (e.g: Germany, Italy), they provided a strong support for the uptake of the scheme
- The findings of the EVER interview are generally consistent with the evidence of the literature review, despite some discrepancies such as the scarce relevance given to the cost of implementation
- As far as internal barriers are concerned, lack of resources (in terms of time, competences, human capital and culture) and difficulties in the understanding and perception of the scheme and its requirements (e.g: identification of relevant aspects) emerge from the literature as chief hindrances organisations have to face.
- The EVER interviews, however, give credit to the idea that external barriers are those that actually prevent organisations from joining/maintaining the scheme, while internal "burdens" are less critical

A3.3 BENEFITS

After having examined the motivations why organisations decide to register in EMAS and the barriers they face, the EVER stud also investigated if and to what extent these organisations actually do perceive benefits once they achieve EMAS registration. In the present paragraph we present a general overview of the benefits, while the benefits connected with competitiveness and the market response are dealt with more in depth in the next chapter.

The first aspect to be taken into account with respect to beneficial consequences of adopting EMAS is that of the so-called "legal compliance". Most of the evidence gathered within the literature review emphasizes how EMAS does actually support organisations from the point of view of increased levels of legal compliance they guarantee (Patton and Baron 1995, Madsen and Ulhoi 1999, Van Der Veldt 1997, Sunderland 1997, Watson 1996, Aragon 1998).

Just to mention one of these studies, Biondi et al. (2000) identify in a better legal compliance and in the capability of continuously monitoring compliance one of the most relevant benefits of EMAS registration.
This benefit is also connected with other forms of EMS certification. Hamschmidt (2001), for instance, states that legal compliance is perceived as relevant benefit deriving from ISO 14001 certification (59% of the sample), ranking at second place after the systematisation of existing environmental activities. Furthermore, Leal (2003) shows that non-certified companies believe the assurance of legal compliance would be the main benefit deriving from the certification.

The EVER in-field research provides a very consistent picture, as far as this benefit is concerned. According to the results of the interviews, in fact, EMAS provides considerable benefits in the area of legal compliance: quite interestingly, the three most important benefits perceived by the interviewed EMAS-registered organisations are connected with the monitoring and management of legal compliance. Greater awareness of regulatory requirements was identified as a fairly or important benefit by 70% of the EMAS participant, better compliance by 69% and better planning of actions for legal and regulatory compliance by 67%. These benefits are perceived as far more important than economic (e.g.: resource) savings and competitive advantages on the market (see next Chapter, A4), and slightly more important than organisational and managerial benefits.

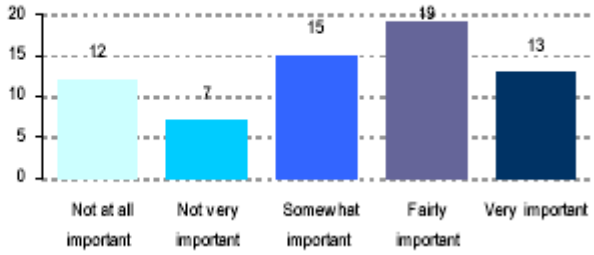
Different studies (VROM 1997, BMU 1999, ASU 1997) show that the EMAS registration, in helping organisations achieve legal compliance, also reduce economic losses linked to remediation costs, even if there is also evidence that the benefits for organisations, from such point of view, are not overwhelming (Hillary 1998, Kvistgaard 2000, Imperial College, ISO 14001solutions and IEFE 1999).

Apart from legal compliance, the evidence emerged in the analysed literature suggests that there are many other dimensions in which the adoption of an EMS, and specifically EMAS, plays a relevant role in benefiting companies.
We can mention, for instance, better control/management of the company (Rodriguez-Badal and Ricart, 1997), or the overall systematisation of managerial and organisational activities (Hamschmidt et al, 2001, IEFE 1998). As an example, we can report the outcome of the German-based Wittmann's survey: for two thirds of the companies, the certification made it possible to pinpoint various possibilities of rationalizing procedures.
Not only organisational benefits, but also the increased motivation of personnel has been singled out as a relevant benefit deriving from EMSs certification (Hillary 1998, UBA 1999, IRIS 2000, Von Hauff 2000, Biondi et al. 2000).
Imperial College, ISO 14001solutions and IEFE (1999), for instance, show that 26% of EMAS registered companies perceive "better employee motivation" as an important positive effect of the application of the schemes.

The EVER in-field research confirms the relevance of such aspects, as shown by the figures below: both the rationalisation of internal organisation (3,3) and greater employee motivation (3,6) are singled out, by EMAS participants, as relevant benefits deriving from registration:

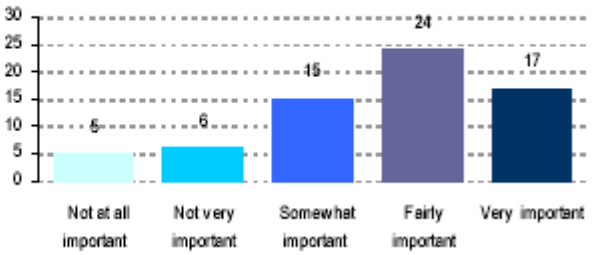
Rationalisation of internal organisation

Average:	3.3
Standard Deviation:	1.3
Min:	1.0
Max:	5.0
Number of observations:	67.0



Greater motivation and participation of employees

Average:	3.6
Standard Deviation:	1.2
Min:	1.0
Max:	5.0
Number of observations:	67.0



As anticipated, there are also benefits connected with EMAS registration that are directly connected with the capability to improve the environmental performance and with competitive advantages that an organisation can gain on the market. These benefits are dealt with in other parts of the study (environmental performance: A1, and competitiveness: A4).

In concluding this paragraph, we can propose a comparative scale of importance of all the benefits:

- First and most important of all, EMAS improves the capability to face up to legal and regulatory requirements: as anticipated, the three most significant benefits perceived by (close to 70% of) the participants are connected to a better monitoring, management and guarantee of the legal compliance.

- Also organisational benefits are strongly associated with EMAS implementation: a second typology of benefits, in order of importance, are those relating to organisational aspects. Approximately 61% of the participants experienced an increase in the motivation and involvement of personnel, while 63% achieved a better definition of responsibilities.

- Lastly, EMAS is able to bear economic and competitive benefits, but definitely to a lesser extent if compared with previous benefits, e.g.: economic savings related to a more eco-efficient operational management are one of the most perceived economic benefit, but this is experienced only by 56% of the participants ("fairly" or "very significant" cost saving through a decrease in resource use, reuse or recycling).

A3.4 INCENTIVES

Both the literature review and the in-field research investigated what incentives might support the overcoming of barriers and hindrances and/or strengthen the drivers and the benefits on the way of EMAS uptake and exploitation.
The BEST project (DG Enterprise 2004) gathers most of the findings of existing studies on the issue and so it represented our main source in the literature review (even if it does refer to EMSs, and not only to EMAS).

One of the first indications emerging is that of a broader involvement of business organisations in the EMAS accreditation, supervision and registration system (Watzold et al, 2000), which explains, for instance, the success of EMAS itself in countries like Germany in the early years of the scheme implementation.
The involvement of - key interested parties in the organisational structures for EMAS is seen to ensure that trust and credibility are enhanced, leading at once to more actors being involved in promoting the scheme. However, since associating other actors alongside business organisations might lead to the perception that too much business involvement weakens the value of EMAS (e.g. in the eyes of NGOs or the general public), the BEST project underlines that it is necessary to implement a balanced involvement of stakeholders, as to create the correct climate of trust, which is important for the operation of the scheme. And this is the very case of SMEs, which are more likely to introduce an EMS when the organisations set up to administer such systems inspire trust, understand their needs and develop a correct "proximity" to the business community.

Moreover, the literature agrees on the necessity to promote initiatives for the integration of the EMAS registration process into an overall "comprehensive, strategic framework agreed between public authorities and industry" (DG Enterprise 2004). For instance, such frameworks can assume the form of voluntary agreements, and get linked to wider sustainable development goals, so that all the actors can gain benefits from the agreement itself.
The "Environmental Pact" in Bavaria – Germany (De Leo et al. 2003) is a relevant example of agreement between business and the regional government, providing advantages to both sides with the introduction of forms of regulatory relief in exchange for voluntary measures by enterprises.
Even SMEs can take advantage by such instruments, by getting engaged in the agreements thus influencing their development.

It has been observed (see A3.2) that one of hindrances on the way of the EMAS registration is represented by the costs of implementation, and the complexities connected to the process (especially in the case of SMEs). The BEST project states that Public Administrations can take a wide range of measures in order to support organisations from such point of view, like by providing direct subsidies rather than technical information and expertise, or by developing sector-specific initiatives as well as the promotion of the implementation of EMSs for specific categories (e.g: SMEs). Financial incentives and subsides can assume different forms. For instance, we can mention cheaper bank loans (e.g: France and Italy) or even reduced EMAS registration fees (in the Netherlands, there is no fee at all) (DG Enterprise, 2004). On the very important role of banking and financial institutions as potential sources of powerful incentives we propose an excursus (see below, at the end of the present paragraph).

In most Member States direct subsidies play a central role in attempts to promote the uptake of EMSs. Such subsidies cover part of the costs inherent in adopting an EMS.
In the past, organisations, and especially the smaller companies, have relied mostly on direct funding and technical and information support, provided by means of promotion projects and other

local and sectorial initiatives (see chapter A2). These incentives proved to be effective especially in some Member States (e.g.: Germany, Italy and Spain). While some evidence (DG Enterprise 2004) suggests that subsidies, however important, are not the overriding factor in EMS registration, their relevance is highlighted by many studies such as the MISF project (1996-1998), showing how two thirds (65%) of participating SMEs had plans to implement an EMS, but that they would not have started the process unless obtaining external support and funding.
It has to be noted, though, that many of these incentives have a short-term effect, with particular reference to the provision of funds aimed at financing the implementation costs.

Another incentive to the adoption and maintenance of EMAS and other EMSs is represented by regulatory relief and deregulation (see the RMEAS project -Brink et al. 2003- and the Semina project –Provincia di Lucca 2004-). Indeed, to date many Member States have already explored ways of combining an EMS with the granting of permits, inspection and enforcement. This issue is strongly relate to the integration and embedment of EMAS in environmental legislation, regulation and enforcement, so it will be dealt with more in depth in chapter C3 of the present report.

Finally, as usual, we can check the consistency of the literature findings with the EVER in-field research. During the interviews, the EVER consultants investigated which incentives and modification would be useful for overcoming EMAS barriers. The results are summarised in the following table:

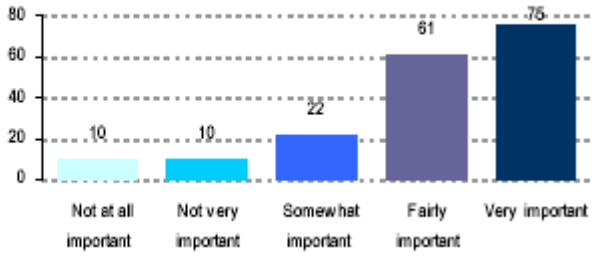
What are the most desired incentives and support measures?

Regulatory relief (administrative procedures, permits, etc.)	4,0
Fiscal incentives such as tax abatement	4,0
Information and promotion campaigns for EMAS (and its logo) by the public institutions	3,8
Upgrading EMAS to an internationally recognised scheme	3,7
Use of the Environmental Statement as an official communication document in the standard administrative procedures (reporting)	3,6
Facilitated access to (non environment-related) public funding or to green public procurement procedure	3,6
Support funding (including pilot projects)	3,4
Technical training and information support (including guidelines and manuals)	3,3
Simplified access to EMAS registration for micro enterprises and SMEs	3,3
Streamlining the application, validation and registration process	3,1
Reducing the costs of registration and verification	3
Possibility of relying on a staged approach, with or without a form of “intermediate” recognition	2,8
Possibility of registering an “industrial cluster”	2,7
Making EMAS an entirely public scheme (without involvement of private organisations)	2,2
Making EMAS a privately-managed scheme (without involvement of public institutions)	1,7

It appears how fiscal incentives and regulatory relief are considered as the most important aspects on which to work, followed by promotion campaigns of the scheme which might overcome the lack of awareness characterising consumers and the public at large (see also next chapter, A4).

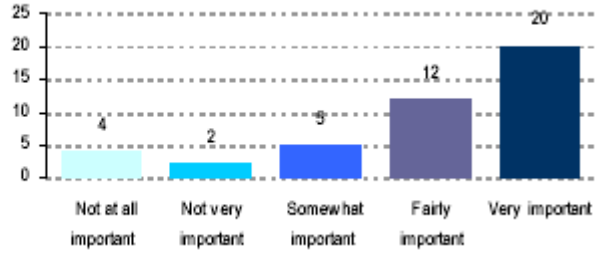
Fiscal incentives

Average:	4.0
Standard Deviation:	1.1
Min:	1.0
Max:	5.0
Number of observations:	178.0
No answer:	21.0



Regulatory relief

Average:	4.0
Standard Deviation:	1.3
Min:	1.0
Max:	5.0
Number of observations:	180.0
No answer:	19.0



Support funding and reductions in the costs of verification and registration achieve lower (however "positive") grades, while there is absolute disregard to the options of making the scheme totally managed by either a public or a private structure.

Excursus: Incentives for EMAS from the banking and financial sector

Generally speaking, the banking and financial sector can play a relevant role in spurring the development and promotion of EMAS, thanks to the ability of influencing companies' behaviour by means of integrating environmental issues in many spheres of financial activity: *commercial banking* (such as corporate client lending), *investment banking* (like project finance) *asset management* (shares, funds and real estate) and *insurance* (corporate clients and environmental third-party liability).
Within the EVER study objectives, the relevance of EMSs (including EMAS) has been investigated as a tool for client-firms' assessment by banks and financial institutions, e.g. in terms of evaluation of companies' risk profile and/or performance.
This perspective is not very explored, despite the relatively wide literature (Case 1999, Bouma, Jan Jaap *et al*. 2001, Forestieri, Gilardoni 1996, Coppola, Corsini 1995, Mosca, Rinaldi 1996 *et al.)*. The point is that, notwithstanding the number of theoretical contributes to the issue, there is poor empirical evidence as regards indirect environmental impacts associated with financial institutions' policies and practices for lending, investment, insurance and other business activities.

Within the EVER study literature review, the issue has been investigated in terms of:
- influence in the evaluation of credit worthiness by financial institutions;
- influence in the rating of companies performance within sustainability indexes.

A survey carried out by IEFE (IEFE, 2002) on the instruments used by financial sector operators in the environmental credit risk assessment shows that few top EU banking groups are already active in the integration of the environmental variable within their granting loans activities. Just to report some of the main findings of the study, the survey provided the following results:

- England, Switzerland, Germany and the Netherlands are the most advanced countries: most of the banks in these Countries developed specialised units for the assessment of environmental risk, integrating firms' credit worthiness with an evaluation of their environmental risk profile;

- a “front runner” example is the following: for one of the most relevant Swiss banking groups, the value of credits subject to a preliminary environmental assessment was, in 2001, 98% of the overall private and corporate credit portfolio, while the number of loans subject to a detailed environmental assessment rose of 43% in comparison to the previous year;
- to mention another example, in 2001, in one of the main banking groups in the UK, 6180 loans were granted after an environmental *on-site* analysis; 32% of them asked for an *in depth* assessment;
- from the point of view of the instruments being used, the survey shows that, beyond the use of instruments provided by relevant international initiatives (ABI 2001, FORGE 2002, EpiFinance 2002), many banking groups developed internally many tools for the assessment of environmental credit risk: *questionnaires/checklist, flowcharts, rating systems, risk matrices.* Nearly all these tools refer to the adoption of an EMS (including EMAS) by client companies.

Moreover, within the survey carried out on GRI Database (see par. A.5.3) within the EVER desk-research, sustainability reports belonging to the financial sector were specifically analysed as regards the reporting of environmental issues in lending policies. An interesting result of this in-depth analysis is that 55% of the sustainability reports in this sector mentioned the adoption of an environmental assessment within credit risk evaluation. Even more interesting is the fact that in many cases the report explicitly refer to the adoption of an EMS (including EMAS) by a client-company as one of the most important assessment criteria.

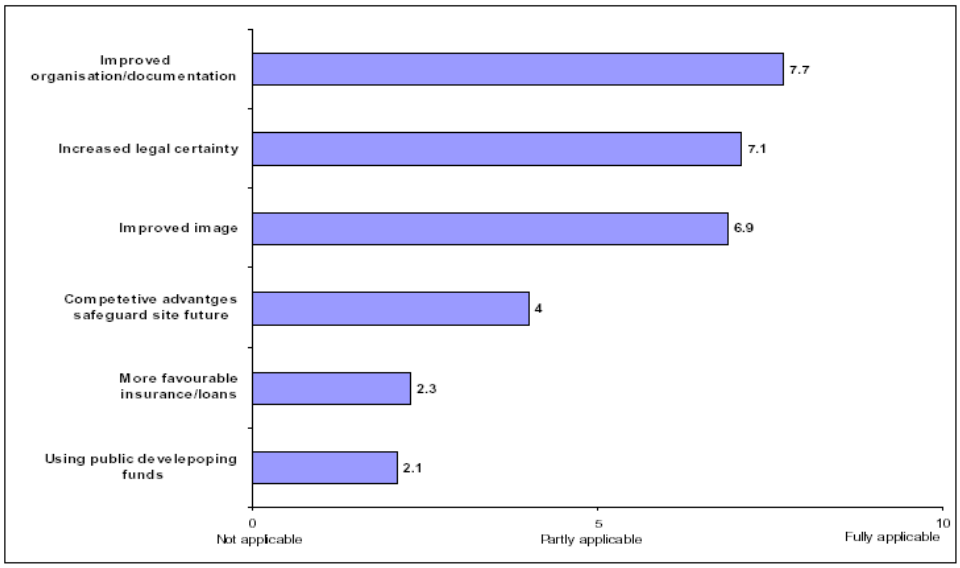
As to financial markets, an increasing role is today played by *sustainability indexes,* aimed at providing private and institutional investors with independent reliable indexes as a basis for investments focused on sustainable companies, even by means of benchmarking their performance.
As regards EMSs’ (including EMAS) relevance within such indexes, IEFE carried out a research aimed at investigating if and how companies’ EMSs are considered in ratings for their inclusion within sustainability indexes (IEFE, 2005b). Empirical evidence shows that the presence of an EMS is explicitly regarded as a positive factor only in two chief sustainability indexes: Dow Jones Sustainability Indexes and FTSE4Good.

As regards DJSI, the identification of “sustainability leaders” is based on a corporate sustainability assessment: a defined set of criteria and weights is used to assess the opportunities and risks deriving from economic, environmental and social developments for the eligible companies. As far as the environmental dimension is concerned, EMAS registration and/or ISO14001 certification, together with the percentage of companies’ activities “covered” by such systems, are considered within high impact variables: the assessment of such aspects has a weight of 4.8% of the overall evaluation of firm sustainability performance (e.g. the second higher percentage, overtaken only by the “environmental perfomance” assessment, with a weight of 6%).
Moreover, within *Industry specific criteria*, the evaluation comprehends, once again, the existence of advanced EMSs.

With reference to *FTSE4Good*, to qualify for inclusion in the FTSE4Good Index Series, companies must meet criteria requirements in three areas: environmental sustainability, relationships with stakeholders, and universal human rights.
As regards environmental sustainability, criteria requirements are divided in three areas: *Policy*, *Management* and *Reporting*, each one defined by a specific set of indicators. As regards *Management area,* companies with ISO14001 certification and/or EMAS registration are considered to meet all the relative indicators. In addition, the outline of an EMS is considered as a desirable indicator within the *Reporting Area*.

The EVER desk-research proved that ISO 14001 and EMAS can effectively be considered as best practices in environmental management by the banking and financial sector and, as such, they can be a relevant part of a sustainable performance assessment. Nevertheless, this is still an emerging trend and, today, EMS certification is not deemed to be a key performance indicator for the largest part of these indexes.
With this respect, for instance, the BEST project (DG Enterprise 2004) mentions a survey of EMAS registered sites (carried out in 1998-1999 by the German Environmental Agency), showing how most of the 70 per cent of all registered enterprises that took part in the study stated that they had not gained more favourable conditions for their insurances/bank loans:

What beneficial effects did German companies gain from EMAS registration?



The situation in not improved today, as only 12% of the participants are experiencing a fairly or very important advantage linked to EMAS registration in having a better access to credit or to public funds.

On the other hand, involving banks and financial institutions in the implementation of EMAS (so to make registration a favourable condition for credit, insurance, etc…) results from the interviews as one of the most effective support measure for the promotion and diffusion of the scheme, and one of the most appreciated incentives by both participants (average score of 4,1 on 5 and more than 80% thinks it would be fairly or very important) and non-participants (3,7 and 70% respectively).

A4. EMAS CONTRIBUTION TO COMPETITIVENESS

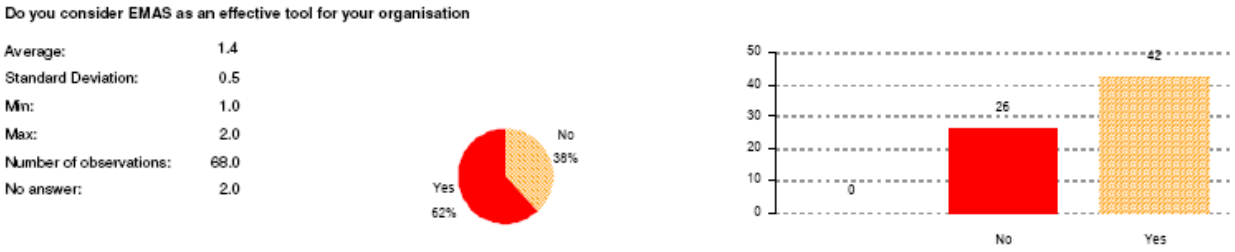
The present chapter is focused on the capability of EMAS to support the competitiveness of registered organisations on the market; in other words, the aim of the study here is to gain insights on how the scheme enables them to obtain positive feedbacks from the final customer or the intermediate client, in terms of variables that conventionally measure "competitiveness", such as: market shares, increase of sale and turnover, innovation, image and customer satisfaction, etc.
Hence, while some dimensions are closely linked to the market (e.g: market shares and sales), others refer to "immaterial" and non-quantifiable assets (e.g: image, customer satisfaction, innovation), being nevertheless crucial for the overall competitive performance of organisations.

The general impression deriving from the analysis of the evidence emerging from both the literature review and the in-field research (as well as some hints gathered during the EVER workshop) is that EMAS registration is actually able to exert a positive influence on competitiveness, even if the effective relevance in supporting it is not certain, especially as far as some variables (such as market positioning and revenue or turnover increase) are concerned.
There is plenty of references in literature dealing with the EMS-competitiveness relationship. Many studies refer to Environmental Management Systems as a whole, and not to EMAS alone. However, in describing the findings of the literature review, we will specify where such findings relate to the EU Scheme, on which we mainly focused our attention. Moreover, such hindrance is overcome thanks to the in-field research, whose questionnaires have been tailored to the EMAS application.

It is interesting to start off, in presenting the results of the study, with the outcome of a simple, straight but very meaningful question asked to interviewees during the "in-field" research of the EVER study: whether they considered EMAS as an effective competitive tool.
It emerges that there is no agreement upon the answer, as 54% of respondents believe the scheme is actually effective, while 46% have a more pessimistic view.
If we break down the outcome of the interviews between "participants" and "non participants", we can gain insights of how companies actually adopting the scheme judge it as a tool capable of supporting their competitiveness.

Figure 1:

EMAS Participants

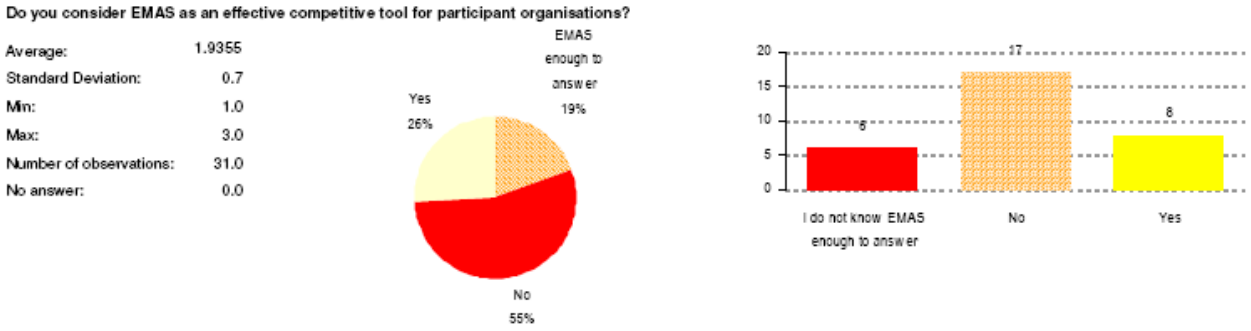


The percentage of interviewees having a positive perception of EMAS competitive capabilities is higher than the average of the whole sample in the case of the "participants" subgroup (62%), even if we have to highlight that a relevant number of EMAS registered organisations (38%) are not perceiving benefits in terms of competitive effectiveness.

On the other hand, if we consider "non participants", it is interesting to note how only 26% believe that EMAS would actually provide an effective support to their competitiveness.

Figure 2:

Non-participants



Both the in-depth analyses carried out in the "desk" and "in-field" research focused on different dimensions of competitiveness. Indeed, benefits linked to EMAS (or other EMSs) can differ in nature and features. We propose an overview of the main findings relating to some key-aspects of competitiveness, starting from the more "internal" ones (relating to economic efficiency).

A4.1 COST OPTIMISATION

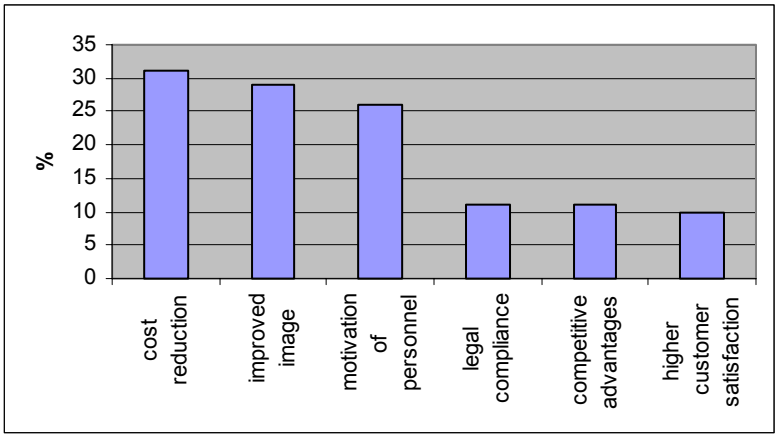
Most of the literature agrees on the benefits provided by the EMAS registration in terms of cost savings and optimisation, and this is consistent with the evidence emerging from the EVER "in-field" research, as well.
In a relatively recent review of existing studies on the issue (Clausen et al. 2002), most of the works taken into consideration show that EMAS implementation supports firms competitiveness, thanks especially to the lower costs they can obtain. As we can see from the following table (Figure 1), this is the most perceived benefit if we consider the whole set of the analysed studies.

Figure 3

Type of benefits	NL VROM 1997	EU Hillary 1998	GER UBA 1999	AUS BMU 1999	GER BMU 2000	SWE IRIS 2000	SWISS Baumast 2001	DK Kvistg. 2001
Reduced resource consumption	yes		yes	Yes	yes			yes
Lower cost (several reasons)	yes	yes	small	Yes	yes	yes	yes	yes
Better working conditions								yes
Better employee motivation and participation		yes	yes		yes	yes	yes	yes
Positive market response		yes	small		yes	yes	small	no
Better financial conditions in banking and insurance				Yes	yes		small	no
Better Image	yes	yes	yes		yes		yes	
Reduced risk of non-compliance	yes	small	yes	Yes				

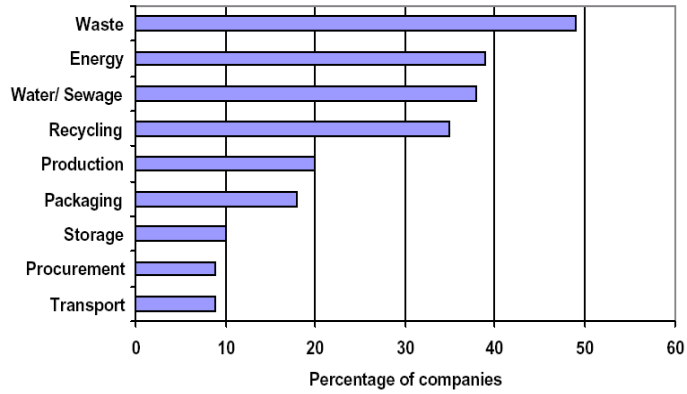
Cost savings are relevant not only in general terms, but also in comparison with other benefits deriving from the EMAS registration.
We can mention, for instance, a study (Imperial College, ISO 14001solutions and IEFE 1999) showing how cost reduction is actually the main benefit associated with the implementation of the scheme:

Figure 4



The German UBA (1999) investigated cost savings more in detail, and the findings hereby summarised (with a crucial role played by savings in waste and energy areas) are in line with the evidence emerging from most of the works carried out on the issue:

Figure 5



Areas of cost savings due to EMAS implementation (Source: BMU/ UBA 1999).

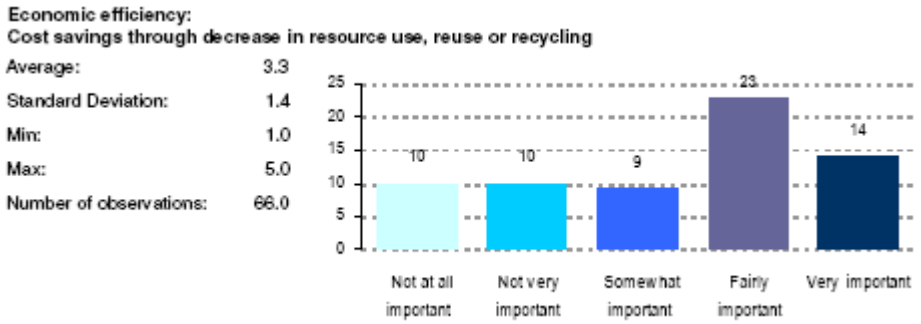
The "in-field" research carried out in the EVER study, confirms the importance of economic efficiency - related benefits, as one of the main way in which EMAS supports the participants' competitiveness.

Figure 6

The most relevant competitive benefits perceived	
Cost savings through decrease in resource use, reuse or recycling	3,3
Cost savings through waste reduction	3,2
Better planning of investments in machinery, equipment and plants	2,7

We can see from Figure 7 below that reuse, recycling and an overall decrease in resources used are regarded as "fairly" or "very important" by most of the respondents (37 out of 66), and the same goes for cost savings achieved through waste reduction, while there is less perception of effective benefits as far as the planning and optimisation of investments is concerned.

Figure 7



Also the studies that more generically deal with EMSs (and not EMAS-specific) show how cost savings represent one of the main dimensions on which the certification supports competitiveness (Petrick et al. 1999, Axelsson et al. 2003). Indeed, it appears that all kinds of EMSs do actually spur competitiveness of firms as they operate as cost-cutting measures, especially as far as some issues like greater energy efficiency and reduced resource consumption are concerned. We can mention, as an example, a study carried out in 2001 (Hamschmidt et al, 2001), showing how 50% of Swiss ISO-certified companies perceive cost reduction as a relevant benefit deriving from the implementation of an EMS.

Of course, the natural "counterpart" of the costs saved due to the adoption of an EMS is represented by the costs sustained for its implementation. Further and specific information on the issue is provided in other sections of the Report (see previous chapter).
As far as competitiveness is concerned, we should focus on a specific aspect, being it the overall relationship between costs sustained/saved due to the certification, as to gain insights on whether the latter is economically "convenient", thus spurring competitiveness.
In literature, there are many studies investigating the capability of EMSs of paying back the costs sustained for their implementation and maintenance. There is no general agreement upon the actual payback period of EMSs certification (or, more specifically, EMAS registration).
For instance, while some studies (Hamschmidt, Dyllick, 2001; Cesqa Sincert, 2002, Freimann et al, 2000, Hoppner et al, 1998, IRIS 2000) provide a brighter picture showing how sometimes the increased revenue provides a payback in a relative short period of time (a year and a half – two years), there is also evidence supporting the fact that often organisations do not cover the costs sustained, neither in the short nor in the long run. It appears that this is often the very case of small organisations such as SMEs, as shown by the study carried out by Hillary in 1999, gathering the experiences and the outcome of many research activities.
There are indeed many other studies (e.g.: Jaffe et al, 1995, Grimaud and Ricci, 1999) that are sceptical, as they focus on the internal costs sustained for the implementation of an EMS, also arguing that higher prices deriving from the implementation costs will hinder the competitiveness of organisations (Lanoie and Tanguay, 1998).
As far as EMAS is specifically concerned, we can mention the outcome of a previously mentioned study (Imperial College, ISO 14001solutions and IEFE 1999): during the average time-lapse between the achievement of the registration and the carrying out of the survey, 41% of companies

already break evened, so that the study assessed an average payback period ranging from 2,2 to 2,8 years.

The EVER "in-field" research, as well, investigated whether the EMAS registration paid back or not: it appears that 60% of EMAS participants affirm it actually did, while about 31% of the sample disagree and the rest are not able to answer such question.

A4.2 BETTER IMAGE AND HIGHER CUSTOMER SATISFACTION

Factors spurring the competitiveness of firms can be either internal or external. As far as the "external dimension" is concerned, most of the existing literature is consistent with the assumption that, while market response is still weak, EMAS registration provides relevant advantages in terms of an improved corporate image, with respect both to consumers and to other important actors (e.g: competitors, banks and insurance companies, stakeholders at large).

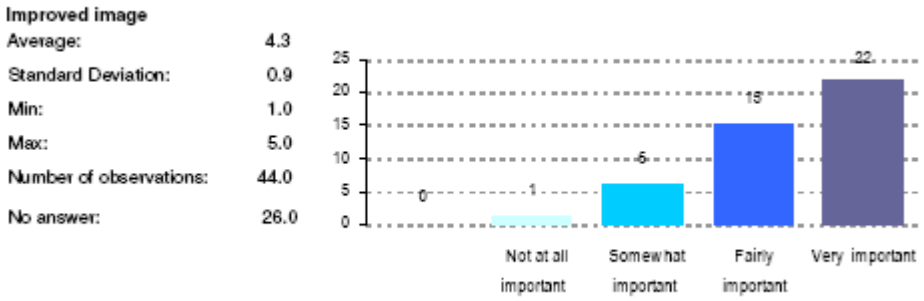
The relevance of such "relational" benefit is stressed by both the findings of the EVER "in-field" research and the evidence emerging from the literature review (e.g.: Strachan 1999).

While there is general agreement on the "qualitative" support provided by EMAS to improved image (and thus competitiveness), some studies make a further step, trying to analyse more in depth and to "quantify" the importance of such benefit which, by nature, is intangible and difficult to evaluate.
We can mention, as examples, the results of some EMAS-based studies and surveys:

- Wittmann 1996: this Germany-based survey indicates an effective improvement in company image in 62% of the cases being analysed
- Imperial College, ISO14001solutions and IEFE 1999: improvement of company image (with 29% of preferences) ranks among the most significant benefits, following only cost reduction (31%).
- Hillary 1998: a pan-EU EMAS survey shows that SMEs perceive an improvement of image as the main registration-driven benefit (54%), whereas its importance, however consistent, seems to decrease as the size of the organisation increases.

The relevance of image improvement is confirmed by the results of the EVER "in-field" research, singling out "improved image" itself as the main competitive advantage experienced due to the participation in EMAS:

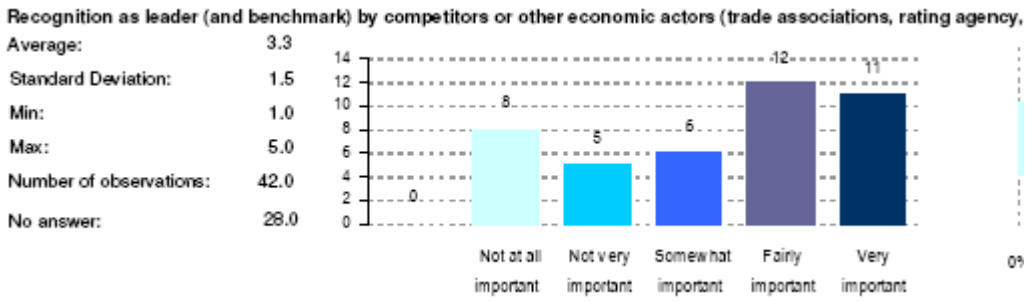
Figure 8



Half of the respondents consider it as "very important", while only one respondent is sceptical on the support to competitiveness provided by a better image.

A strong image can assume also the form of "leadership recognition", as far as competitors and other relevant stakeholders and economic actors are concerned. Indeed, the "in-field" research gives proof that organisations clearly perceive EMAS registration supports such "strong image" (3,3), as reported in Figure 9 below:

Figure 9

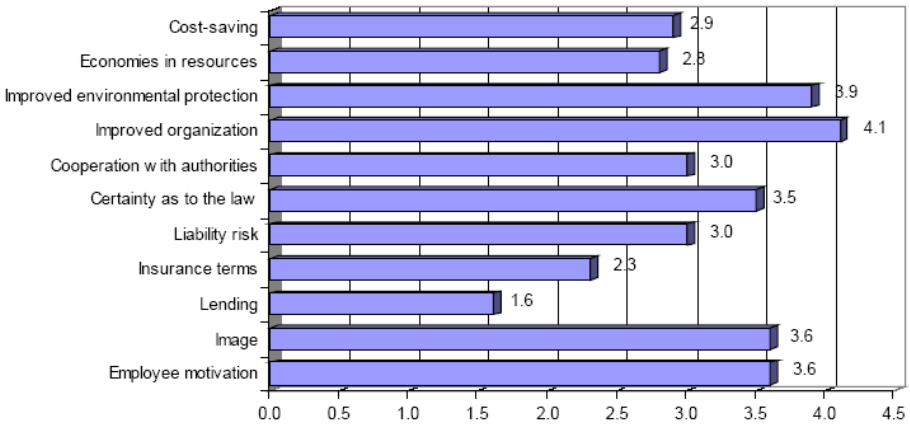


The outcomes relating to EMAS are not significantly different from the literature findings related to studies focusing on other EMSs, These studies once again stress the relevance of certification-driven improvement in corporate image as a key-benefit supporting firms competitiveness (e.g.: Hillary 2000, Del Brio 2000, Danish EPA 2003, Christiansen et al. 1998).

It is interesting, for example, to mention the study carried out on Spanish organisations, both certified and not certified, as to investigate if (and in which dimensions) EMSs spur their competitiveness (Leal et al. 2003). Improved corporate image is regarded as one of the most "decisive" EMS-related factors in supporting competitiveness by all kinds of companies (certified and non-certified), while other benefits were kept into great consideration by certified companies only (such as an improved overall control and management of the company).

Furthermore, Von Hauff (2000) shows that an improved image is among chief benefits deriving from an ISO 14001 certification, although in this case other options rank higher:

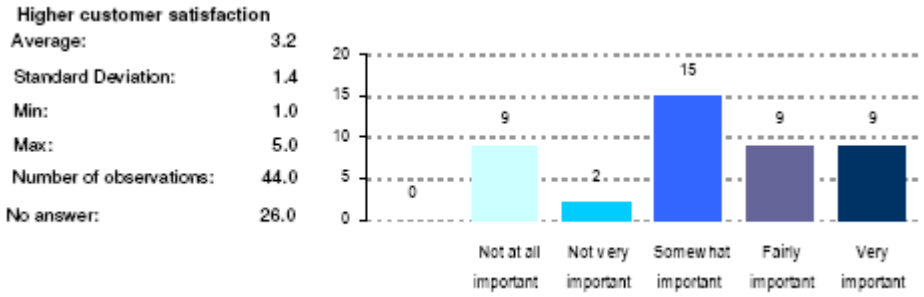
Figure 10



Another dimension of competitiveness closely linked to corporate image is that of "customer satisfaction". As environmental awareness is rapidly spreading among EU consumers, customers of

companies proving to be more "eco-friendly" than competitors through environmental certifications might well be more satisfied, and eventually respond orientating their purchasing habits. Is this perceived as a competitive advantage by EMAS organisations?
The trend emerging both from the EVER "in-field" research and from the literature review, is that of an increase in customer satisfaction deriving from the EMAS registration. And this is in line with the general finding that "immaterial" benefits are those that are most perceived by organisations. However, there is no general agreement upon the overall degree of success in increasing customer satisfaction. For instance, while the Imperial College, ISO 1001Solutions and IEFE (1999) study stresses how such benefit is perceived as important by 10% of respondents only, being overpowered by other issues such as costs reductions, the interviews within the EVER study seem to give it more credit, as respondents gave a positive evaluation (3,2 on a maximum of 5):

Figure 11



A4.3 INNOVATION

EU environmental policy has the broad aim of influencing the innovation process and technological development within firms in favour of cleaner techniques and technologies responses (Hilliard et al. 2003). The underpinning idea is that the adoption of environmentally friendly techniques and technologies, concerning the take-up of methods improving the productivity of resources, will overcome the traditional trade-off between increased competitiveness and enhanced environmental protection.
As a consequence, we analysed existing literature, as well as the outcome of the EVER "in-field" research, in order to assess if and to what extent the adoption of EMAS and other EMSs actually supports the competitiveness of companies by spurring innovational processes.

Most of the evidence gathered suggests that there is a positive influence of EMAS on environmental process and product innovations, as well as on environmental organisational innovations. The most important survey on this issue (Rennings et al, 2003), carried out on German registered sites, shows that EMAS actively supports the development of environmental innovations, whose scope depends on the maturity of the scheme itself. Moreover, it appears that sites who have achieved significant learning processes by EMAS are particularly successful in economic terms, exploiting synergies between the "environmental" and the "innovative" dimensions.
As one may expect, especially organisational changes are being induced by EMAS, such as environmental project- or innovation- teams or employee suggestion schemes. These can support learning processes and contribute to capacity building (see Bradford et al. 2000). Additional environmental innovations, especially process and product innovations of a technical nature, are often a result of preceding organisational innovations (Rennings et al, 2003).

Most of the 1277 EMAS-validated sites in the sample of this study reportedly implemented internal environmental organisational innovations, such as environmental indicators, environmental employee objectives plans, environmental teams and environmental employee suggestion schemes.

Figure 12

Environmental innovations implemented by the interviewed EMAS-validated facilities

	a) Environmental innovation implemented						b) Innovation implemented between 1999 and 2001 [partially if a) = yes]						c) Substantial contribution by EMAS [if a) or b) = yes]					
	YES		NO		Don't know		YES		NO		Don't know		YES		NO		Don't know	
Environmental organisational innovations																		
Internal																		
Environmental indicators	[illegible]	68.9%	[illegible]	30.8%	[illegible]	0.6%	[illegible]	49.6%	[illegible]	49.8%	[illegible]	0.6%	[illegible]	81.1%	[illegible]	18.5%	[illegible]	0.3%
Environmental employee suggestion scheme	[illegible]	49.6%	[illegible]	49.6%	[illegible]	0.7%	[illegible]	43.7%	[illegible]	56.0%	[illegible]	0.3%	[illegible]	60.1%	[illegible]	39.3%	[illegible]	0.6%
Environmental team	[illegible]	50.6%	[illegible]	49.2%	[illegible]	0.2%	[illegible]	43.7%	[illegible]	56.3%	[illegible]	0.0%	[illegible]	76.6%	[illegible]	22.9%	[illegible]	0.5%
Environmental employee objectives plan	[illegible]	64.6%	[illegible]	34.4%	[illegible]	1.0%	[illegible]	53.0%	[illegible]	46.5%	[illegible]	0.6%	[illegible]	82.7%	[illegible]	16.8%	[illegible]	0.5%
External																		
Supplier surveys	[illegible]	77.8%	[illegible]	21.5%	[illegible]	0.7%	[illegible]	59.9%	[illegible]	39.7%	[illegible]	0.4%	[illegible]	85.9%	[illegible]	13.8%	[illegible]	0.3%
R&D co-operations	[illegible]	27.6%	[illegible]	70.2%	[illegible]	2.3%	[illegible]	40.3%	[illegible]	58.5%	[illegible]	1.1%	[illegible]	48.9%	[illegible]	50.3%	[illegible]	0.6%
Environmental process innovations																		
Production process																		
Process-integrated							[illegible]	81.8%	[illegible]	17.1%	[illegible]	1.1%	[illegible]	61.3%	[illegible]	37.9%	[illegible]	0.8%
End-of-pipe							[illegible]	54.3%	[illegible]	44.4%	[illegible]	1.3%	[illegible]	62.2%	[illegible]	37.2%	[illegible]	0.6%
Process recycling							[illegible]	37.5%	[illegible]	61.3%	[illegible]	1.2%	[illegible]	62.6%	[illegible]	36.5%	[illegible]	0.9%
Preceding and succeeding stages																		
Procurement							[illegible]	56.9%	[illegible]	40.5%	[illegible]	2.6%	[illegible]	73.7%	[illegible]	26.0%	[illegible]	0.3%
Energy production							[illegible]	25.4%	[illegible]	73.8%	[illegible]	0.9%	[illegible]	55.6%	[illegible]	44.4%	[illegible]	0.0%
Distribution							[illegible]	39.2%	[illegible]	58.3%	[illegible]	2.5%	[illegible]	57.5%	[illegible]	42.1%	[illegible]	0.4%
Environmental product-related innovations																		
Technical																		
Improved or new products							[illegible]	43.9%	[illegible]	53.6%	[illegible]	2.4%	[illegible]	49.4%	[illegible]	50.1%	[illegible]	0.5%
Product planning																		
Environmental R&D-criteria	[illegible]	31.9%	[illegible]	57.2%	[illegible]	10.8%	[illegible]	41.7%	[illegible]	57.8%	[illegible]	0.5%	[illegible]	62.3%	[illegible]	36.8%	[illegible]	1.0%
Environmental product performance specifications	[illegible]	45.2%	[illegible]	42.4%	[illegible]	12.4%	[illegible]	43.6%	[illegible]	55.3%	[illegible]	0.9%	[illegible]	71.6%	[illegible]	27.7%	[illegible]	0.7%
Explicit consideration of environmental aspects in product development	[illegible]	41.9%	[illegible]	45.7%	[illegible]	12.4%	[illegible]	46.5%	[illegible]	53.1%	[illegible]	0.4%	[illegible]	75.0%	[illegible]	25.0%	[illegible]	0.0%
Participation of the environmental manager in product development	[illegible]	47.9%	[illegible]	40.1%	[illegible]	12.0%	[illegible]	38.9%	[illegible]	60.8%	[illegible]	0.3%	[illegible]	66.3%	[illegible]	33.2%	[illegible]	0.5%

The EVER "in-field" research confirms the relevance of EMAS-driven innovations in supporting the competitiveness of participating organisations.

As we can see from the table below, both organisational and technical innovation capabilities are spurred by the EMAS registration, with the former placing second (3,5) among the most perceived competitive benefits, and the latter achieving a positive assessment (3,1), as well.

Figure 13

The most relevant competitive benefits perceived	
Improved image	4,3
Improved organizational and managerial innovation capability	**3,5**
Cost optimization	3,5
Recognition as leader by competitors and other economic actors	3,3
Higher customer satisfaction	3,2
New customers (or contracts) or market shares acquired	3,2

Improved technical innovation capability	**3,1**
Improved product quality or performance	3
Facilitated access to credit or to public call for tenders	2,1

Figure 14

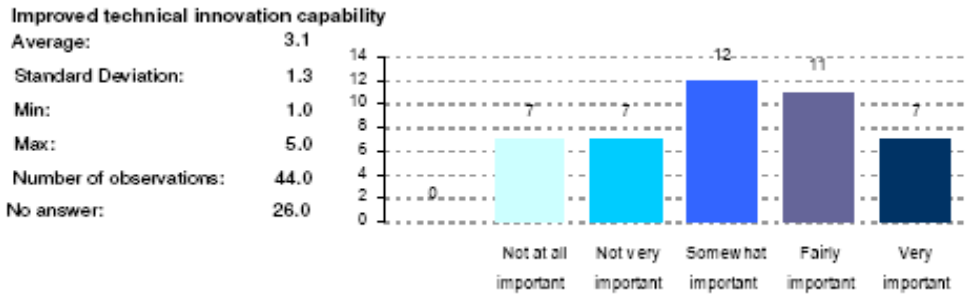
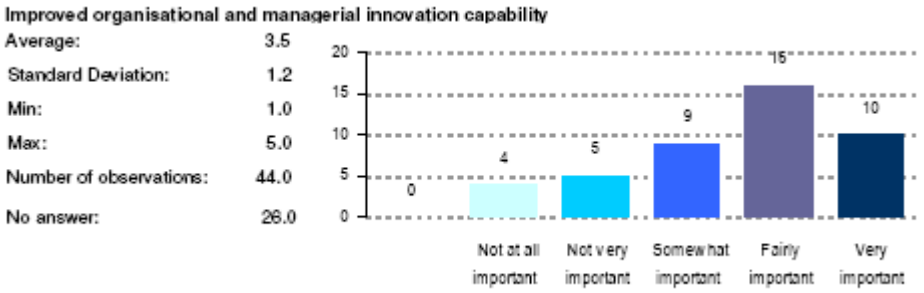


Figure 15



Other studies focus on EMSs as a whole, and the evidence emerging is in line with the findings concerning EMAS. Indeed, it appears that implementing such systems does spur the competitiveness of firms by means of increased innovational capabilities, even if their effectiveness seems to be not overwhelming. As an example, we can mention Malmborg (2002), who stresses the importance of EMSs (namely, EMAS and Iso14001) in terms of "organisational learning". Moreover, Hamschmidt shows that one third of respondents of his Swiss-based study is perceiving relevant benefits as far as the "innovation dimension" is concerned, even if the improvements in such field are not regarded as the main benefits achieved due to the EMS certification (Hamschmidt et al, 2001):

Figure 16

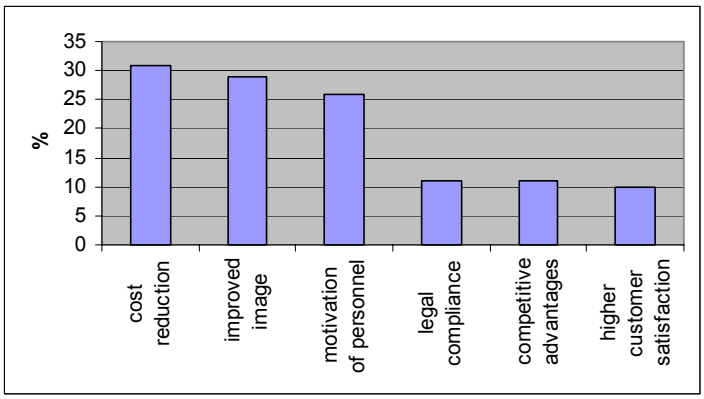
What are the most perceived benefits?	*%*
Systematisation of environmental activities	76
Assurance of legal compliance	59
Risk minimisation	58
Improved image	52
Cost reductions	50
Better relationships with PAs	47
Employee motivation	41
Improvements in innovation	**32**
Improvements in market position	28
Improved conditions from banks and insurance companies	13

A4.5 DIRECT "MARKET-RELATED" SUPPORT TOWARDS COMPETITIVENESS

We have gained insights of the improvements achieved by organisations, as a consequence of the introduction of EMAS or other EMSs, as far as many dimensions of competitiveness are concerned. Moreover, the literature review has been aimed at investigating the "overall" support provided by EMAS (or other EMSs) to firms' competitiveness, in terms of "direct" indicators such as market shares, increased sales and revenues and improved market position.
The findings of the literature review are consistent with the idea that only part of the above-mentioned benefits support a concrete improvement of the competitiveness of EMAS organisations. It seems like the main benefits are either immaterial (such as a better image) or linked to the internal sphere of the company (e.g: lower costs or better management and rationalisation of activities), and not directly linked to the market response.
Indeed, even if there is evidence that the implementation of an EMS does actually result in an increase of competitiveness (Feldman 1997, Bonifant et al 1995, Hart et Ahuja 1996, HMUEJFG 1998), many other studies focus on the lack of market pull as a relevant hindrance on the way of an effective exploitation of EMAS competitive capabilities (Kvistgaard 2000, UNI ASU 1997, UBA 1999).

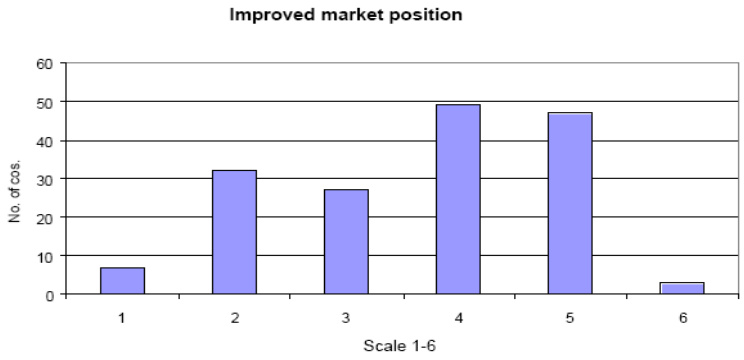
To mention some example of a positive relation between EMAS and market response, Hamschmidt (2001) shows how 28% of Swiss companies only experienced an improvement in their market position as a consequence of EMS adoption, while some of the previously investigated benefits, such as legal compliance or activities' rationalisation, are far more important.
Again, the 1999 IEFE-Imperial College evidences how, notwithstanding the good results achieved in terms of cost reduction and improved image, the concrete competitive advantages (stressed by 11% only of respondents) are existent but still limited:

Figure 17



Furthermore, the IRIS survey (2000) on Swedish EMS-certified organisations (including EMAS participants) highlights some of the benefits gained on the market. It emerges that, whereas one could expect that the major gains with an EMS should derive from increased revenue (rather than cost savings), the results of the study couldn't verify quantitatively such assumption. Nevertheless, about 30% of questionnaire companies did state that they could demonstrate increased revenue as a result of environmental work, and many companies (both large and small) reckon that their market position has been improved as a result of the EMS implementation:

Figure 18



Companies' assessment of improved market position as a result of the EMS, on a scale from 1-6 in which 1 corresponds to 'not at all' and 6 to'to a very great extent.'

As far as EMAS is specifically concerned, there is no overall agreement on the support provided to the competitiveness of registered organisations "on the market". Most of the evidence gathered is anedoctal, and refers to a specific context.
Anyhow, some studies provide a brighter picture, as some authors state (Clausen et al, 2002) that "the reported information for EMAS competitive results from all studies indicates in general a positive impact".
Hillary (1998) found in an EU wide representative sample 41% of 140 sites which felt that the market had rewarded their EMAS participation.
However, there is evidence that the support of EMAS towards competitiveness is bitterly tackled by the lack of market pull (Kvistgaard), so that the response given by the market is not overwhelming as organisations might hope.
For example, we can mention Wittmann's survey on German EMAS-registered companies (1996), showing an effective increase in revenues in only 17% of the cases (and a reduction in 8%).
As we have seen, one of the most interesting studies in this perspective is the survey conducted in the German region of North-Rhine-Westfalia in 2003, investigating the reasons for dropping out of EMAS (Lange, Ahsen & Pianowski 2004). One of the main conclusions of the study is that markets have insufficiently responded to EMAS.

According to the literature, hence, it is not possible to provide a universally accepted assessment of the impact on the market of EMAS registration.

As far as the EVER "in-field" research is concerned, when asked what competitive advantages they experienced thanks to the registration, EMAS participants gave the following response:

Figure 19

The most relevant competitive benefits perceived	
Improved image	4,3
Improved organisational and managerial innovation capability	3,5
cost optimisation	3,5
Recognition as leader (and benchmark) by competitors or other economic actors	3,3

Higher customer satisfaction	3,2
New customers (or contracts) or market shares acquired	**3,2**
Improved technical innovation capability	3,1
Improved product quality or performance	3
Facilitated access to credit or to public call for tenders	2,1

Again, the optimisation of costs and a better image (along with improved managerial and organisational innovation capabilities) seem to be the key-benefits. Participants averagely recognise that they are actually experiencing an increase in market shares and customers, but it appears, at the same time, that organisations are experiencing positive results in some "intangible fields" more than into concrete competitive advantages "on the market".

A4.6 EMAS AND INTERNATIONAL COMPETITIVENESS

Finally, some considerations should be devoted to the possible effects of EMAS on international competitiveness.
The ever tightening connection between environmental policies and product / company competitiveness has led also very "light" measures, like voluntary environmental instruments, to become controversial and discussed policies from an international trade perspective. In order to fully assess the effects of EMAS on competitiveness, the implications of the scheme on world trade issues cannot be neglected.
The choice made in the EVER study is to deal in the present paragraph with this issue by considering the impact of the voluntary instruments as a whole (including EMAS and Eco-Label) on international trade, even if there are some differences between the two schemes. We very briefly summarise here the main conclusions of the literature review, the reader can consult the relevant references for further information.
With the diffusion of voluntary instruments like EMAS and the EU Eco-Label, the relationship between environmental policies and competitive advantages has started to change in business' perception (Majocchi, 1997).
The "conventional" approach sees companies operating in Countries that lag behind under the environmental legislation point of view as more competitive (no compliance costs) with respect to EU-based companies (World Bank 1992). In more recent years another, and opposite, interpretation has developed: third Countries fear that high EU environmental standards, and even environmental certifications, regarding the product or the production processes might represent a discrimination for their exports to EU markets: a sort of protectionist barrier (Iraldo, 1997).
It is not easy to assess whether an environmental policy might hinder free trade, undermining international agreements as those gathered within GATT (General Agreements on Tariffs and Trade), that are aimed at preventing companies and nations from using technical standards that might turn out to be "hidden" barriers. However, according to the literature "mainstream" (see also in the bibliography on the EU Eco-Label: OECD 1994 and 1995, IISD-UNEP 2000, and many others), it clearly appears that environmental voluntary instruments (such as Emas or the EU Eco-Label), even if capable of producing relevant effects in international trade, are not to be considered as potential Non-tariff Trade Barriers (NTB) for third-countries producers because, although they concern the Product and Productions Methods (PPMs, see Tudini 1992), the fact that they are *voluntary* prevents them from violating the main GATT and WTO provisions against protectionism (Iraldo, 1997).

A4.7 KEY INDICATIONS

We can conclude by highlighting the general trends emerged by both "desk" and "in-field" research:

- It appears that EMAS and other EMSs do support the competitiveness of participant organisations

- Better results are achieved either in "intangible" fields (such as an improvement of corporate image) or in the internal sphere of the organisation (e.g: costs optimisation, innovation capabilities) that might turn into a better positioning with respect to competitors (e.g.: in the pricing policy)

- On the other hand, the marker response, however present, is still very weak, so that the lack of market pull results in little improvements of the more "traditional", direct and quantifiable competitive variables, such as market shares and revenues.

- Competitive advantages directly linked to any sort of "market reward" are perceived only by a small minority of the EMAS registered organisations.

- If EMAS is really an effective tool for competition or not, when compared with other tools, remains a controversial matter: participants in the scheme are more positively oriented, while very few organisations outside the scheme believe it can produce competitive advantage on the market, especially if compared with other forms of certification (i.e.: ISO 14001).

- All in all, EMAS seems to pay back its costs, even if this mostly happens in the medium-long run.

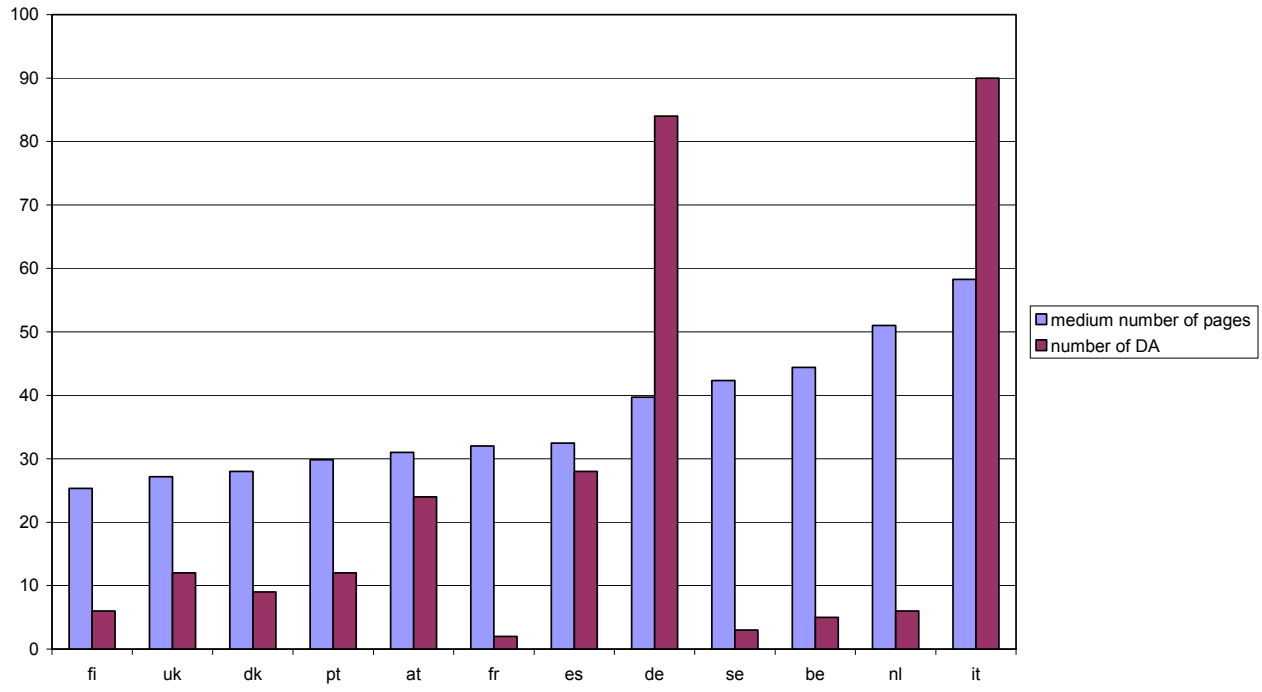
Excursus: use and effectiveness of the Environmental Statement to improve corporate relations and image

As we have anticipated (see paragraph A3.1), the capability of improving the relationship with the relevant stakeholders by means of a communication strategy based on the Environmental Statement is one of the most significant drivers for EMAS adoption. The question is: does the Environmental Statement provide an appropriate and effective tool for external communication towards the relevant stakeholders and, eventually, do registered organisation use the Statement for this purpose?

An early possible answer came from the first assessment study on EMAS implementation (aimed at the first revision: Imperial College, ISO14001solutions and IEFE, 1999): only 60% of the registered companies considered the Environmental Statement an effective communication tool.
It should also be noted that the same study pointed out that the statement was not extensively used by EMAS companies for communication purposes, and that the stakeholders that mostly request it were: students and scholars (ibidem).
Most of the references in the literature agree on this interpretation (e.g.: Gorla et al. 2001, Biondi et al. 2000, Jones 2000, Stray and Ballantine 2000, Stittle et al. 1997, Grafé 1996, etc.). A study carried out in the UK (Collison et al, 2003) considered the level of importance attached by different companies (both with and without EMS, including EMAS) to environmental communication for different group of stakeholders. This study shows that environmental regulators are the most important environmental communication "targets", followed by local community and pressure groups.

The same elements clearly emerged also during the EVER EMAS workshop discussion, where the importance of communication through EMAS was stressed as a very strong motivation. The EMAS Statement is in fact regarded as the defining element of the scheme, so that companies are reported to choose *a priori* between EMAS and ISO 14001 depending on their need for communication. Hence, organisations with a relevant need to communicate use EMAS because of the presence of the statement. At the same time, at the workshop there was a strong agreement on the limitations of the statement as a communication tool in its current form. There was frustration about the fact that it is mostly students who request it, and a perception of it being too complicated and confusing for the general public.
With this respect, a thorough study on 150 Environmental Statements drafted according to EMAS I Regulation and published all over the EU (Gorla et al. 2001) argues that the statement is often drafted in an non-effective format for external communication, and mostly in a very exhaustive, technical and detailed way to support the check by the verifier. This implies that the large majority of the Statements (with the exception of few Member States) are lengthy and not "easy-to-read" documents.
Within the EVER desk-research, IEFE Bocconi carried out a test on the state of the art of the Environmental Statement, collecting 296 EMAS Statements from different EU Member States (the most recently published edition) and measuring their length. Even if this exercise has no statistical relevance, it can be a meaningful "indirect" indicator of the scarce reader-friendliness of these documents. The Graph reported below shows that the average number of pages is well above 30.

medium number of pages in 296 European Organization registered EMAS, divided by countries



Even more negative feedbacks emerge from our study if we consider the potential use of EMAS as a communication tool towards the clients and customers. According to the experiences reported by participants in the EVER workshop, the EMAS statement in its current full format is not used in the marketplace. It was argued that in some cases companies are opting for a combination of ISO 14001 and a CSR report instead of EMAS. The workshop participants also confirmed the anedoctal evidence reporting that very few EMAS organisations are publishing synthetic "extracts" of accredited information (taken from the full Statement) for communication and marketing purposes.
Literature confirms that the statement is not used for communication purposes very much, especially for competition-related target groups (customers, suppliers, public purchasers, financial and credit institutions). As we have seen, it is mainly distributed to regulators, employees and, sometimes, to local communities.

One reason for companies to drop out of EMAS is the lacking response of clients to their environmental statement. The importance of a low market demand is showed by a survey carried out in the German region of North-Rhine-Westfalia in 2003. In this study, the reasons for dropping out of EMAS were investigated (Lange, Ahsen & Pianowski 2004). Most of the responding companies had been registered twice under

EMAS and left the system because they could not generate benefits by publishing an environmental statement. The companies explained that their clients did not demand and were barely interested in the Environmental Statement.

Finally, it should be noted that a moderate request to simplify the Environmental Statement for improving its use as a communication tool came from participants (3,0 on a maximum of 5), non-participants (3,3) and stakeholders (3,0) interviewed during the EVER in-field research phase.

A5. EMAS RELATIONSHIP WITH SUSTAINABLE DEVELOPMENT

This chapter aims at evaluating the contribution of EMAS towards *sustainable development,* on the basis of its broadly accepted definition as «the development able to fulfil present needs, without compromising the possibility for future generations to come to fulfil theirs», and usually referred to the three pillars: the economic, the social and the environmental one.
The potential and actual contribution of EMAS to these pillars is partly analysed in other chapters of the study, as regards for instance the effects on the economic pillar, largely dealt with in the part relating to competitiveness (see A4), or the impacts on the environment, assessed under different points of view throughout the whole report. This section, therefore, mainly focuses on social and socio-economic aspects.

The EVER study focuses indeed on the influence that EMAS can exert on the three pillars of sustainability from the perspective of companies' behavior; from this point of view, the key issue is the concept of Corporate Social Responsibility (CSR), defined by the European Commission as «a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis» [COM (2002)347].

The very first part of literature review, carried out in the EVER study, investigated the relationship between EMAS and CSR, focusing on a specific and particular aspect of corporate social responsibility: employees' health and safety (the results were already presented in the interim report). This was just a starting point, and this focus was due to the fact that health and safety management is one of the aspect that companies are more eager and prone to integrate with the environmental issues.

In order to complete the literature review, the EVER study broadened its scope, by analysing the issue of a possible integration between EMAS and CSR for all the other different aspects the latter is "composed of", aiming at gathering evidence as refers the introduction of specific elements of CSR in EMAS, or the possibility of re-defining EMAS as a broader scheme, dealing with all social and environmental aspects linked to CSR.

In general terms, EMSs are considered as a CSR tool both by the literature and main CSR international initiatives (Global Compact 2002a, 2002b, 2004; EC, 2004; CSR EMS Forum 2004, OECD 2000, *et al*.).
From a more operational point of view, the evidence emerging from the literature review emphasizes how the possibility to rely on existing management systems (as in the case of EMAS) is an important driver for a company to develop its CSR strategy (CSR EMS Forum, 2004; SAI 2002 *et al.).* Mainstreaming CSR becomes easier if a company can rely to a certain extent on already existing management systems, even if it is not possible or relevant in all cases (as different goal setting, monitoring, assessment etc., may be required). Separate CSR systems are thought not to add to a successful mainstreaming, whereas management systems in force that are gradually adapted and enriched with CSR components are seen as more appropriate (thus stressing the importance of research to adapt management disciplines and integrate CSR principles in traditional management tools) (Biondi 2004; Hortensius 2005; EC 2003, 2004; CSR EMS Forum, 2004).
Moreover, management standards against which a company can be certified are thought to be useful benchmarks and communication tools on CSR management performance (EC 2004).

The evidence emerging from the literature can be summarised considering three research areas:

1. the integration of health and safety issues within EMSs in terms of:
    - use by companies of EHS integrated management systems;

- development of initiatives for the integration of such aspects by different international bodies (International Labour Organization, ISO, Global Reporting Initiative);

2. the inclusion of social, economic and environmental aspects connected to CSR in an integrated management perspective;
3. the relationship between EMSs and CSR reporting and communication tools.

A5.1 THE INTEGRATION OF HEALTH AND SAFETY ISSUES WITHIN ENVIRONMENTAL MANAGEMENT SYSTEMS

A5.1.1. The companies' perspective

As far as the issue of health and safety within companies' EMSs is concerned, the evidence emerging from different studies carried out in many EU countries such as Italy, Denmark, France, Spain (EFIWLC, 2000; Frey *et al.* 1999, Gorla *et al.* 1998, IEFE 2005a) can be summarised as follows:

- there is *a still limited integration* of aspects regarding health and safety within EMSs, even if increasing in recent years;
- *the influence of companies' sector* on the degree of integration is strong: companies operating in given sectors (e.g. chemical branch and waste management) are more "sensitive" towards the opportunity of integrating health and safety issues within their EMSs;
- *the size of organisations* is a crucial variable*:* large organisations seem to be more sensitive towards the adoption of an integrated approach, due to larger organisational and financial possibilities and to the available economic resources. However, some studies show that even SMEs are keen to integrate health and safety aspects with the management of environmental aspects. In particular, a study carried out on Italian SMEs (Frey et al., 1999) show that 65% of the sample (100 SMEs) that was investigated are interested and are experiencing some form of integration between environmental and safety issues. Moreover, the study specifies that the tendency to integrate is not limited to front-runner SMEs, as most companies showing greater interest for an integrated approach lag behind from the point of view of environmental or safety management (i.e.: they are not even implementing a certified EMS or health and safety management system).

A5.1.2 International bodies' EHS initiatives within Corporate Social Responsibility

There is an increasing tendency, in recent years, towards the analysis of the issue of integration of health and safety aspects within companies' management systems, as well as towards the necessity/opportunity of developing new instruments for companies (standards, guidelines etc.) (ILO, 1998, ISO 2004, GRI 2004).

Among relevant initiatives, ILO carried out a study (ILO, 1998) aimed at analysing the instruments that companies have within the management systems of health and safety, and investigating the possibility of developing an own document on occupational health and safety management, following the structure of *ILO Codes of practice.*
The study is particularly interesting since it analysed 24 documents: standards, guidance documents and codes of practice (among which, the EMAS Regulation and the ISO14001 standard), in order to

assess the presence/absence, in each of them, of 27 Occupational Health and Safety Management System (OHSMS) variables.
Within the 24 models analysed, EMAS and ISO14001 are parts of the restricted group with the most comprehensive coverage of occupational health and safety aspects. On the other hand, based on the analysis that was carried out, and the extent to which OHSMS variables are present, neither EMAS nor ISO14001 are considered strong *auditable OHSMS standards*. However, ISO14001 is evaluated as a strong *auditable standard:* even if it is not an OHSMS, many organizations are using it as a template for OHSMS development. According to ILO, two key OHSMS variables that are missing in ISO 14001-based OHSMSs are 1) *employee participation*, and 2) *health/medical programs and surveillance.*

Figure 1

Environmental Management System / **OHSMS Variable**	**EMAS**	**ISO14001**
Management commitment and resources	X	X
Regulatory Compliance and OHSMS Conformance	X	X
Accountabiliy, Responsibility and Authority	X	X
Employee Participation		
Occupational Health and safety Policy	X	X
Goals and Objectives	X	X
Performance Measures	X	X
System Planning and Development	X	X
Baseline Evaluation and Hazard Risk/Assessment	X	X
OHSMS Manual and Procedures	X	X
Training System	X	X
Technical Expertise and Personnel Qualifications	X	X
Hazard Control System	X	X
Process Design	X	X
Emergency Response	X	X
Hazardous Agent Management		
Preventive and Corrective Actions	X	X
Procurement and Contractor Selection	X	X
Communication System	X	X
Document and Record Management System	X	X
Evaluation System	X	X
Auditing and Self inspection	X	X
Incident Investigation and root Cause Analysis	X	
Health Medical Program and Surveillance		
Continual Improvement	X	X
Integration	X	X
Management Review	X	X

Source: ILO, 1998.

From a broader CSR perspective, the study highlights the weakness of many management systems approaches as regards addressing *employees participation*. This issue is perhaps the most important to labour representatives. For instance, it is possible to have an otherwise strong OHSMS that has weak employee participation: this is observed in some ISO 14001 - based OHSMSs.

The ILO commitment to an international OHSMS standard finally result in the "ILO Guidelines on occupational safety and health management systems" (ILO-OHS, 2001), adopted in 2001, on the basis of ISO standard.

As regards EMSs (including EMAS) relevance as OHSMS standard reference, it has also to be noticed that, within the context of the GRI framework, the Global Reporting Initiative develops *Technical Protocols* on indicator measurement, each one addressing a specific indicator or set of indicators by providing detailed definitions, procedures, and references to assist users in applying the *Guidelines*. The *Pilot Health and Safety Technical Protocol* refers to ISO14001 as regards the reporting of management systems' formal certification (GRI, 2004).

A5.1.3 Key indications from the EVER in-field research

The EVER in-field research confirm the idea that currently integrating health and safety issues within EMSs seems the most viable option as regards the possible integration of CSR issues within EMAS revision; at the same time, there is not a global consensus on the hypothesis of an EHS integrated certifiable standard.

The EVER study interviews show how promoting and favouring integration between EMAS and health and safety is an interesting option: 62% of all the interviewees is in favour of integrating health and safety into EMAS (68% among participants).

Nevertheless, at the EVER EMAS-workshop, the issue appears as controversial: on one hand there was the idea that today organisations use EMAS as an instrument for the implementation of their CSR strategy, as regards the environmental dimension, just like other tools are used for health & safety related issues (OHSAS18001). The question is about the EMAS effectiveness as an *environmental* management tool, while the integration with CSR elements should be regarded as a subsequent, and still premature, step.
On the other hand, it was argued that H&S issues are CSR most suitable elements for a quick integration in perspective of the EMAS revision, both for being site-related and for the existence of similar systems and tools for their management. In other words, the use of such tools allows companies to have the expertise that is necessary in managing H&S aspects even within the EMAS scheme.

A5.2 THE INCLUSION OF SOCIAL, ECONOMIC AND ENVIRONMENTAL ASPECTS IN AN INTEGRATED MANAGEMENT PERSPECTIVE

As today, there are many different management standards and frameworks (e.g. quality, environmental, health and safety, social and workplace standards) enabling companies to embed CSR issues and stakeholder participation into business' decision-making and operations:

- *workplace standards* on labour conditions (SA8000) and on occupational health and safety (OHSAS 18001);
- *quality management standards* (ISO 9000, EFQM etc.);
- *environmental management standards* (EMAS, ISO 14001);
- *national initiatives* (AFNOR SD 21 00 *Guidelines on sustainable development* - France; AENOR PNE 165001 - *draft ethical financial instruments* and PNE 165010 *draft ethical management systems standards* - Spain; The SIGMA Project - UK; The Q-RES Project – Italy);

- *sectoral initiatives* (FORGE *guidelines on environmental management and reporting for the financial services sector; guidance on CSR management and reporting for the financial services sector* – UK).

On the basis of the wide literature and initiatives that are already existing, the perspective of the integration of CSR issues into a global management system framework seems indeed to be mature, as far as a great number of guidelines, operational toolkits, papers and articles have been issued (Biondi 2004, Hortensius 2005, Oskarsson *et al*. 2005, Sacconi *et al*. 2004, SIGMA 2003a, 2003b *et al.*).
However, it is far more difficult to assess companies' sensitivity and effective implementation of such integration, due to the relatively less advanced experiences developed by companies as regards the use of CSR *"issue-specific"* management systems (e.g. EMAS and ISO14001 as regards the environmental dimension; SA8000 as regards the social dimension etc.) within a global CSR systematic management framework.
The same literature emphasizes, on the other hand, how management standards and systems often differ in their goals, objects and structure: for instance, some instruments are *organisation based* (such as EMAS), some are *site based* (such as SA8000) and some are *product based* (such as the FSC criteria) (EC 2003; Biondi 2004).

Actually, there is a core of generally accepted considerations on which most of the evidence gathered converges:

- managements systems (certified or not) generally refer to a *common approach,* based on the *Plan Do Check Act (PDCA) cycle*. These elements can be broadly referred to as policy, planning, implementation and operation, performance assessment, improvement and management review. A systematic approach to managing CSR issues can certainly benefit from such a framework and of companies' experience in managing quality, social and environmental issues through existing standards (ISO 14001, EMAS, SA8000 etc.);
- nevertheless, CSR is a more complex issue than quality, environmental or occupational health and safety. Besides differences in goals, objects and structure, existing management systems may miss the strategic focus and top management recognition that is necessary for successfully addressing CSR;
- hence, a far more useful approach is that of using organisations' management systems as a suitable basis to start addressing CSR issues. It is also worth underlining that companies' adoption of CSR management tools and systems *per se* is no guarantee of good performance. A great challenge ahead is how to define and measure good business performance in this area.

Among the actions undertaken at international level, a relevant initiative has been recently developed by ISO (ISO, 2004), aimed at determining whether ISO should proceed with the development of ISO deliverables in the field of CSR. To this end, ISO carried out a study dealing with the issues to be taken into account in CSR activities by ISO. The study reflects the variety and diversity of issues, opinions and debates characterizing any effort to focus on a single type of international CSR deliverable, and to integrate social, environmental and economic issues into a single standard.
The study highlights the difficulties and risks related to such an integration:

- ISO14001 and EMAS do not include the kinds of universally applicable performance requirements that characterize other SR standards; moreover, the audits of ISO14001 and EMAS do not consider the actual environmental impacts of an enterprise in terms of the health of ecosystems or abundance of natural resources, species etc;
- Key-issues concern the significant qualitative differences existing between the economic, environmental and social matters: there is indeed a danger of presuming that all CSR issues

can be equally treated within the same framework. In particular, it is noted that social aspects are more *intangibles* and sometimes difficult to quantify compared to other aspects, such as environment and quality. As a result, a framework that does not recognize the differences between the various aspects is unlikely to succeed in promoting a balanced approach to all CSR issues. To this end, a useful option could be that of a step-by-step process for such integration;

- many organizations are already addressing economic, environmental, quality, occupational, health and safety and social aspects of their activities, and in some cases they have to face trade-offs between these different aspects. CSR implies an even broader range of issues, and it is argued that an organization have to set priorities in dialogue with stakeholders to address the most significant issues, based on its own values, legal and other normative frameworks and its actual impact (direct and indirect) on society.

ISO work and commitment to social responsibility finally resulted in the preparation of a new standard on social responsibility (ISO26000): the standard will provide guiding principles on social responsibility. It will not be a management system standard and will not be set for certification purposes. ISO expects that developing the standard will take three years, with publication in early 2008.

A5.2.1 Key indications from the EVER in-field research

The EVER in-field research is rather consistent with the literature review: while the development of management tools is seen as an essential step to enable companies to "translate" their broad CSR commitments into concrete actions and ensure the quality of how they are managed, the debate over CSR standardisation (within EMAS revision in particular) is controversial.

First of all, the results show that sustainability-targeted initiatives are rather diffused among organisations: 65% of the respondents (summing up all groups) carried out in the past initiatives for employee involvement in social issues, 47% performed stakeholder engagement on social issues and 67% developed (or is developing) an occupational health and safety management system (OHSAS 18001 or others).

As regards an upgrading of EMAS to a wider scheme on CSR and/or sustainable development, 50% of the sample interviewed agrees on this opportunity, 50% does not (48% agrees and 52% doesn't among EMAS participants). Largely preferred is the possibility of including CSR-related issues in EMAS, as an *add-on* of the current scheme (with a "modular" approach).

The EVER EMAS-workshop underlined the variety of questions characterising the debate over CSR integration within the EMAS revision process. First of all, it was argued that, once adopted, such integration would indeed imply the rigorous compliance with CSR requirements. However, today CSR comprehends too many and various issues, on which an universally valid and recognised rules' system does not exist yet.

A crucial issue regards *the definition of the social requirements* that might enter EMAS. A first problem is that of the singling out and delimitation of CSR aspects to undergo regulation. A second aspect regards the definition of the boundaries that should apply to such aspects, considering or not, within the scheme, the activities carried out by organisations in extra-EU contexts, still underdeveloped from the point of view of human rights protection (e.g: rights of workers, child labour etc.).

Moreover, management standards are voluntary and their success ultimately depends on the level of acceptance by the market. The authority of the standard body that sets them and the process through which they are developed (e.g. involving consultations with a wide range of interested parties) are also very important to determine their credibility. From such perspective, a revision of EMAS with the integration of CSR elements would have relevant implications in terms of marketing. It was argued that the consideration of EMAS by companies as a competitive tool does not allow an insertion of social aspects within the scheme. According to this opinion, market consequences of CSR elements in EMAS would only be increased costs for organisations, without significant benefits as far as market response is concerned.

A.5.3 THE RELATIONSHIP BETWEEN EMAS AND CSR- REPORTING TOOLS

As today, a considerable number of studies and research projects have been devoted to corporate sustainability reporting, in order to investigate companies' *motivations* (Cormier and Magnan, 1999; Herremans *et al*. 1999; KPMG 1999 *et al.),* and the correlation between such a commitment and companies' characteristics, as regards *strategic proactivity* (Aragòn Correa, 1998),) *financial performance* (Stanwick 2000), *financial condition* and *industrial sector* (Cormier and Magnan, 1999) etc. However, relatively poor literature exists as regards the correlation between companies' attitude towards sustainability reporting and the adoption of an environmental management system.
In order to overcome such lack, IEFE Bocconi directly carried out an in-depth analysis within the activities of the EVER study, aimed at evaluating the extent to which actors committed to sustainability reporting are also EMAS/ISO14001 certified organisations, thus strengthening with empirical evidence the idea that currently EMS users are the majority of voluntary environmental and/or sustainability reporters.

The research was conducted on the GRI database, which gathers at the international level the sustainability reports of all organisations using *GRI Guidelines*, and formally communicating to GRI their adhesion to the standard (this means that the database does not cover all organisations using *GRI Guidelines* for their reports world-wide, but only those providing the *Global Reporting Initiative* with an official feedback).
The main objective of the IEFE work within the EVER study was indeed that of examining how many of those companies implementing sustainability reporting also apply an EMS (and specifically how many are EMAS-registered), as to investigate if and to what extent the empirical evidence is consistent with the following considerations:

- companies implementing sustainability reporting are familiar with the EMS approach, and use it as a source of data and indicators specifically validated for the environmental part of their report;
- most of companies with an EMS feel the need to implement reporting (even if they are not EMAS registered, thus lack the environmental statement) and, specifically, to report on sustainability as a whole (not only environment);
- reporting on other (non-environmental) dimensions is carried out even in absence of a management system;
- there is a relevant number of environmental certified companies that, in order to implement reporting (both environmental and sustainable), find it useful to use an external standard (e.g. GRI), and in some cases such standard is used for the verification of the report, as well.

The GRI database, updated as to September 2005, recorded 725 organisations, of which 357 (49%) EU-based; for each sustainability report within the database, the EVER desk-research analysed the existence of an EMS of the corresponding organisation, distinguishing:

- organisations reporting the existence of an ISO 14001-certified EMS;

- organisations reporting the existence of an EMAS-registered EMS;
- organisations reporting the existence of an EMS which is not certified or registered, but formally structured and reported. Within this category, data recorded are often related to organisations declaring to have set up their EMS according to the ISO14001/EMAS standard, and/or being willing to obtain the certification in the following 2/3 years;
- organisations reporting the existence of an EMS covering health & safety issues, as well, eventually with a OHSAS18001 management system.

The elaboration of the data, based on GRI database branch classification, distinguishes two geographical spheres for organisations:

- European Union + Extra EU (covering all organisations included in the database),
- European Union,

in order to highlight data referred to the European context of application, with particular attention paid to EMAS-related data.
The main results of this part of the desk research are reported in the table below; besides overall database outcomes, the table shows some interesting data referred to specific sectorial branches.

Figure 2

EU + EXTRA EU				
Total number of GRI reporting organizations	Of which ISO14001 certified	Of which EMAS registered	With a *non-standardised* EMS	With an EHS integrated management system
725	**57%**	**8%**	**18%**	**16%**
Energy Utilities (44)	70%	14%	18.1%	18.1%
Financial Services (73)	27%	7%	23.2%	5.4%
Public Agency (11)	55%	9%	0%	0%
Food & Beverage Products (39)	54%	3%	15.3%	12.8%
Metal Products (15)	73%	7%	6.6%	20%
Health Care Products (26)	58%	0%	26.9%	46.1%
Equipment (25)	88%	8%	12%	32%
EU				
Total number of GRI reporting organizations	Of which ISO14001 certified	Of which EMAS registered	With a *non-standadised* EMS	With an EHS integrated management system
357	**57%**	**16%**	**19%**	**14%**
Energy Utilities (19)	74%	32%	10.5%	15.8%
Financial Services (46)	41%	11%	21.7%	4.3%
Public Agency (4)	25%	25%	0%	0%
Food & Beverage Products (22)	50%	5%	22.7%	18.1%
Metal Products (5)	80%	20%	0%	0%
Health Care Products (15)	47%	0%	26.6%	46.7%
Equipment (13)	77%	15%	15.3%	38.4%

Source: GRI Database. Own elaboration carried out by IEFE Bocconi within the EVER study.

The main conclusions of the analysis may be summarised as follows:

- the collected evidence proves that corporate sustainability reporting commitment often matches companies' attitude towards EMS registration/certification: 57% of the EU organisations reporting on sustainability are also ISO14001 certified, and 16% are EMAS registered;
- taking into consideration ISO14001 *plus* non standardised EMSs, the percentage of sustainability reporting organisations also implementing an EMS raise up to 76%;
- as regards the influence of the sector in which the companies operate, the evidence confirms the overall higher sensitiveness towards sustainability of companies active in sectors for which the environmental and/or H&S issues are crucial.

A5.3.1 Key indications from the EVER in-field research

The in-field research proves that there is a growing interest by EMAS organisations to communicate on other sustainability issues (i.e.: not only environment-related issues) and on their performance in Corporate Social Responsibility as a whole. The evidence collected with the interviews and in the EVER EMAS workshop, in fact, is rather consistent with the desk research.
As regards interviews, the results show that 43% of the interviewees drafted, is drafting or thinks it would be important for his/her own organisation to draft a sustainability report.

At the EVER EMAS-workshop, the debate over EMAS as a reporting and communication tool focused on the opportunity of making EMAS a more effective instrument. There was indeed a strong agreement on the limitations of the statement as a communication tool in its current form, which could be modified in order to provide organisations with a more "flexible" communication and marketing tool.

As regards corporate reporting in general, it was argued that organisations today tend to privilege *sustainability reports* rather than *environmental reports*, using instruments such as the *GRI Guidelines*. Such instruments, however, only provide reporting guidelines, as they don't deal with CSR planning and management aspects, as an EMAS revision could do. From such perspective, the results of the in-depth analysis support the option of introducing an article in the new EMAS Regulation dealing with the inclusion, in the EMAS statement, of an additional separate chapter on CSR issues. This possibility, according to the participants in the EVER EMAS workshop, should be explicitly foreseen and not left to the discretional approach of each Competent Body.

A6 EMAS AND PUBLIC INSTITUTIONS

The present chapter proposes an in-depth analysis on the relationship between "EMAS and Public Institutions", due to the specificities characterising the implementation of the scheme within this sector and to the interest that this issue is raising for EMAS development.
The application of EMSs by public institutions (and local authorities in particular) has been broadly developed both on a theoretical (Erdmenger 1998, Levett 1997, Noren, Von Malborg 2004 *et al*.) and on an operational level, through many projects regarding EMAS I (PIE 1997, LACE 1997, EMSs of Finnish Local Authorities, 1997, EURO-EMAS 2001 *et al.)* and EMAS II (IEFE–QualitAmbiente 2005, SSSUP 2005, EMAS Peer Review 2004, NEST 2004, TANDEM 2004, EU COMPASS 2004, EMAS LAB 2003, etc.).
Relevant literature emphasises that public administrations, like any other organisation, produce environmental impacts linked to their structures and to the supply of given services. The key point is that such bodies do have land use, planning and management *powers* on their own territory: in other words, they can influence, through the planning and control (and the proper implementation) of administrative functions, the activities and behaviours of the "society" being governed (companies and citizens).
The relevance of indirect environmental aspects, as opposed to direct ones, together with other specificities linked to the role and the environmental tools such bodies can implement and manage, suggest us to deal with some of the aspects presented above for the whole range of organisations (performance, drivers and barriers, benefits and incentives) in a separate chapter, by emphasising the peculiarities of public institutions in EMAS application.
A final section is dedicated to literature review as regards public support measures and incentives that, according to public institutions themselves, should be included in the EMAS revision process, both to promote the implementation of the scheme within the public sector and to strengthen its role in the diffusion of the scheme itself.

A6.1 PERFORMANCE

A6.1.1 Direct Environmental Aspects

Generally speaking, literature review as well as most of the experiences developed by local authorities in the EU (SSSUP 2005, EURO-EMAS 2001, Focus Lab 2003, EMAS Peer Review 2004, IEFE–QualitAmbiente 2005, etc.) show the success of EMAS in improving municipalities' environmental performance, both in general terms and in specific environmental spheres.
From a more detailed perspective, improvements often regard *waste management*, indeed an increased *separate waste collection* rather than a decrease in production. Other significant improvements, often registered among local authorities, concern the *use of resources* and *better environmental conditions on the governed territorial area*.
The evidence emerging from literature can be summarised as follows:

- an Italian survey carried out on 19 certified/registered local authorities (17 Municipalities and 2 Provinces, with 16 bodies ISO14001 certified and 3 EMAS registered) (Focus Lab, 2003) shows that the mostly achieved environmental improvements regard an increase in *separate waste collection (*63% of the sample) and an *overall improvement of environmental conditions of the territory* (58%). *Reduction of water consumption* (31%) and *energy savings* (31%) follow;
- within the *EURO-EMAS Project* (a LIFE funded project), 9 municipalities across Europe aimed at improving environmental performance by 33% over the three-year period of the project, to demonstrate the real value of EMAS for EU local authorities. The results of the

project demonstrated that EMAS delivers improvements in the environmental performance of municipalities across a wide range of aspects, though the consistency of improvements strongly depends on the starting point (some municipalities had already good environmental performance, so that an improvement of 33% was a difficult task). The main targets achieved by the municipalities participating in the project concerned *waste reduction and recycling*, *energy efficiency* and *resource use.* The project concludes that EMAS delivers improvements in municipalities' environmental performance;

- within the *EMAS Peer Review for Cities Project* (a LIFE funded project aimed at promoting the use of EMAS in EU accession countries local authorities), cities involved were asked to fill in a questionnaire aimed at investigating, *inter alia,* municipalities' experience in the EMS development. A total of 55 survey forms were returned, coming from cities spread across 19 countries. As regards the effectiveness in improving environmental performance, cities were asked in which departments the EMS has been most successful. As we can see in Figure 1 below, almost all of the 128 respondents declared the EMS was successful (122).

Figure 1

Rank	Function/department	Replying success		Replying lack of success
		number	%	
1	Waste Management	20	16%	0
2	Water and sewage Management	15	12%	0
	Energy Management	15	12%	1
4	Green Purchasing	14	11%	0
5	Schools, kindergatntners and elderly homes	12	10%	0
6	Central Administrations	11	9%	2
	Transportation Management	11	9%	2
8	Land use Planning	10	8%	0
9	Air quality Management	7	6%	0
	Other	7	6%	1
	TOTAL	**122**	**100%**	**6**

Department Reporting Success (Source: EMAS Peer Review of Cities Project, 2004)

As far as the reasons for success are concerned, the majority of replies focused on the direct involvement of the personnel in environmental management (*Waste Management, Water and Sewage Management, Energy Management, Air quality Management*). On the other hand, reasons provided for lack of success in improving environmental performance regard *scarce information*, *lack of control*, *poor relevance of the environment as a department priority.* The evidence emerging can be usefully related to that resulting from the EVER EMAS-workshop, as regards PAs difficulties in the identification and assessment of environmental aspects (see Annex II to the present report).

Furthermore, the EMAS Peer Review investigated success in relation to the EMS being used. The EMAS scheme is successful across all the functions, achieving its highest success correlation with "*green procurement*" and "*schools*". The other most diffused EMS among LAs, ISO14001, appears successful in most departments (not all), but less than EMAS as far as "*Land use planning*", "*Green Procurement*" and "*Air quality*" are concerned.

The evidence collected in-field by means of the EVER interviews, even though based on a very small number of observations (7 public administration participating in EMAS), confirms the findings of the literature review: EMAS succeeds in improving PAs environmental performance.
The interviewed Public Administrations rated their own overall environmental performance of last years as "*somewhat improved"* (72%) or even *"much improved"* (14%). According to the interviewees, the presence of an EMS supports the improvement of the environmental performance *"to a great extent"* for 29% of the sample, and "*to a considerable extent"* for a further 49%.
The areas where the improvements are more significant are those dealing with *emissions to air* (86%) and *use of natural resources and raw materials* (86%).
Moreover, as regards the assessment of the environmental performance, all interviewed PAs regularly measure their direct and indirect environmental aspects.

A6.1.2 Indirect Environmental Aspects

Industrial organisations implementing EMAS are mainly concerned with the control of environmental aspects generated by the production activities. Like all productive organisations, public institutions have similar «direct» aspects, generating impacts on the environment. But they mostly have major indirect environmental impacts arising from the way they deliver their services and exert their land planning and control powers.
Within the EVER study, both literature and interviews showed that even if local authorities and public institutions do consider «indirect environmental aspects» one of the key features of EMAS, they still face difficulties in measuring their performance in this field, assessing the significance of these aspects and managing/improving them (IEFE-QualitAmbiente 2005, EURO-EMAS 2001, Focus Lab, 2003, EMAS Peer Review 2004, *et al.)*. The main challenge seems to be the correct identification and measuring of significance levels of the indirect aspects: the concept of "influence" (e.g. to what extent the policies of a municipality or its activities affect the activities of other actors) appears indeed difficult both to grasp and to satisfactorily measure.
Actually, literature review, interviews and the EVER EMAS workshop focused on a crucial aspect: the most relevant difficulties are related to the *lack of competence and knowledge* within public administrations, as well as to the *lack of operational and practical guidance* and *tools*. On the opposite, indirect aspects for these organisations are very much connected with knowledge-intensive activities, requiring very specific competence: urban and land planning, transport and mobility, procurement policies, etc.

Just as an example, within the *EMAS Peer Review* project, cities were asked about their understanding, monitoring and management of the significant indirect aspects. As regards understanding, 33% of the sample didn't answer the question; 24% of the sample answered that they had *medium* understanding of what is meant by indirect aspects; only 18% declare to have a *high* understanding of indirect aspects (see fig. A6.2). However, even within the « *knowing* » groups (*medium* plus *high understanding* cities), most cities (43%) replied *low* or *don't know* when asked how well they were managing their indirect aspects (none answered *high*).

Figure 2

Number of replies	Understanding Indirect Aspects
2	Don't know
3	None
9	Low
13	Medium
10	High

18	Don't answer
Total 55	

Understanding Indirect Aspects (Source: EMAS Peer Review of Cities Project, 2004)

The in-field research carried out by the EVER study fully confirms PAs difficulties in identifying, assessing and managing indirect environmental aspects, and properly singling out good indicators, as well. Moreover, even if 100% of the (7) PAs interviewed declared that EMAS contributes to improve the environmental performance for some indirect environmental aspects, only few examples were mentioned: *transports*, *relation with the local community* (education, involvement, etc.), *green procurement* and *promotion programmes for the diffusion of EMSs*. No other hints to territorial or urban planning policies were mentioned.
The lack of information and competence on this issue is confirmed by the fact that 42% of the sample answered "*don't know"* when asked to compare the environmental performance of their organisation concerning indirect aspects to those of other similar public institutions.

Finally, a significant hint regards the relation between the width of the territorial area governed and PAs' indirect environmental aspects: the wider the area governed, the higher the difficulties in properly managing these aspects (IEFE–QualitAmbiente 2005). In other words, while lower administrative levels (e.g. municipalities) can rely on a detailed institutional framework and "set of rules" for land-use planning and management, more general administrative functions of superior administrative levels (as for instance Italian Provinces and Regions) tend to increase difficulties in identifying, assessing and monitoring indirect environmental aspects.

A6.1.2.1 Green Public Procurement

Among PAs' indirect aspects, public procurement plays a key role: procurement policies, as well as rules and criteria for the management of public contracts represent a relevant sphere in which PAs can indirectly generate environmental impacts, by influencing the behaviour of their suppliers and external contractors.
At the same time, public procurement represents a relevant channel, for PAs, to promote the diffusion of EMSs on their territory. The in-field research carried out within the EVER study shows how 35% of the overall sample (including stakeholders, participants and non-participants) considers *facilitated access to green public procurement procedure for EMAS registered organisations* as a very important factor in connection to the role of public institutions for EMAS development.

According to literature analysis, green public procurement (GPP) seems to play an important role within PAs tools to promote and diffuse EMAS through the supply chain, even if some issues relating to implementation mechanism are controversial (LEAP 2004, EPE 2005, Madsen 2005). It is not clear, in particular, *if* and *how* the Commission should oblige Member States to set rules for stimulating and enabling local authorities and other public institutions to include EMAS in their public procurement choices.

Among relevant initiatives, a survey (LEAP 2004) was conducted on 40 local authorities across 11 EU cities (involving 29 authorities with EMAS, 9 with ISO 14001, 7 with ecoBUDGET and 6 with other systems; in some authorities there was more than one certification system in place):

- the majority of local authorities (88%) stated that the procurement function was included in EMS, although in a number of cases it was deemed to be limited (23%). The procurement functions ranged from specific products (toners, cartridges,…) to entire services, such as sewage treatment, natural parks management;

- as regards GPP coverage, 25% of the authorities of the sample incorporated environmental considerations into all of their tender specifications for goods purchasing, but less than a fifth did the same with all their service specifications. However, most authorities (95%) had some environmental considerations factored into goods, with the corresponding figure for services being 73%.

Finally, as regards barriers and problems faced, the most frequently cited problems related to the integration of EMS and procurement were:

- *lack of resources*, e.g. staff or money for upfront investments (68%);
- *lack of knowledge of environmental specifications for products* (58%) or suppliers for services (50%);
- *lack of support from within the organisation* (43%).

Other studies (Oheme 2005) focused on European "GPP state of the art", as regards the legal framework and the current possibilities to integrate EMSs considerations within public procurement policies and tools:

- according to EU regulations, it is possible to integrate environmental elements at all stages of procurement procedure (definition of the subject matter, technical specifications, variants, selection and award criteria, contract clauses). However, the possibilities to directly consider EMAS/EMS are still restricted, as it is not possible to impose environmental requirements on issues which have not direct impact on the subject matter of the contract;
- only in appropriate cases in which the nature of the works and/or services justifies applying environmental management measures or schemes during the performance of a public contract, the application of such measures or schemes may be required. EMSs can in fact demonstrate that the economic operator has the technical capability to perform the contract;
- further possibilities have been highlighted by law cases. Some jurists argue that a consistent application of the rulings of the European Court of Justice would support to use EMSs as *selection criteria* also if there is no direct link to the subject matter of the contract (in the so-called Beentjes and Nord-Pas-de-Calais cases).
- Other jurists argue that EMAS can be used as an *award criteria*, even if equivalent qualifications/certifications have to be recognised, and EMAS must be defined as an award criteria in the call for tender and properly weighted. These additional award criteria are only allowed in cases where public authorities announce them beforehand in the tender (Barth 2003). Another problem is that procurement law requires public authorities to select the economically most advantageous tender. Only if two tenders are equal in economic terms, the public authorities can apply the additional award criteria. There are indeed practical examples, where public authorities attribute evaluation-points for EMSs in the award phase, for instance 5% for scoring suppliers within equal economic offers. However, this is in contradiction to the European Directives, and the question has not yet been a case of the European Court of Justice.

The in-field research carried out by the EVER study as well as the workshop outcomes confirm that GPP is a crucial aspect for public institutions, both in terms of opportunities (70% of the sample – 5 out of 7 public institutions – have already adopted GPP initiatives) and controversial issues as regards implementation mechanism.

At the EVER EMAS-workshop there was an agreement on the fact that PAs can't oblige their contractors to have EMAS registration (as it is a voluntary tool), but they should be able to include EMAS requirements in their contracts and/or contract clauses, eventually requesting the supplier's commitment to achieve EMAS within the time-span of the contract itself. Moreover, even if GPP is seen as a fundamental step to promote and diffuse EMAS through the supply chain, the general

view of the workshop participants was that this should remain as one of the most important "indirect environmental aspects" and managed as foreseen by the current Regulation, with no additional requirement. Hence, the adoption of GPP should not be mandatory for public institutions in order to obtain EMAS.

A6.2 DRIVERS, BARRIERS AND BENEFITS

A6.2.1 Drivers and motivations

According to the literature review, the decision of public institutions to adopt EMAS is closely related to their nature and functions, e.g.: the role they play in being an example for the communities they govern (firms and citizens) and their need to obtain and maintain their consensus (political consensus above all, within a broader framework of stakeholders' relations) (SSSUP 2005, EMAS Peer Review 2004, Focus Lab 2003, EURO-EMAS 2001, LACE 1997).
The most common drivers spurring PAs to participate in EMAS can be summarised as follows:

- *environmental and management performance improvement*, in order to achieve better environmental and organisational/managerial capabilities. Among the reasons that motivate public institutions to register, the aim of improving environmental and land-use policies' effectiveness emerges as the most important. Providing administrators with practical tools to support their decision making process also plays a relevant role;
- *stakeholders' and local community's relations improvement:* the focus is on improving transparency and credibility towards stakeholders; demonstrable environmental awareness and competence can also increase the authority's standing with various stakeholders groups and improve public institution's image and communication;
- *territorial image's improvement:* EMAS registration is often seen by local authorities as an opportunity to promote the attractiveness of the governed territorial area, both for business and tourism purposes. The possibility to obtain an environmental certification is particularly relevant for PAs governing touristic areas. A recent survey investigated the experiences in EMAS implementation by the municipalities belonging to area hosting next Olympic Winter Games in 2006 (SSSUP 2005). When asked about the main drivers that spurred them to implement EMAS, all local authorities involved (8 municipalities and a "Comunità Montana", a superior-level authority with a co-ordination role) mentioned the possibility to improve the image and attractiveness of the territory, in order to maximise the benefits that the Olympic event may produce over time, in terms of increase in the population, employment and added value produced;
- *consistency with their role as public institution with environmental objectives*, e.g. give a coherent message about environmental responsibility and behaviour to the local community;
- *leading by example* e.g. promoting EMSs for SMEs and/or demonstration and example for local enterprises.

Additional drivers include "*a push by local members*", "*improving access to public and EU funding"*, "*fulfilling environmental commitments*" and "*complying with legislation*". Links to pilot or demonstration projects are also mentioned.

The EVER in-field research phase supports evidence emerging from literature: the main drivers identified refer to "*political consensus*" (50% of the PAs interviewed) and to *"local stakeholders and community's relations' improvement"* (43%).
"Being consistent with the role of public institution with environmental objectives", "participation in local Agenda 21" and *"leading by example"* were also mentioned as relevant drivers.

A6.2.2 Barriers

Generally speaking, almost all the studies and research projects dealing with EMAS implementation by public institutions include reports and outcomes to illustrate the barriers faced in the implementation of the scheme (EMAS, ISO14001 or less formal EMSs) (SSSUP 2005, EURO-EMAS 2001, EMAS LAB 2003, Focus Lab 2003, ECOLUP 2004, etc.). Some of the main barriers that have been highlighted can be summarised as follows:

- *lack of time, human resources, skills and competences;*
- *difficulties in achieving staff involvement and motivation;*
- *budget constraints:* when resources are limited, EMAS has to compete with many other local government priorities. Although the process may reveal areas where the authority could save money, the initial costs could be substantial when the authority is under financial pressure;
- *lack of political support and commitment:* EMAS requires changes in the policy agenda, but a major hindrance refers to maintaining the environment as a top priority on this agenda after the initial registration process. This is sometimes tackled by the lack of awareness among elected members and officers;
- *difficulties linked to the understanding* and, especially, *to the implementation* of the EMAS requirements.

As regards barriers in maintaining EMAS over time, it has to be firstly noted that public institutions generally are not keen on dropping out, as their institutional role implies a somehow "irreversible" commitment to the principles underpinning EMAS. However**,** according to literature, a lack of recognition by public institutions (mainly superior administrations) and lack of external feedbacks act as relevant barriers to EMAS effectiveness after the initial registration.

The evidence collected in-field by means of the EVER interviews is rather consistent with the literature review, especially as regards difficulties in implementing the requirements and in involving and motivating personnel.

However, *lack of human resources*, *competence* and *external incentives*, *costs of registration* and *difficulties in achieving and maintaining legal compliance* were not considered as important barriers. The difficulties related to the *roles of the verifier* and of the *Competent Body* were not rated as substantial hindrances within EMAS adoption, either.

A6.2.3 Benefits

Relevant literature emphasizes that the benefits arising to public institutions extend beyond improving the environmental performance. As regards internal benefits, many studies (IEFE–QualitAmbiente 2005, SSSUP 2005, EMSs of Finnish LAs 1997, EURO-EMAS 2001, Focus Lab 2003, etc.) highlight the following improvements:

- *better management of performance* – EMAS spurs a systematic approach to management, improving the overall organisational efficiency of local authorities, through a rationalisation and a more structured knowledge of internal activities (better coordination, internal communication, planning of processes and activities). Significant improvements also regard compliance with legislation and better management control, by adding information on PA's environmental performance to the decision making process;
- *economic savings* – EMAS is able to bear financial savings through a more eco-efficient operational management (by improving recycling performance, reducing energy

consumption, increasing income generated from sale of recovered waste as a raw material etc.). However, while some of these benefits arise quickly and require no additional expenditure (simply implying changes in work instructions, training and personnel behaviour), there's a limit from the savings that can be generated from such changes, after which savings can only be realised through investments in new processes and services. Hence, it is important to gain savings early in the EMAS process, to justify increased capital investment for the environmental program to then realise long-term savings.

Other benefits mentioned include "*continuous improvement*", *"staff motivation*" and "*securing funding*".

As regards external benefits, literature review (IEFE–QualitAmbiente 2005**,** SSSUP 2005, EURO-EMAS 2001, Focus Lab 2003, *et al.*) pointed out the specificities characterising the implementation of the scheme within public administrations, mainly from two points of view:

- *competitiveness* - PAs deliver services, and so should be seen as organisations competing for "market share". According to literature, local authorities registered in EMAS do benefit from a competitive edge over those who do not. This is particularly relevant for *territory quality* and *attractiveness* (e.g. EMAS capability to attract investments and tourists, recruiting and retain quality staff, attract and retain self-sufficient residents);
- *political consensus* and *dialogue with local stakeholders/community* - As reported by many studies, EMAS is able to increase opportunities for effective communication within local community and stakeholders, to enhance transparency and credibility and improve the image of the institution.

The in-field evidence collected by the EVER interviews is rather consistent with the findings of the literature review and the EVER workshop outcomes, as regards organisational efficiency's improvements and stakeholders' relations. EMAS tends to improve dialogue with the local community and is considered an effective "consensus building" tool (as regards in particular better relations with social stakeholders and better cooperation with local industries and environmental NGOs).
On the contrary, EVER EMAS-workshop pointed out that today registered PAs are not fully exploiting all the communication opportunities that are offered by EMAS, especially in the relations with local communities, mainly because of the difficulties faced in effectively communicating with their territory. Moreover, there was a strong agreement on the limitations of the environmental statement in its current full format as a communication tool for addressing local community.

Besides organisational and stakeholders' relations improvements, the other most important benefits perceived by PAs (as emphasised by the EVER study interviews) are those related to *economic efficiency* (e.g. cost savings through decrease in resource use, reuse and recycling and through waste reduction) and *participation in pilot projects* and *in voluntary agreements.*

A6.3 SUPPORT MEASURES AND INCENTIVES

This final paragraph deals with the incentives and support measures that, according to PAs and stakeholders, the Commission should consider in the EMAS revision process.
Generally speaking, both public institutions and stakeholders believe that PAs should be considered as a priority by the Commission, considering the key-role they can play in the diffusion of EMAS. However, in order to make it effective, some significant elements should be considered within EMAS III, as partially reported in previous paragraphs.

QualitAmbiente, a network among more than 50 Italian environmentally certified PAs, carried out an in-depth analysis on the most important specificities characterising EMS implementation within public administrations and the most relevant support measures and incentive to further promote the diffusion of the scheme (IEFE–QualitAmbiente 2005). The study, carried out during 2005 through a series of workshops and interviews involving all the associated local authorities and other non-associated ones, at different administrative levels, is consistent with the main findings of the EVER study, offering a "closer look" for the study itself.
Key issues may be summarised within four areas:

- ***EMAS Implementation by PAs***

EVER study findings strongly emphasize that the successful implementation of EMAS requires measures "tailored" to the needs and specificities of PAs, mainly through technical training and information support. The most desired option seems to be a guideline issued by the Commission to support EMAS application in PAs. This guideline should mostly focus on "indirect aspects" and, in particular, should provide: a list of aspects to be taken in consideration (categorising the main typologies of indirect aspects for a public administration), suggestions on how to measure indirect aspects (for instance, by proposing a set of indicators tailored to the PAs' needs) and practical examples and best practices taken from interesting experiences (as regards indicators, a useful option could be that of further developing CE 532/2003 Recommendation and ISO 14032, dealing with PAs' specific indicators and examples).
As regards stakeholders relations, the EMAS revision process should aim at making the environmental statement a more effective tool for public institutions to better communicate and interact with the local community; to this end, the Commission should consider the possibility to simplify the environmental statement through a standard model focused on local authorities' needs.

- ***Role in promoting the scheme***

The contribution of public institutions within EMAS diffusion and promotion may be strengthened through different measures:

- as regards local community's relations, both the Commission and national governments should support local authorities' initiatives aimed at promoting community awareness and involvement (by means of information campaigns, public funding for EMAS registered PAs committed to environmental education etc.);
- as regards companies' incentives and reliefs, a clear "set of rules" enabling PAs to endorse and stimulate the adoption of the scheme in their territorial area through support measures for EMAS registered firms (incentives, funding and regulatory reliefs) is still missing. Hence the Commission should consider the possibility to introduce in EMAS III additional requirements aimed at pushing national governments' definition of such a legal framework.

- ***Green public procurement opportunities***

Wider participation in EMAS by local authorities is likely to be a key factor in driving the uptake of the scheme down the supply chain. Nevertheless, many issues regarding EMSs consideration within public procurement are still undefined (technical specifications, selection and award criteria, contract clauses etc.). To this end, according to the Italian certified Public Administrations, EMAS III could explicitly refer to a ground set of rules to develop afterwards (IEFE-QualitAmbiente, 2005).

- ***Certified PAs' rewards and recognition***

A final relevant issue regards the possible introduction in EMAS III of reward mechanisms and/or other forms of recognition for certified PAs. The issue covers a wide range of options,

from regulatory relief to facilitated access to public funding, to the possibility, for certified PAs, to use EMAS registration as a substitute for some administrative duties and/or environmental requirements within EU and/or national environmental policy (as regards, for instance, the requirements and indications that will emerge from the application of the Thematic Strategy on the Urban Environment CE 60/2004).

Part B: Eco-Label

B1. Contribution of the EU Eco-Label to changing the consumption and production patterns: direct effects

General introduction to eco-labelling

With regard to products and services environmental labelling has become a wide-spread market based environmental policy instrument in the European Union. The range of environmental labelling reaches from mandatory to voluntary approaches. According to standardisation efforts undertaken by the International Organisation for Standardisation (ISO) three voluntary labelling approaches can be distinguished: Its Technical Committee 207 developed three types of voluntary labels: Type I (ISO 14024) refers to criteria-based certification programmes, Type II (ISO 14021) describes self-declared environmental claims and Type III (ISO 14025) applies to quantified product information that is based upon independent verification using present indices.

Eco-labelling such as the European eco-label refers to ISO type I labels as making a positive statement that identifies products and services as being less harmful to the environment than products in the same product category without a label. Eco-labelling differs fundamentally from the setting of minimum product standards or requirements that it rewards environmental leadership. Eco-labels (could) refer to several environmental issues referring to potential environmental impacts of products or services based on life-cycle considerations.

Environmental labelling, and in particular eco-labels, claim to have two general objectives (Piotrowski & Kratz 1999: 430):

- providing consumers with the information they desire and thereby increasing market efficiency (information policy instrument),
- reducing the (negative) environmental impacts via offering environmentally less harmful products and services in the market (environmental policy instrument)

Introduction: Assessing environmental performance, direct and indirect benefits

Successful eco-labelling activities rely on both *market efficiency* and *environmental effectiveness.*

Although the general eco-labelling's objective to be efficient and effective is widely acknowledged, opinions differ whether 'real world' eco-labels are able to do so. Cautious estimations find it difficult to tell how much eco-labelling has up to now indeed contributed to reducing environmental stress, since environmental benefits will be achieved only gradually over years (Yang 1998: 7). Others even state a 'perverse effect' caused by eco-labelling, since the "adoption of green production process and the supply of more environmentally benign products may be accompanied not only by conservation of conventional production lines […] but also by an increase in investment in 'polluting capital' before the adoption of the technology required to submit products which qualify for the label" (Dosi / Moretto 2001: 121).

The difficulty of judging the environmental benefits of eco-labels is first of all due to a lack of adequate parameters on *how* to measure *what*. So far, research on environmental effectiveness of labelling programs remains anecdotal (e.g. EPA 1994; OECD 1997; Neveling 2000) and is applied only in the Scandinavian context[6] (Reinhard et al. 2001). Systematic research on quantitative and qualitative parameters indicating direct and indirect environmental benefits of eco-labelled products and services, therefore, is strongly needed.

Eco-labelling has different meanings and implications for different stakeholders in the product life chain. For instance, companies applying an eco-label to their products intend to increase their market share and to substitute environmentally less benign "conventional" products with the eco-labelled ones. Other market competitors might be influenced by an eco-label without asking or applying for it. Such eco-labels could inform a manufacturer on environmental "hot spots" and

[6] See footnote 7 for more information.

constitute "crash barriers" – stimulating thereby environmentally more benign product innovations. Retailers might differentiate their procurement processes and range of products between eco-labelled and non eco-labelled products or they could become aware of environmental problems within a specific product group. Consumers could bear in mind the label and use them as an additional support while shopping. Or, consumers could become sensitive towards environmental challenges in general and more environmentally conscious in their behaviour. Needless to say that this list of examples could be continued. It demonstrates that eco-labelling impacts are more complex and that the paths toward environmental benefits have to take into account two different, but also complementary types of environmental benefits:

- ***Direct environmental benefits ("performance")*** meaning environmental improvements attained through the practised application of eco-labelling on products and services and
- ***Indirect environmental benefits*** meaning environmentally positive impacts induced by eco-labelling schemes on surrounding policy, businesses and society (e.g. criteria as an informal 'standard', the eco-labelling multi-stakeholder approach as an initiator for co-operative action etc.).

Against this background the analysis of direct performances and indirect effects of eco-labels is a crucial element of the EVER-project based methodologically on both a comprehensive literature review and questionnaire-based interviews with experts and companies all over Europe. The two following chapter deliver an analysis of direct performances (B1) and indirect effects (B 3) of eco-labelling.

Altogether, we focus on the European level with the EU Flower as an anchor point, but nevertheless and due to the – so far – limited scientific research linked to the EU Flower, we will present some further general observations which refer to some national schemes, especially the German Blue Angel and the Nordic White Swan.

B 1 Environmental Performance

This chapter provides an overview on the environmental performance of the European eco-label. We present first some insights on supply side effects, followed by insights on the demand side. Afterwards we look directly to experiences and knowledge with regard to environmental performance and close with some views on direct environmental benefits.

B 1.1 Market related supply side effects

Lack of systematic and statistically reliable data on market shares

A first way to assess the effect on environmental performance is to evaluate how much the Eco-Labelled product are diffused throughout the market. Actually, the more Eco-Labelled product are sold and bought by consumers, the more they can "substitute" polluting products. That is why we deal with the dimension of market shares in absolute values in this chapter, while the effects of the Eco-Label in relative terms (its capability to cause an increase in the turnover or in the market shares) will be analysed in chapter B5, because they more directly relate to the impact on competitiveness. Even if there has been considerable research on eco-labels from the introduction of the first national eco-label scheme – the Blue Angel – in Germany (1978) onwards, there is clearly a lack of assessing systematically the direct effects. An important indicator of successful market penetration is the market share of eco-labelled products in relation to all other products sold belonging to the same group (Rubik & Frankl 2005: 85). However, the OECD (1997: 5) concludes that "in practice, data concerning the market impact of eco-labelled products is very difficult to obtain". There is no statistical data in general to map the market power an eco-label may confer to a product. Data on market shares is often confidential commercial information in the hands of industry (OECD 1997: 5). In short: research on market shifts is rare (Frey et al. 1998: 19).

Future efficient and effective eco-labelling should, therefore, work on establishing a systematic monitoring system on market shares available which allows generating data and information. Instead of quantitative data on market shares, secondary indicators are used to assess direct eco-label effects (Taylors Nelson – Sofres Consulting 2001; Rubik & Frankl 2005). Secondary indicators focus on available data (quantity of eco-labelled products; quantity of product groups, quantity of companies using the eco-label) concerning the eco-labelling performance.

Anecdotal data on market share success and failure

Data on the market diffusion of eco-labelled products exist for one or the other product group and eco-labelling scheme. According to the OECD (1997: 5) some scattered anecdotal evidence shows that sales have increased when an eco-label has been obtained. But theses patchwork data do not allow drawing general conclusions for a positive or negative eco-label assessment. With regard to the European Flower, not many examples could be found: Jordan (2003) reports a market share of paints with the EU-Flower about 0.1%. A comparative analysis of several national and supranational eco-labels reports both market success and failures (w.N.: 23)[7].

The effects of the Eco-Label on an increase in the market share is strictly connected with the impact on company's competitiveness, and therefore will be dealt with more in depth in chapter B5.

Considering the EU-Flower, we can use two secondary parameters relating: to the absolute number of licenses for the use of the European eco-label and to the absolute number of applicants.

- Nowadays[8], 284 licenses for the use of the European Eco-label have been granted for several hundred products.
- Concerning the number of applicants, whilst in some categories (especially textile products, tissue papers, soil improvers, paints/varnishes, tourist accommodation service, all-purpose & sanitary cleaners, hand dishwashing detergents) there is some relative success (if measured with respect to other EU eco-label product categories), 43% of the product categories still show low applicant levels, i.e. between 0 and 3 applying companies.

It is clear that the global EU market share, although not estimated, is still relatively small. "This is far from the 5-10% or even 20-25% market share 'objective' being discussed in the EU Eco-label policy management scenario documents, and certainly far from the 30% potential identified in the EU Eco-label work plan" (Schiesser & Shinn 2004: 26). What remains unclear is the market share of eco-labelled products against non-eco-labelled ones in a specific product group. The statistics of the EU-Flower indicate for 2003 about 250 Mio articles/items sold[9], but this does not indicate any market shares neither on the European nor on the national markets of the Member States.

Based on a questionnaire survey among parachemical companies, Bates (2004: 22) found out that the EU-Flower is the most known eco-label with 18% being aware without support and 40% with support; in addition to that they found out that 30% of the interviewed have initiated a procedure to

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[7] For other eco-label schemes more – but still anecdotal – information could be found. An assessment for the *Nordic White Swan* as reported by Rubik & Frankl (2005: 86-7) estimated the market shares for several product groups:

- For printing paper, it was estimated that the share is about 70% in all Nordic countries (except for Iceland).
- Regarding printed matter, the shares of eco-labelled products are higher in Sweden (about 70%), being 40–70% in Denmark and 10% for Norway and Finland.

For other product groups, the estimates relating to the market shares are lower:

- The highest market shares of eco-labelled laundry detergents are found in Sweden (70%), followed by Norway (40–70%) and Finland (10–40%), whereas they are less than 10% in Denmark and Iceland.
- For all-purpose cleaners, the shares are up to 40% in Sweden and Norway and between 10% and 40% in the other Nordic countries.

Green Seal labelled products, for instance, have only been moderately successful with the individual consumer. In Japan, a wide variety of environmentally preferable products are available. However, their sales have been negligible, with exception of recycled printing and copy paper.

[8] State: November 23, 2005.

[9] See http://europa.eu.int/comm/environment/Eco-Label/marketing/statistics_en.htm (visit as of October 21, 2005).

obtain an ecological certification; they applied for ISO (14%), Eco Emballage (10%), Swan (8%), EU-Flower (2%). Main reasons for certifications have been the need for an ISO requirement, growing customer demand and consumer pressure. On the other hand, factors discouraging application has been investment lost (20%) and lack of information.

Eco-labels need supporting demand-side market measures

The overcome belief that market forces automatically guarantee the success of eco-labels did not fulfil. In general, eco-labelled products are placed in niche markets. Only a few schemes such as the German Blue Angel or the Nordic White Swan certify a considerable total quantity of different product groups, namely 80 for the Blue Angel[10] and 61 for the Nordic Swan[11]; but: just very few product groups show a remarkable market penetration. As it seems, current supply-side and demand-side benefits (producer image, green consumerism etc) do not suffice to make eco-labels successful.

The EVER interviews show that also companies not applying for the eco-label could fulfil the requirements: half of the interviewed non-participants knew about the compliance with the Flower requirements; most of them indicated that between 80 and 95% of their products would fulfil them[12]. These results indicate that market demand is too weak to "force" companies to apply for the Flower (see also chapter B5).

The eco-labelling literature therefore calls for supporting and accompanying measures in order to generate a market pull. The OECD (1997: 6) states "that eco-labels may have an important market impact when retailers specify they want to stock products with eco-labels (e.g. ICA retailers in Sweden) or when they become a tool in identifying environmentally preferable products for government procurement (e.g. Canadian Environmental Choice Programme, Japanese Eco-Mark) and institutional purchasing (e.g. Green Seal Environmental Partners, Canadian Environmental Choice Programme)". Among supply chain actors, the retail sector is often identified as key actor to successfully stimulate purchasing of eco-labelled products. The underlying – even though simplified – assumption is: green shopping needs "green shelves". Empirical evidence reveals that – in the Dutch case – most companies of the (Dutch) study's area electric appliances are familiar with EU eco-label, but more than half of retailers not (retailers do often not know criteria & missing requests from customers) (Brezet et al. 2001: 5).

Added-value of eco-labels for producers – wishful thinking without empirical evidence?

The benefits of eco-label often rely on assumptions which lack of empirical evidence. Vermeire & Le Roy (2003: 19), for instance, state that "eco-labels add an extra quality assurance to products/services, as they guarantee their environmentally friendly nature and as such helps to boost the image of brands. The labels allow consumers to distinguish between the products in a cost-effective manner". Following that hypothesis, the image boosting of brands induced by eco-labelling should increase market shares. What remains unclear, are conflicting interests between eco-labelling image and brand image which do not automatically go hand in hand.

In a laboratory test carried out with undergraduate test persons it became clear that third-party verification seems to be the most promising answer to seller reputation. In this study, Cason & Gangadharan (1999: 20) concluded the following: "Allowing for seller reputations (only) increases the number of high-quality goods delivered relative to the no-reputation baseline. Outcomes in this treatment remain inefficient, however, particularly in the experienced session. Cheap talk signalling does not increase efficiency or the number of high-quality units, except when subjects are experienced. Thus, unverified claims are not sufficient to improve market outcomes. Although certification is costly, sellers usually opt to certify; consequently, the number of high-quality units,

[10] State: February 2005 (see http://www.blauer-engel.de/deutsch/navigation/body_sitemap.htm - visit as of October 21, 2005)

[11] State October 21, 2005 (see http://www.svanen.nu/Eng/criteria/kriterietraff.asp (visit as of October 21, 2005).

[12] It must be clarified that these statements could not be verified during the research.

increases, even though efficiency does not significantly increase. Certification, therefore, appears sufficient to overcome the moral hazard problem studied here".
Assessing barriers for effective eco-labelling, most studies identify on supply-side high costs for certification at several levels (initial cost for application, internal preparatory effort and costs, costs of testing, costs for marketing) (Lohse & Schnabel 2000). Schrader (2003), therefore, recommends as supply side success factors to link eco-labels to best practice, make it a low cost issue, and guarantee of competitive advantage.

Market dynamics – static versus dynamic approaches

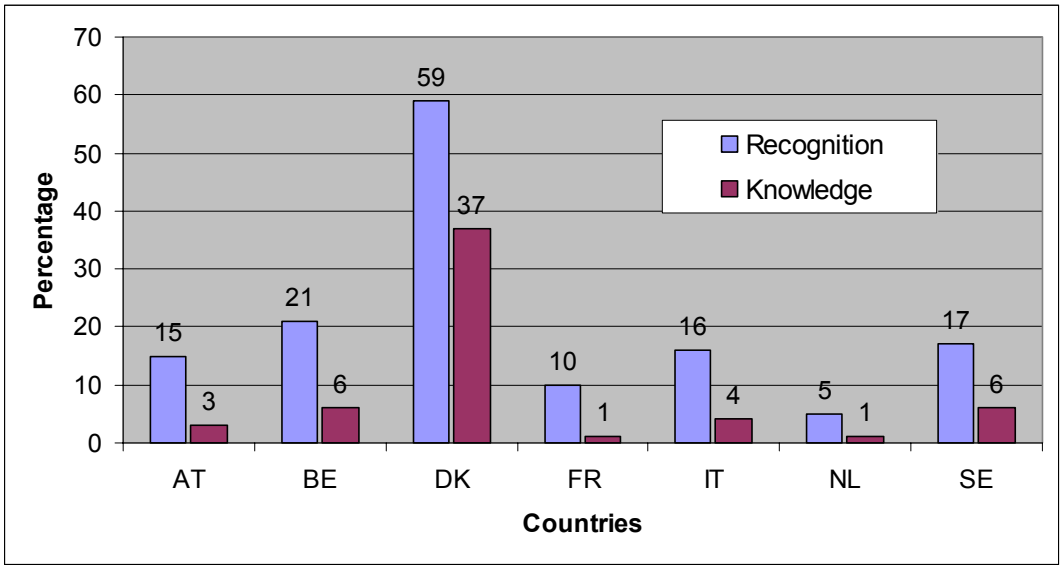
Eco-labels could stimulate suppliers in their product development process and influence the range of products offered on the markets. Such a process needs a dynamic component in research; we have not (yet) found any empirical study dealing with the subject of *changing* manufacturers' strategies to adapt to newly elaborated eco-labels; this statement is valid both for national schemes and the EU one.
Rehfeld et al. (2004) carried out a survey among German companies' inquiring for product innovations and their environmental orientation; the authors examined also the influences of different instruments, among them eco-labels in general. It turns out that eco-labelling is only used very little both by environmental product innovators and non-environmental product innovators (for possible negative effects on innovation patterns see also paragraph B5.2).

B 1.2 Market related demand side effects

Most comprehensive data in eco-label research – data on consumer awareness of eco-labels

In the field of eco-labelling research most reliable data exist on consumer awareness of eco-labels. For both national and supranational schemes several surveys on consumer awareness have been carried out, especially based on an assessment of the European Flower week and a campaign which took place in 2004. In the following, we present an overview of reports and their findings, but one has to consider that methodologies of the report, sample sizes and year of data gathering are diverging.
According to a survey as a result of a website questionnaire conducted by BEUC (2002) 38% know the EU eco-label and 74% did not know where to find products with the European eco-label – although the results could not really be considered as representative due to the online character of the survey.
In a comparative representative four-country survey Rubik & Frankl (2005: 110) report on disappointing figures: 1% of German consumers, 1.7% of Norwegian, 0.4% of Italian and 1.2% of Spanish consumers know the EU-Flower without getting any help. Their survey showed that national eco-labels are still most well-known among consumer with 56.6% for the Blue Angel in Germany and remarkable 70% for the White Swan in Norway.
Kvistgaard Consult (2005a and b) examined the effects of the Flower week which took place in 2004 in several EU Member States, namely Austria, Belgium, Denmark, France, Italy, The Netherlands and Sweden. They carried out surveys among the targeted population in these countries and examined – among other topics – recognition and knowledge of the eco-label. Their results are presented in the following figure.

Figure: Knowledge and recognition of the eco-label (Source: Kvistgaard Consults (2005a: 35 and 37)



Additional country specific results are:

- ***Austria:*** Leitner et al. (2004: 7) report the recognition of the EU-Flower among Austrian consumer as of 13% as result of a representative survey of January 2004.
- ***Belgium:*** Considering the Belgian consumers Rousseau (2004: 15) found out that 28% of Belgian population knows the EU eco-label and that (once more) 28% of them possess a correct perception of its role, i.e. 8% of the population.
- ***France:*** Another survey quoted in Rousseau (2004: 12) states that only 11% of French population knows the EU eco-label while 73% think that the information on eco-products is not sufficient.
- ***Italy:*** A periodical survey carried out in Italy (Astra Demoskopea 1999, 2001 and 2003) shows that only 2.5 % of the interviewees know the EU eco-label and, among them, only 40% is aware of its role and of the guarantees that it provides.
- ***Nordic countries:*** Some efforts have been undertaken in Nordic countries. One more general hint to all the Nordic countries derives from Leire/ Thidell (2004: 22): They identified a negative attitude among many consumers in Nordic countries against the EU eco-label. Country specific research data are:
  - *Denmark:* Cadman & Dooley (2004: 65) found a positive attitude at least among Danish consumers with 43% of Danish consumers being aware of EU Flower when aided by prompts (e.g. visual aids). Compared to research done a few years ago concluding eco-labels have had only been moderately successful with the individual consumer (OECD 1997: 6), current survey results seem to be more promising. According to recent information, 89 % of the Danish consumers recognize the Swan whereas 65 % recognize the EU eco-label, only half of the consumers that recognize the EU eco-label know what it stands for. For the Swan 8 out of 10 have a qualified knowledge (Eco-Labelling Denmark and Zapera.com 2005).
  - *Finland:* In Finland the picture is a bit different: 86 % of the Finnish consumers have a spontaneous awareness of the Swan, but the qualified knowledge has decreased significantly from 77 % in 1998 to 39 % in 2004, because more and more consumers mix the Swan with the "Good from Finland"-label (which is also a styled Swan) and they say that the label means domestic product or domestic production. 57 % of the Finnish consumers have a qualified knowledge of the EU eco-label (Taloustutkimus 2004a and b).
  - *Norway:* In Norway, 87 % of the consumers have a qualified knowledge of the Swan whereas only 8 % know the EU eco-label (Stiftelsen Miljømerking 2005).

- *Sweden:* The same picture goes for Sweden where 90 % of the consumers (Taloustutkimus 2004b) have a qualified knowledge of the Swan and only 6 % knows what the EU eco-label stands for Kvistgaard Consults (2005a: 37).

Trust & confidence

Consumers' awareness is one side of the coin, the other one is trust and confidence in labels themselves. *Knowledge, search for environmental information, and attitudes towards the reliability of this information* are crucial factors for the market performance of eco-labels and eco-labelled products. To some degree this point of departure is supported by recent studies.

Rousseau (2004: 15) reported that only half of the Belgian consumers who know and interpret the EU eco-label have confidence in the Flower which means that finally only 2% of Belgian consumers know the EU eco-label, interpret it correctly and have confidences in it. Other studies on the confidence and trust in the EU-flower are not known to us.

Rubik & Frankl (2005: 98ff.) report on their four-country comparison on trust in different types of administrations and institutions administrating and guaranteeing an eco-label scheme. Environmental organisations (with consumer organisations) and independent organisations are ranked at the top whereas producers and retailers are ranked at the bottom in all four countries; national governments are also regarded as a minor reliable source in all countries, except of Norway. It is interesting to notice that the European Commission as source has a middle position among Italian and Spanish consumers, but a weak in Germany and Norway.

Effects of supporting eco-label measures on consumer awareness

Several studies elaborated marketing proposals for the EU-Flower in some Member States. Concrete campaigns were carried out in Denmark at the beginning of this decade and in some Member States in 2003.

In February 2001, the Danish Environmental Protection Agency launched a major campaign aiming at increasing the recognition and knowledge about the two official eco-labels, the Swan and the EU-Flower, and at increasing the sales of eco-labelled washing powder and textiles. An evaluation of the effects of an eco-labelling campaign was carried out via face-to-face interviews[13] before the campaign, after it and once more half a year later after the campaign. The evaluation reports that the recognition of the Swan increased from 56% to 68% and from 16% to 36% for the EU-Flower after the campaign. The knowledge about their actual meaning also increased, from 26% to 41% for the Nordic Swan and from 4% to 16% for the EU-Flower. The trust of the labels remained high throughout the campaign. The evaluation could not directly register any increased sales of labelled products, but based on supplementary data it was concluded that the actual sales of eco-labelled washing powders increased significantly whereas the sale numbers of eco-labelled textiles remained stable (Miljøstyrelsen, 2001, quoted in Leire/ Thidell 2004: 25f).

The visibility of eco-labelled products in shops

A Belgian study dealt with the appearance of eco-labelled products – a so far neglected issue in eco-label research: bio-products are available in supermarkets, specialised stores, and markets and directly from the producer. The products with a social label are mostly available in Western countries bearing most often the Kaleen, Rugmark, and Belgian Social Label. Most labels do not explicitly mention in what outlets and countries labelled products are available (w.N.: 25).

Changing purchase decisions and the role of positive / negative labels

The impacts of different environmental product information schemes on purchase decisions have been tested in a project (Grankvist et al. 2004) under test laboratory conditions. It revealed – as predicted – that information about environmental outcomes provided by eco-labels did influence

[13] The sample size was about 500-600 interviewees.

product preference. Furthermore, participants who attached high importance to the purchase criterion "environmental consequences" were more affected by the labels than participants who valued environmental consequences less (ibid.: 224). In consequence of these results, the researchers shed light on positive and negative labels summarizing: "That it takes a strong environmental concern to choose products with positive eco-labels may partially explain the weak correlations between environmental attitudes and purchase behaviour. There are of course a number of supplementary explanations. Several studies have reported a conflict between concern for environmental protection and a desire to cut down one's own expenses. Thus, that eco-labelled variants often are purchased at a higher price could be one additional factor. (ibid.: 226) (…) In line with the results above, could eco-labels that signal negative environmental consequences be of practical use and contribute to a different purchase pattern? (…) To implement a system that not only includes positive, but also neutral and negative eco-labels, a regulation that prescribes that all products should be classified into one of these three categories will be needed. The EU Council Directive concerning the Energy Label (…), a system which is based on order of rank, from most to least energy efficient, shows that legislation can be used to introduce a label system that not only indicates positive but also neutral and negative outcomes. (…) If a three-level eco-label system were to be introduced, this could affect both consumers and producers. Consumers with an intermediate environmental concern would perhaps not choose products with a positive eco-label, but they would sort out products with negative labels. This in turn could foster product development in a more environmentally benign direction. A regulatory system with negative labels may also drive products out of the market. If it becomes common knowledge that unless certain standards are met, a negative label has to be attached to the product, such products may be withdrawn" (ibid.: 227).
When it comes to target groups OECD (1997) shows that eco-labels are better known to woman than to men and to younger people than to older people.

B 1.3 Environmental performance

Lack of empirical data on environmental effectiveness

Several studies state a general lack of empirical data on the environmental effectiveness of eco-labelling (OECD 1997: 8; EPA 1994: 19). Just recently the forecasting via scenario methodologies has become an issue in the eco-label literature. Cadman & Dooley (2004) base their study on potentials of the EU-Flower with setting three different scenarios; they assume a 5%, 20% and 50% market penetration of eco-labelled-products and substitution of "average" products – without mentioning the approaches and measures how to reach these market penetration rates. Based on empirical data eco-labelled products possess a smaller environmental "footprint" than average products of the same product group. Based on this information, Cadman & Dooley (2004) develop scenarios for all – at this state of research – 21 product groups of the EU eco-label. The results are calculated according to the most important environmental criteria (p. 7-51). The summarising results are the following ones:

Direct environmental benefits of using eco-labelled products (Cadman/Dooley 2004: iv)

RESOURCE SAVED /AVOIDED PER YEAR	AMOUNT SAVED PER YEAR BY SCENARIO %		
	5% Take-up	*20% Take-up*	*50% Take-up*
Electricity (GWh)	14,700	59,000	147,600
CO_2 produced from energy use (tonnes)	9,318,000	37,270,000	93,175,000
Water use (megalitres)	12,285,000	49,138,000	122,846,000
Reduced hazardous substance use	13,800	55,400	138,400

(tonnes)			
Material savings (other than hazardous substances) (tonnes)	530,700	2,122,700	5,306,700
Reduced discharges to water (tonnes COD)	30,400	121,700	304,200
Reduced air pollution (tonnes)	17,500	70,100	175,300

As a consequence of lacking quantified data, Locret & de Roo (2004) examined if the EU eco-label is ahead, inline or behind current (environmental & health) legislation in order to estimate their environmental effectiveness. According to them, however, in most cases the EU-Flower is ahead of legislation; this result is of course not very astonishing if we consider that the eco-label should signal environmental leadership of a certain share of products offered on the markets and that criteria elaboration aims at going beyond existing legislation.
Due to a lack of empirical evidence most studies make their recommendations on a conceptual basis. Schiesser & Shinn (2004: 11) state that "what the Flower actually delivers in terms of reduction in environmental impacts and overall ecological burden is difficult to calculate. It delivers through a number of mechanisms. Some of these mechanisms are direct, such as a shift in production processes and product composition or design. Also, good promotion can increase market share for the more ecological products". Karl & Orwat (1999: 121) believe that "regarding long-term environmental and economic impacts, the environmental improvements of eco-labelling programmes depend largely on the ability of eco-labels to provide appropriate incentives for product innovation. Product-related environmental advancements can be made in many ways (…) for example, an increase in the lifetime use of a product, input substitutions (e.g. less toxic materials), redesign and reformulation of products".

B 1.4 Direct benefit assessment

Methodological constraints and future way-outs

As to possibilities of reliable direct benefit assessment experts are sceptical. Dosi & Moretto (2001: 113) conclude that "there is still a lack of empirical and theoretical analysis aimed at assessing or predicting its effectiveness in terms of reducing the supply of polluting products". Reinhard et al (2001: 28) states that the review of previous evaluations of eco-labelling shows that a common approach is to evaluate effects on attitudes and behaviour rather than concrete environmental effects, as the latter type of effects has been considered very difficult to measure in a relevant way. It is also clearly difficult to distinguish the effects of an eco-label from the effects of other measures, which is why studies often conclude that several instruments have jointly contributed to an observed change.
Schiesser & Shinn (2004: 26) conclude against the background of lacking data and methodologies that "overall the direct environmental improvements (or reduced environmental impacts) was judged to be poor to mediocre in 77.5 % of cases[14]. This was due to a lack of data on sales volumes or market share and of information on average impact reduction/unit of product. The only option was to use the number of applicants as a proxy. Whilst in some categories (textile, tissue papers, soil improvers, paints and varnishes and growing media) there is some relative success (relative to other EU Eco-label product categories), 50% of the product categories still show low applicant levels, i.e. between 0 and 3 applicants. It is clear that the global EU market share is still relatively small. This is far from the 5-10% or even 20 –25% market share 'objective' being discussed in the EU Eco-label policy management scenario documents, and certainly far from the 30% potential identified in the EU Eco-label work plan".

[14] This 77.5% refer to the judgements of experts interviewed during the project.

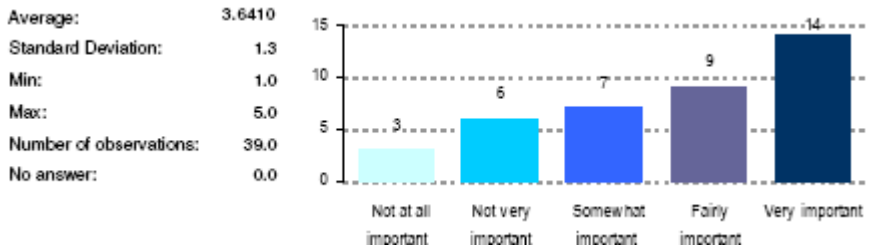
Taylor Nelson – Sofres Consulting (2001: 6) elaborated some methodological framework requirements for direct benefit assessment. According to their view the following aspects are important:

- *Adequacy with the demand of the market:* number of companies awarded (manufacturers, retailers); impact on the image of the companies awarded; number of shelves in stores with eco-labelled products; range effect (assortment of labelled products, product families); level of environmental concern of the purchasers
- *Level of development:* number of products labelled, number of articles labelled, market shares of labelled products
- *Visibility*: (1) spontaneous notoriety: % of European consumers which recognise the EU eco-label logo as a label of environmental excellence and as the EU eco-label (to increase the demand by consumers); (2) on the shelves: leaflets; merchandising with number of stores where eco-labelled products are sold, and number of promotional actions per year in the stores

Reinhard et al. (2001) – in order to overcome methodological shortcomings – recommended to carry out an "effect chain analysis" considering the relevance of product group, the relevance of criteria, and market acceptance and applied this approach in the context of the Nordic Swan.

The EVER-project questioned actual participants of the EU-Flower as to their opinion of the label's influence on environmental performance. Nearly 2/3 of the participants indicated that the objective to improve environmental performance was very or fairly important for their application for the Flower.

"One aim of the eco-label is to improve the overall environmental performance of products. How important was this aim in your decision to use the eco-label?"



About every second interviewee indicated that the Flower had some effect on the environmental performance of the product in the areas of air and water emissions, waster/recycling and water/material use; improvements with regard to accidents/spills were rare and for noise/smell observed by ¼ of interviewees. Answers from non-participants were spare and not reliable.

"How would you rate the effect of the eco-label on environmental performance improvement in the product life cycle in each of the following areas? (please estimate annual improvement as % of total if possible)"

Environmental topic	***Yes***	***No***	***Don't know***
Air emissions	50%	27%	23%
Water emissions	47%	33%	20%
Waste and recycling	45%	32%	23%
Water and material use	47%	32%	21%
Noise and smell	26%	41%	33%
Accidents and spills	2%	48%	43%

Precise examples for induced changes are rare. Examples of improvements are reductions of water discharges and emissions due to the production of cellulose and the substitution of a chemical used in the production process – both changes are necessary to fulfil the eco-label requirements.
Applying for the Flower means also to document the environmental performance of the product which should be awarded. We asked participants and non-participants of the EU-Flower in this context for environmental targets of their products, the contribution of the Flower.
About half of the participating and non-participating companies declared to set target for environmental improvements of their products for all or most areas, each fifth participant and each fourth non-participant declared not to do it at all. 41% of the participants and 55% of the non-participants declared, to measure regularly the environmental performances; it is astonishing is that about 1/3 of the companies participating at the EU eco-label indicated not to measure at all. 42% of the participants indicated that the Flower has contributed to the setting of environmental targets in all or most areas.

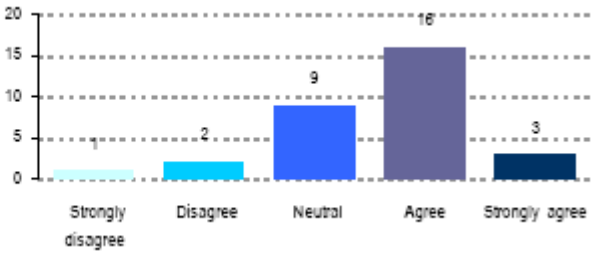
	Does your organisation set quantitative targets for environmental improvement of your products		***Does your organisation measure the environmental performance of its products on a regular basis?***		***Do you think that the eco-label has contributed to setting environmental targets for the improvement of product performance?***	
	Particip.	***Non-part.***	***Particip.***	***Non-part.***	***Particip.***	***Non-part.***
Yes in all areas	20.5%	33.3%	28.2%	45.5%	23.7%	n.i.
Yes in most areas	25.6%	16.7%	12.8%	9.1%	18.4%	n.i.
SUM: Yes in all or most areas	**46.2%**	**50.0%**	**41.0%**	**54.5%**	**42.1%**	**n.i.**
Yes in some areas	35.9%	25.0%	23.1%	27.3%	31.6%	n.i.
SUM: Yes in all, most or some areas	**82.1%**	**75.0%**	**64.1%**	**81.8%**	**73.7%**	**n.i.**
No	17.9%	25.0%	35.9%	18.2%	26.3%	n.i.

n.i. = not interviewed

Stakeholders were questioned for their judgements about the requirements of the Flower. Some stakeholders consider them as in general fine and suitable, some are more critical, e.g. with regard to their complexity and strictness and therefore the difficulties of SME to fulfil them. One stakeholder subdivided the requirements into three clusters of product groups, namely product groups with benchmark character (e.g. textiles, tourist services), zero-product groups (e.g. computers) with modest level of criteria and product groups with dissents among Member States (e.g. paper products, furniture).
In addition to that, interviews inquired for the relationship between the linkages with sustainable development. In the average stakeholders agreed that the product groups are connected to sustainable development.

"Are the 23 Eco-Label product groups connected to strategies for sustainable development and/or environmental objectives?"

Average:	3.5806
Standard Deviation:	0.9
Min:	1.0
Max:	5.0
Number of observations:	31.0
No answer:	0.0



More extended explanations fluctuate between "There is not a conscious connection to environmental objectives" and "The product groups are based on environmental objectives, but are not always strategic" – obviously large discrepancies exist.
These points emphasize that the requirements should reflect their relationships with the overall environmental objectives of the European strategy for sustainable development and the sixth environmental action programme.

B2. Contribution of the EU Eco-Label to changing the consumption and production patterns: indirect effects

The mentioning of indirect effects of eco-labelling is a relatively new area; Reinhard et al. (2001) stressed this point in an explicit manner as one of the first. A (more) systematic examination was carried out by Cadman & Dooley (2004). But so far, there is no uniform definition of indirect effects of eco-labelling; also Cadman & Dooley did not elaborate any clarification. However, – in our understanding – indirect environmental effects means environmentally positive impacts induced by eco-labelling schemes on its surroundings in policy, business and society outside the effects on the applicant and participant of the European eco-label.
Within this subchapter, we present the findings of the relatively new research area of identifying the indirect effects of eco-labelling analyzed in the literature review, the questionnaire survey and the on-site visits.

B2.1 Policy related effects

Eco-labelling as one key instrument in Integrated Product Policy (IPP)

With the emergence of the IPP-debate since the end of the 1990s, voluntary eco-labelling schemes have come into focus. While in the past eco-labels have been considered predominantly as a 'stand-alone' tool aiming solely at coping with asymmetric information distribution among actors in the market, the IPP debate changed the 'image' of eco-labels. The potential of third-party eco-labelling schemes lies in linking them to other (product) policy instruments and making them the basis for future policy instruments.
A relevant part of the literature considers the EU eco-label as capable of indirectly producing positive effects. Landmann (1999: 47) considers eco-labels as the basis for policy instruments such as e.g. standards or limit values. Cadman & Dooley (2004: 66) regard eco-labels to be used as a basis for establishing fiscal measures (e.g. by rebate scheme) to promote green products, and to be used in the "new approach" as a basis for the establishment of criteria whether companies have complied with "essential requirements" (e.g. Energy-using-products – EuP) (p. 64f.).
Further integration activities of eco-labelling aim according to Taylor – Nelson (2001: 14):

- "to reference the Eco-label in all relevant internet sites (green purchasing, sustainable development (…);
- to develop public and private procurement;
- to set up bridges with the other tools of the IPP (mutual recognition, explicit reference of the Eco-label in the other tools, facilitated; attribution of the eco-label if the company is engaged in other IPP procedure and vice-versa (…));
- to inform rating companies and investment funds already integrating ethical and environmental criteria about the Eco-label, e.g. in the financial sector".[15].

Taylor Nelson – Sofres Consulting (2001: 14) refer to the relationship between the European and the national eco-labels[16] recommend to optimise the use and the impact of the resources dedicated to the eco-labels, that is to clarify the complementary role of each EUEB stakeholder and to encourage co-operation with national eco-labels using promotion materials and establish regular contact with stakeholders. This view was supported in our interviews by the stakeholders.

The EEB explicitly intends to encourage the indirect benefits of eco-labels by a) use of eco-label criteria in greening public procurement, b) informal eco-design benchmarking for individual companies, c) creation of an information database on the best available technologies, substitution feasibility and a network of expertise and contacts with frontrunners on different product areas and d) possibly keeping the pressure on other labels (although this is doubtful given the low level of ambition so far) (Schiesser & Shinn 2004: 29).

Many studies recommend to link eco-labelling with environmental management systems – and in particular with the European EMAS-scheme (e.g. Lohse & Schnabel 2000, Nielsen 2002)[17].

While on the one hand many experts emphasize the "still hidden" potential of eco-labels others underline their limitations. The EEB, for instance, believes that, at present, the eco-label should focus on products and should be managed, promoted and marketed in order to become more effective. "In the service sectors, EMAS could play an equivalent role to that of the eco-label scheme, except that it has no in built-in benchmarking and is unlikely to have any in the near future" (Schiesser & Shinn 2004: 10). "The main achievement of the scheme is to prove that product alternatives are possible, and are easily recognisable by consumers" (Schiesser & Shinn 2004: 33).

Hagemann & Weissner (1999: 43) state that from the perspective of environmental and consumer organisations there are environmental disadvantages related to the use of eco-labels because of the possible substitution of eco-labels for necessary environmental limits and regulation.

What is striking is the fact that the debate on eco-label integration centres on the IPP discussion. For the moment, there is a starting debate on eco-labels and other policy concepts and strategies within one working group on product information needs of the formal IPP-network[18]. A more intense strategic discussion of the potentials and constraints of eco-labels in the context of sustainable development policies, consumer policy, and thematic environmental strategies (such as waste, recycling or hazardous substance polices) seems to be rather neglected.

Our empirical findings show that 89% of the interviewed stakeholders favour the linkage of the eco-label with other measures and activities of their specific national policy areas (e.g. IPP) and 11% denied it. 84% of the interviewed stakeholders think that the eco-label could be used as a basis for compliance with requirements of the new approach and other directives (like EuP), 16% rejected it. The activities mentioned are IPP and within IPP especially the tool of public procurement, some stakeholders proposed references to lists of unwanted chemicals which have been prepared in Scandinavia.

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15 Recent literature shows how this approach today is not very diffused yet, due to the scarce sensitivity of the rating companies and the credit sector to the product-related environmental aspects (Iraldo 2002).

16 See chapter B2 of this report which stresses this point more intensively.

17 See chapter C1 of this report which stresses this point more intensively.

18 See http://europa.eu.int/comm/environment/ipp/ipp_wg.htm (visit as of October 26, 2005).

Elaboration of integrated information flows throughout the product life-cycle

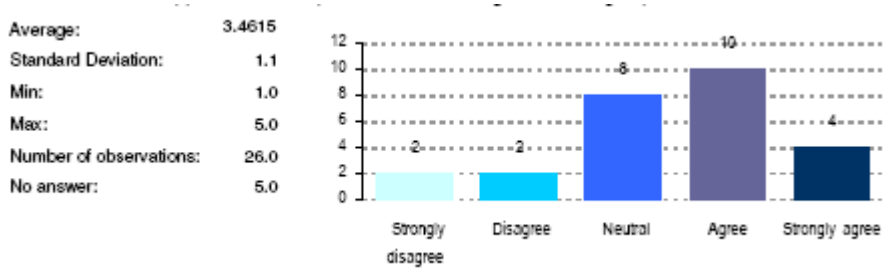
Similar to the debate on integrating eco-labels within other policy instruments, there is a vision to elaborate an integrated information flow throughout the product life-cycle with several information tools linked with each other.

Cadman & Dooley (2004: 61f.), for instance, calculated the application of the EU-Flower for the elaboration of ISO type II labels (green claims) and as a support for the elaboration for the so-called Environmental Product Declarations (EPDs) and presented some figures for cost reductions (potentials); they also hinted at an international co-operation because the EU eco-label has been studied intensively by non-European countries, e.g. New Zealand, USA. As an important benefit they regard the application of EU-requirements by national schemes of Member States of the EU-25, e.g. Austria, Nordic Swan, new EU-Member States, and estimated the indirect benefits on savings of € 1 Mio and 21 man-years.

Rubik & Frankl (2005) recommend applying different environmental product information schemes depending on the respective stakeholders, to use product categories to identify synergies between different environmental product information schemes, and to use mandatory comparative rather than voluntary selective environmental information schemes.

The results of the EVER-project confirm these findings. The interviewed stakeholders confirm the support of the EU-Flower for national eco-labels. Examples given are the orientation of 1-2 requirements of the German Blue Angel at the EU-Flower, the Catalan tourism label, some requirements of the Nordic Swan and of the Polish Eco Znak.

"Has the eco-label supported national processes for defining eco-labelling requirements?"



Stakeholders were also asked for two other relationships: The applications of the EU eco-label as criteria for product tests of third parties (e.g. consumer tests) was by the large majority (81% yes, 19% no) supported. Stakeholders slightly disagreed about the contribution of the EU-Flower for the development of sector-oriented eco-labelling approaches.

B 2.2 Market related effects

B 2.2.1 Producers

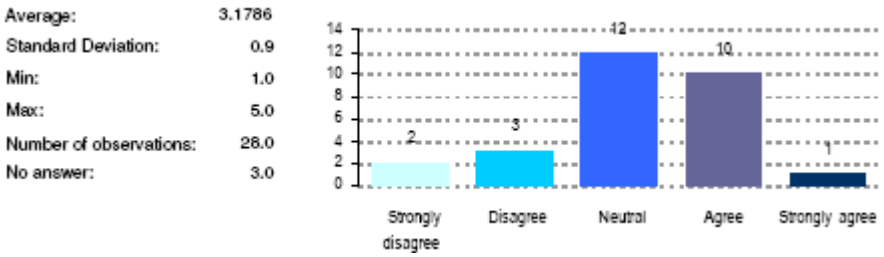
Indirect effects on non-labelled products and on product development

Many studies assume indirect effects on the whole product portfolio of companies through eco-labelling. However, these assumptions lack in general empirical evidence.

Landmann (1999: 47) estimates that eco-labels could indirectly force producers to produce/offer eco-labelled products. Nadai (1999) assumes that negotiation of eco-label criteria improves the environmental performance of a whole market sector. Cadman & Dooley (2004: 59ff.) suppose that eco-labels could be used by companies as benchmark for their own products or as a target to improve their environmental performance. "Declaring a given product's compliance with EU Eco-Label criteria, implies that those companies employ someone whose job includes keeping a watchful eye on Eco-Label developments and making use of Eco-Label information" (Cadman &

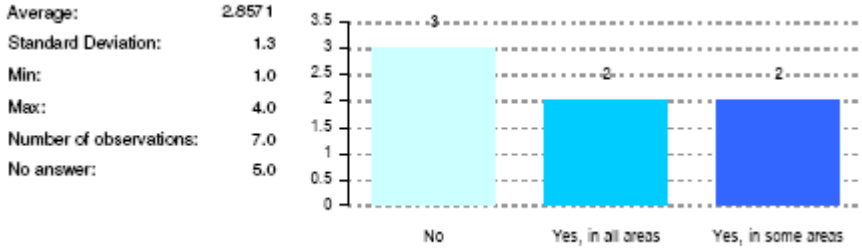
Dooley 2004: 60). As a consequence they assume that eco-label criteria could generate minimum environmental requirements applicable to all products of a product category on the market.
Schiesser & Shinn (2004: 11) give some empirical evidence based on case assessment as they state that "other mechanisms are more indirect, such as the creation of a product benchmark that puts pressure on non-licensed manufacturers to evolve (mimicking all or some of the Eco-label criteria), or simply guides them as to what is expected of them, even though they may not apply for the Flower. For example, in the case of washing machines, the Eco-label has certainly resulted in creation of standard, although it is difficult to establish how much this is due to the Eco-label and how much it is also thanks to the EU energy label".
Within the EVER-project, stakeholders were asked if the eco-label had supported the informal development of a baseline requirement within branches. This indirect effect was slightly supported; claimed examples are bed/mattresses, textiles, paints and tourist accommodations.

"Has the Eco-Label supported the (informal) development of environmental baseline requirements within a sector?"



Our interviews confirmed the literature according to which an eco-label is used as informal benchmark also by non-participants. About half of the interviewed non-participating companies declared to use the eco-label in all or some areas.

"Do you use the eco-label criteria as informal benchmarks to measure the environmental performance of your products?"



Customer and supplier relationships

Some studies emphasize the market transformation potentials for changing customer and supplier relationships. Lohse & Schnabel (2000: 43) identified that the eco-label can cause severe disturbances along the production chain. They encountered examples where SME suppliers regarded the European eco-label actually as a threat. If one of their main customers was to apply for the eco-label this would thus impose restrictions on the preliminary chain. The main fear is that a strong customer might shift the additional services and costs arising from the fulfilment of criteria and proof of compliance over to the preceding supply chain without adequate economic compensation[19].

[19] See below for more hints.

***Indirect effects on corporate environmental management*[20]**

Landmann (1999: 50) found out that any eco-label as voluntary instrument offers producers the option to choose appropriate ways of their optimisation calculations. In general, eco-labels are judged to support capacity building and development of know-how on environmentally more sound production and products. For Vermeire & de Roy (2003: 20) the EU eco-label is not just another symbol: It can be used as a business strategy, for the benefit of the company's marketing policy. By demonstrating consumers that products or services offer an optimal environmental performance, the logo can become a marketing instrument for each part of the product (for instance, the packaging or every other visible part) or it can be used in an advertising strategy. Hagemann & Weissner (1999: 44) see predominantly supply-side effects of eco-labelling since "in an economic sense, eco-labels function as a marketing instrument, facilitating access to product information for consumers and trade. It can be used to improve the image of a product, the image of a company, and to increase the transparency of product information for consumers. (…) From the producer's perspective, the benefit of eco-labels remains secondary, since factors like price and quality use to be the main reasons for purchasing decisions".

B 2.2.2 Retailers, private and public procurement

There is some evidence that eco-labelling schemes have greater impact when the eco-labels become a requirement imposed by retailers for their procurement and/or when they are used as tools to identify green products for government procurement and institutional purchasing.

Some empirical evidence of a negative attitude towards eco-labelling

The retail sector is not very much in focus of eco-labelling research. Just very few empirical impressions exist presented by Lohse & Schnabel (2000) for exemplary sectors:

- *Textile sector:* "Two other mail-order distribution companies are already completely following their internal environmental concepts which dominate their product marketing. Presently, they do not see any space for an additional environmental label in their marketing concepts" (p. 22).
- *Household sector: "*Individual enterprises would only see a need for action if one of their co-competitors decided to apply for the label. The eco-labelling criteria are claimed to be easily met by every actor on the market, which in consequence would not enable them to positively distinguish their products one from another" (p. 27).

These findings have been confirmed by Rubik & Frankl (2005).

Rubik & Weskamp (1995) undertook the effort to systematize indirect effects towards the retail sector. They identified as potential benefits competitive advantages, avoidance of information costs, simplification of assortment of goods policy, improvement of image, and training of employees.

A comprehensive study carried out in Italy[21] shows that the large majority of the interviewed companies use the eco-label as an effective and useful assessment tool for their suppliers, in order to select them for their vendor-list. Most of them consider the eco-label as an effective competitive and marketing tool (IEFE-Bocconi 2003).

Eco-labelling more important for professional purchasers than for private ones

According to Cadman & Dooley (2004) eco-label criteria could be used in private and public procurements calls; their application support procurers and green procurement with the indirect effect of less information search; Cadman & Dooley (2004: 56ff) calculate an indirect benefit € 204 Mio (private) and € 27.5 Mio (public) and several environmental benefits. Some examples are provided by recent literature on how the EU eco-label is used in private procurement, with positive indirect effects (Toroc 2003).

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[20] The listed indirect effects might become in a dynamic perspective direct effects if a company decides to apply the EU-Flower.

[21] Nine retail-chains were investigated, covering more than 80% of the retailing sector.

The EVER-project looked deeper into this subject. About ¾ of the participating companies (strongly) agreed that the Flower has influenced their demands on their suppliers, whereas 43% of the non-participants indicated that. Once more nearly 74% of the participants observed an influence on the information exchange with commercial clients, 56% of the non-participants (strongly) agreed to that.

	Has the eco-label influenced your demands on your suppliers?		***Has the eco-label influenced information exchange with commercial customers (e.g. retailers)?***		***Has the eco-label influenced the communication of your company with private customers?***	
	Particip.	***Non-part.***	***Particip.***	***Non-part.***	***Particip.***	***Non-part.***
Strongly agree	41.0%	14.3%	28.9%	11.1%	28.2%	18.2%
Agree	33.3%	28.6%	44.7%	44.4%	38.5%	9.1%
SUM: Strongly agree & agree	**74.4%**	**42.9%**	**73.7%**	**55.6%**	**66.7%**	**27.3%**
Neutral	20.5%	42.9%	15.8%	0.0%	17.9%	0.0%
Disagree	5.1%	0.0%	7.9%	0.0%	7.7%	27.3%
Strongly disagree	0.0%	14.3%	2.6%	44.4%	7.7%	45.5%
Average	**4.1**	**3.3**	**3.9**	**2.8**	**3.7**	**2.3**
Standard deviation	**0.9**	**1.3**	**1.0**	**1.7**	**1.2**	**1.6**

Also the communication with private customers has been influenced: ⅔ of the participants observed influences on the communication with their private customers, 27% of those non-participants.

Increase of internal environmental awareness

Cadman & Dooley (2004: 65f.) argue that the EU eco-label contributes to an increase of consumers' general environmental awareness. They calculated a potential increase in eco-labelled products of € 500 Mio/year plus diverse (calculated) indirect environmental benefits.

However, the eco-labels' impact on awareness rising differs by country. In a country with a high level of environmental awareness, such as Sweden, the level of consumer awareness to eco-labels is significant and there is a demand for eco-labelled products. The market presence and therefore the visibility of eco-labelled products have contributed to the awareness of consumers.

Civil society associations: an indispensable partner – or not?

The involvement of environmental NGOs, consumer organisations and the media are key factors, which have contributed to increasing the level of consumer awareness of environmentally preferred products in certain countries (e.g. Sweden, Germany)[22].

However, several studies hinted to a limited impact of civil society actors: According to Taylor Nelson – Sofres Consulting (2001) NGO pressure has rarely led to success of product groups – except of Italy. Lohse & Schnabel (2000) examined the opportunities to encourage partnerships between companies willing to apply for the eco-label on the one hand and consumer and environmental NGOs on the other, in order to enlarge the support for pioneer enterprises, and promote additional benefits of product labelling with the European eco-label. Anyway, industry and NGO perspective resulted in making multi-stakeholder cooperation a low priority. Where

[22] See section B1 above.

cooperation between NGO's and industry does already exist, it has developed in an "evolutionary" way out of long lasting processes which have had their roots in the "campaign" structures of an NGO.
The empirical findings of the EVER-project show that ⅓ of the participants see some influence of the EU-Flower in their communication with NGOs, but nearly all non-participants denied this.

	Has the eco-label influenced the communication of your company with NGOs?	
	Participants	***Non-participants***
Strongly agree	2.6%	9.1%
Agree	30.8%	0.0%
SUM: Strongly agree & agree	33.3%	9.1%
Neutral	25.6%	27.3%
Disagree	23.1%	27.3%
Strongly disagree	17.9%	36.4%
Average	**2.8**	**2.2**
Standard deviation	**1.2**	**1.3**

About half of the interviewed stakeholders agreed (strongly) to the question if the eco-label encouraged organisations to actively engage with stakeholders to develop environmental targets, about 20% (strongly) disagreed.

B3. Eco-Label and national labels

The EU Eco-Label exists side by side with many national and private labels. From the EVER interviews we see that around 3/4 of the interviewees are aware of national public and private eco-labelling schemes. Besides the most well-known and frequently mentioned label, the Nordic Swan, other labels are the German Blue Engel, the French NF Environment and the Dutch Milieukeur, the Austrian EL, the Swedish Bra Miljöval, the Lithuanian Write Lily, the Polish Eco Znak, the German Ökotex for textiles and the Green Key for tourist accommodation.

B3.1 Influence of the EU Eco-Label

European and national ecolabels potentially influence each other and the processes related to ecolabelling requirements and approaches. In terms of defining ecolabelling requirements, most of the stakeholders interviewed do agree that the EU Eco-Label has supported the national processes. However some state that it is the opposite way around – e.g. the Nordic Swan has influenced the EU Eco-Label.

As regards the developing sector oriented ecolabelling approaches, the stakeholders interviewed do also agree that the EU Eco-Label supported such process – e.g. within Blue Angel, Austrian EL, Eco Znak, Milleukeur, NF Environment etc.

B3.2 Competition among the EU and national ecolabels

Main findings of the literature analysis emphasise that national labels are better known and preferred. In the Nordic countries market analysis shows that the consumer awareness of the Nordic Swan is much higher than the EU Eco-Label.

In Denmark 89 % of the consumers recognize the Swan whereas 65 % recognize the EU Eco-Label. And only half of the consumers that recognize the EU Eco-Label know what it stands for. For the Swan 8 out of 10 have a qualified knowledge (Eco-Labelling Denmark and Zapera.com, 2005).

In Norway, 87 % of the consumers have a qualified knowledge of the Swan whereas only 8 % know the EU Eco-Label (Eco-Labelling Norway, 2005). The same picture goes for Sweden where 90 % of the consumers have a qualified knowledge of the Swan and only 5 % knows what the EU Eco-Label stands for (SIS Eco-Labelling, 2004).

In Finland the picture is a bit different. 86 % of the consumers have a spontaneous awareness of the Swan, but the qualified knowledge has decreased significantly from 77 % in 1998 to 39 % in 2004, because more and more consumers mix the Swan with the Good from Finland-label (which is also a styled Swan) and they say that the label means domestic product or domestic production. 57 % of the Finnish consumers have a qualified knowledge of the EU Eco-Label (Eco-Labelling Finland, 2004).

In Germany only 1 % of the consumers know the EU label compared to the national label the Blue Angel which 56.6 % are aware of (Rubik & Frankl, 2005). There is the same tendency in Austria where the Blue Angel is far better known than the EU label. In the Netherlands, the national label Milieukeur is better known and in France the NF Environment is more broadly diffused.

National ecolabels are able to guarantee a high competitive potential to producers in many Member States. This can make it hard for the EU Eco-Label to enter markets as the consumers find it difficult to differentiate between the labels. But, the EVER interviews show that the perception of

the national labels being more successful than the EU Eco-Label differs among the interview groups. Particularly stakeholders have a positive perception and agree to the success of national labels.

"Do you agree that these national schemes are more successful than the EU eco-label?"

Group	Participants	Non-participants	Stakeholders
Average result	3.12	2.75	3.88

However, when asked, over 70 % of the interviewed stakeholders do not recommend a national rather than a European label. While some believe more in an EU label in the long run, others see them as supplementary. Finally, the preference of schemes highly depends on the market in which the companies operate, and the product group.

The interviewed participants and non-participants have clear views as respectively 87 % and 75 % will choose the European label in preference to a national one. Their main reasons relate to the applicability on the entire European market – "it's an international passport to sell everywhere" (inside the union) and it eases the communication.

In terms of competition among the national and the EU Eco-Label there are no clear indications from the interviews. Again elements such as product groups and markets appear to influence the degree of competition between the EU Eco-Label and national schemes.

B3.3 Harmonisation of eco-labelling schemes

To meet the needs of a European Eco-Label and overcome competition between the European and the national labels the EVER study clearly shows that harmonisation, as well as co-operation are the way forward. And that the EU scheme should be kept. However the stakeholders do not agree to abolish the national scheme as seen below. Main advantages of the national labels are that they cover product groups not covered by the EU Eco-Label of today and that national labels are suited for – and in many cases preferred on – the local markets.

"How do you think competition between labels could be avoided?"

Group/option (average)	Participants	Non-participants	Stakeholders
Co-operation	3.10	3	4.22
Harmonisation	3.35	4.33	4.42
Abolish national scheme	3.48	3.67	1.78
Abolish EU scheme	1.15	2	1.35

With regards to harmonisation the interviewed show a mutual understanding of the term. As seen below the different groups clearly agree to a list of issues such as identical performance criteria, test and documentation.

"What does harmonisation mean to you?"

Group/issue (average)	Participants	Non-participants	Stakeholders
Identical institutions running the schemes	4.09	3.6	3.43
Identical performance criteria for identical product groups	4.59	4.73	4.29
Identical application procedures	4.16	4.1	3.96
Identical costs	3.47	3.4	3.14
Identical support for application	3.69	3.2	3.54
Harmonised information from suppliers, test and other doc.	3.93	3.91	4.26

Other important issues that are highlighted include:
- Harmonisation in regulation
- Comparative criteria

A main advantage of harmonisation is that it will be easier for companies to apply for different labels. However one thing is to discuss the need for harmonisation – another is to pursue and implement it on an operational level. Here the stakeholder group gave suggestions for how to ease the process:
- Establish common interest groups to work on harmonisation of criteria
- Approach national schemes to European scheme over e.g. 5 year period so you end up with one scheme (the European)
- Flexible integration – large perspective rather than single criteria

Furthermore, one of the interviewed stakeholders pointed out that harmonisation of the procedures will help eliminate duplication and provide clearer information to the consumer on how different schemes compare in terms of environmental requirements.

At the EVER Eco-Label workshops in Brussels, discussing the harmonisation of the European and national schemes it was concluded that the EU Eco-Label should keep on setting the standard i.e. labels at national or subranational level should follow criteria and criteria level from the EU label. The workshop participants agreed on that performance levels can be differentiated according to geography and culture and/or differentiated among product groups.

B3.4 Opportunities and barriers of harmonisation of ecolabels
Having identified the interest in harmonisation it is interesting to look further into the opportunities and barriers of such a transformation. In terms of advantages the interviewed agree to a set of assets as seen below – potentially these could also help raise a greater interest in eco-labelling schemes among companies and consumers.

"What advantages would a harmonisation of the national label and the EU Eco-Label have?

Group/issue (average)	Participants	Non-participants	Stakeholders
Easier access to more than one schemes – less paperwork	3.94	4.44	4.33
Easier access to more than one schemes - easier to understand requirements	4.09	4.00	4.18
Easier controlling process – time saving	4.03	3.89	4.23
Easier co-ordination of schemes	3.90	3.78	4.24
Reduces cost to run schemes	3.8	3.89	4.24

Another advantage is that it will enable a comparative visibility against the same criteria and thereby make the choice clearer for the consumer.

In terms of barriers to harmonisation of the national labels and the EU Eco-Label the stakeholder group pin out the lack of national administrative and political support as the main obstacles.

Furthermore some national labels are well established systems with commercial interests and councils of accreditation, for instance for the Nordic Swan label and the Dutch Eco-Label Milieukeur, which might prove to be a barrier. The EU Eco-Label Regulation does not specify how the verification of the documentation should be carried out. It is up to the national competent body to set up rules for the process. This might indicate the possibility of different rules in different countries under the same scheme and thus different stringency of the verification. In some (northern) countries the EU label has less credibility, because it is believed that it is easier to get an ecolabel in other (southern) EU countries.

B3.5 Opportunities and barriers of abolishing national ecolabels

An alternative to harmonisation is the abolishment of national labelling schemes and the opportunities and barriers of this in preference to the EU Eco-Label. Here the interviewed agree to a range of advantages where uniform EU criteria and more straightforward communication of the EU Eco-Label are among the main advantages.

"What advantages would an abolishment of national schemes have?"

Group/issue (average)	Participants	Non-participants	Stakeholders
Uniform EU-wide criteria	4.19	4.50	4.35
Easier to improve knowledge of the EU-scheme/label	4.19	4.13	3.90
Easier to communicate	4.03	4.00	3.71

the EU-scheme/label			
Only one schemes to apply for – less paperwork	4.03	4.13	3.35
Easier to understand requirements	3.54	3.25	2.9
Easier controlling process – time saving	3.74	3.75	3.16
Less administration	3.8	3.50	3.06
Reduces cost to run schemes	3.5	3.63	3.42

With one single label, another clear advantage is that of making communication easier and thus making the costumers and consumers aware of the scheme.

The main barriers related to an abolishment listed by the stakeholders are:

- Lack of knowledge of the EU Eco-Label compared to national schemes
- The EU ecolabel is not flexible enough and it takes to long time to develop new criteria compared to national labels
- Different criteria to be met
- No national administrative support
- No national political support
- Council for accreditation
- Less product groups

Furthermore, the EU label is expensive and holders of national licenses might lose their label and money, if they cannot immediately be converted to an EU Eco-Label.

B4. Drivers, Barriers and Incentives for the EU Eco-Label development

The EU Eco-Label has been implemented by many different organisations all over Europe with a range of difficulties and challenges and varying degrees of success. To gain more insights on the means of implementation we here explore the drivers and barriers in more detail, as well as the incentives that can strengthen the drivers and overcome the barriers.

B4.1 Drivers for implementing the EU Eco-Label

From the EVER study the most significant drivers identified, for implementing the EU Eco-Label, are:

- Increasing consumer interest
- Satisfying customer request
- Recognition as market leader
- Improvement of international competitive capabilities
- Increasing access to public procurement procedures
- Improvement of environmental performance.

Please see the figures below where the main drivers are related to three categories being stakeholders, economic and internal/administrative.

"Why do you think business/ why did you/ why would you decide to implement the EU Eco-Label?"

Group / driver (stakeholder)	All (aggregated result)
To improve the relations with our stakeholders	3.0
To satisfy a specific request by (one or more of) our customers	3.6
Increased consumer interest	3.9
To keep up with our main competitors or with the other members of our trade association	3.4
Recognition as leader (and benchmark) by competitors or other economic actors (trade associations, rating agency, etc.)	3.8

Group / driver (economic)	All (aggregated result)
To improve our national competitive capabilities	3.5
To improve our international competitive capabilities	3.7
To increase our access to public procurement procedures	3.5

Group / driver (internal/administration)	All (aggregated result)
To improve our managerial capabilities in the environmental area	3.0
To increase knowledge about the environmental	3.2

impacts of products	
To identify "hot spots" for improvements and external requests	3.0
To improve our environmental performance	3.6
To improve product design and product development	3.2
To increase product innovation capabilities	3.4
To improve supply chain management – data access	3.1
To improve employee/management commitment to environmental performance	3.1

These empirical data and findings from the EVER study correspond well with the literature findings. Experiences from the Flower Week project show that the promising and expectations of information campaigns that will increase consumer interest, will attract companies to the scheme. The number of companies awarded the EU Eco-Label increased by 80 pct. since the project started in 2002 – during the project period the number of companies awarded the Flower grew from 124 to 227 (Harder, B., 2005).

The literature also confirms that the adopters are relevantly motivated by large customers and, in particular, by the requests coming from the retailing sector. Many Danish textile companies have applied for the ecolabel because the two largest retail chains asked for it (Valør & Tinge, 2002). The same empirical evidence can be extracted from the literature concerning the Italian and the Benelux situations (Frey, Iraldo, 1999; Carnimeo et al., 2002).

The literature underlines the great importance of the strategic behaviour of the so-called potential "first movers" as many companies are basing their decision of getting an ecolabel upon the action of their competitors. The diffusion of the EU Eco-Label in some Member States relied on this competition mechanism (Frey, Iraldo, 1999; Valør & Tinge, 2002). The literature emphasises how this happens especially in the industrial sectors in which a relevant number of small and medium enterprises operates (textile, paper, etc.). The EVER study confirms that 'keeping up with main competitors' is an important driver, but not as important as consumer interest and customer request.

Another driver stated by a EVER-participant is to diversify the supply. In terms of economic drivers a non-participant specifies the need for a market pull for ecolabelled products. Interestingly enough factors like 'improve access to finance and insurance' and 'cost savings' are not perceived as economic drivers for implementing the EU Eco-Label.

When looking further into the internal/administrative drivers one should notice that the non-participants give a lower score in all questions in comparison to the participant and stakeholder group, which of course is reflected in the average result. E.g. increasing product innovation capabilities has a higher average score (3.5) for both participants and stakeholders.

B4.2 Barriers for implementing the EU Eco-Label

Knowing that both market demand and position are motivating factors for some companies to implement the EU Eco-Label we now move further into the discussion to explore and understand what the barriers of implementation are and what is holding others back from applying for the scheme.

Within the EVER in-field research, the participants identify the most significant barriers of implementing the EU Eco-Label as being:

- Degree of documentation
- Obtaining documentation from the suppliers
- Extra costs of meeting the requirements.

"What kind of barriers and difficulties did you have to tackle in implementing the EU Eco-Label?"

Group / Barrier	Participants (average result)
Degree of formality/documentation required	3.6
Difficulties in getting documentation from suppliers	3.6
Additional costs arisen from fulfilment of requirement	3.6
Difficulties in implementing the requirements in criteria (new technologies, substitution etc.)	3.0
Lack of human resources and competence (know how and train staff)	2.7
Lack of external technical and information support	3.0
Application procedure slow and very bureaucratic	3.3

Furthermore the participants added barriers such as:

- Identifying the right test methodology
- Uncompleted test criteria.

Interestingly enough factors like 'application procedure slow and very bureaucratic' and 'difficulties in implementing the requirements in criteria' are not perceived as significant barriers of implementing the EU Eco-Label.

When addressing the non-participants and the stakeholders with the questions of respectively *"What kind of barriers and difficulties made you decide to abandon/ not to apply for the EU Eco-Label?"* and *"Why do you think business decide not to implement the EU Eco-Label?"* they agree in their standpoints. The following are seen as the main set of obstacles in relation to stakeholder and economic issues (average between 3.1 and 4.4):

- Lack of competitive rewards and advantages from public institutions (green procurement), customers, consumer and retailers

- Lack of recognition and knowledge of the label among public institutions (green procurement), customers, retailers, consumers and the public in general
- The costs of implementation and licence are too expensive
- Lack of economic incentives.

Furthermore the non-participants find it too difficult to communicate the Eco-Label to stakeholders and consumers (incl. use of logo).

When it comes to the internal/administrative barriers in relation to the questions posed the degree of consensus among non-participants and stakeholders is not as strong as seen below.

Group/ Barrier (internal/administrative)	Non-participants (average)	Stakeholders (average)
Degree of formality/documentation required	3.3	3.6
Difficulties in implementing the requirements in criteria (new technologies, substitution etc.)	2.2	3.6
Difficulties in getting documentation from suppliers	2.6	3.7
Application procedure slow and very bureaucratic	2.9	3.3
Lack of human resources and competence (know how and train staff)	2.2	3.4
Lack of external technical and information support	2.5	3.0
Lack of time	3.1	3.2
Lack of top management support (negative attitude)	2.6	3.4

They only agree to the degree of formalities and documentation required and the lack of time as barriers. On the remaining issues only the stakeholders agree to the full list of barriers and highlight the difficulties in getting documentation from the supplier as also stressed by the participants.

In terms of other barriers a point was made that for a global company only 25 % of their market is European. In addition there is a lack of advertising campaigns and lack of knowledge transfer and support from consultants. Also companies aim to brand their own labels and not confuse the consumer with ecolabels. Not least, the ecolabel does not give the possibility of indicating market differentiation.

Clearly the lack of market demand and economic gains are barriers for these two groups of interviewees indicating that the ecolabelled products are still a niche market rather than mainstream products.

The findings from the EVER study are supported by those of the literature review: The most significant barrier of implementing the EU Eco-Label is represented by the difficulties in getting documentation from suppliers, especially suppliers from the Fareast (e.g.: in the textile sector) (Valør & Tinge, 2002). There have been some cases, documented by the EU-funded marketing studies, of potential adopters that gave up the process of implementation due to the relevant

difficulties that they face in involving their suppliers and to obtain from them the guarantees concerning the compliance with the criteria (Iraldo, 1998).

The literature also confirms that the costs of implementation and licence are relevant barriers. Some companies find it too expensive to test and apply for the label, and the turnover fee puts an economic burden on the license holders, that some see as the reason for not getting the label (Frey et al., 1999; Lohse & Schnabel, 2000).

B4.3 Incentives and support measures

In this report, we further elaborated some hints for a framework of incentives that can be considered to overcome the barriers and to strengthen the drivers for the EU-Flower development. These hints are specifically derived by two research area that were investigated by means of the questionnaire and discussed at the EVER Eco-Label workshop in Brussels:

- "changing institutions"
- "changing framework"

The answers to the questions relating to these two areas can be an important trace to develop indications and suggestions for the development of the EU Eco-Label (see Report 1). These answers are therefore analysed in the two following paragraphs.

B4.3.1 Analysis of the answers of interviewees on the cluster "Changing institutions"

The interviewees were asked several questions regarding the issue of changing institutions. In total, we fitted their answered to a coherent cluster encompassing different possibilities to rearrange the institutional framework.

Group / Option	**Cluster**	**Participants (average)**	**Non-participants (average)**	**Stakeholders (average)**	***All (average)***
Making the Eco-label an international scheme	*Internatio-nalisation*	3.9	2.8	3.1	***3.4***
Making the EU Eco-label a private-managed scheme (avoiding the involvement of public institutions)	*New institutional setting*	2.0	1.6	2.0	***1.9***
Making the EU Eco-label an entirely public scheme (avoiding the involvement of private organisations)		2.8	2.2	2.4	***2.6***

Group / Option	Cluster	Participants (average)	Non-participants (average)	Stakeholders (average)	*All (average)*
Strengthen role and competences of stakeholders by allocating competence for decision about requirements to them			2.1	3.4	***2.9***
Making the EU label a pure front runner scheme	*Market penetration*	2.6	1.9	2.6	***2.5***
Making the scheme open to 60% of the market's product in stead of 30%		2.6	2.4	2.9	***2.7***
Centralise administration	*Administration*	2.4	2.9	2.6	***2.5***
Decentralise administration		3.2	2.1	3.3	***3.1***

A > 3.5
2,5 < B < 3.5
C < 2.5

Internationalisation

The Flower is restricted to the EU 25 Member States. Importers from third countries may use it, but currently their number is around ten, one half being Swiss and Norwegian companies and one half not-European ones[23]. The increasing level of globalisation of supply and sale chains as well as the co-operation in the network GEN-net could indicate a new level of international orientation of the Flower through a closer harmonisation towards an international scheme. A broader internationalisation of the scheme was modestly supported, the average number was 3.4.

During the ***workshop*** the issue of internationalisation was not directly discussed on a broad scale.

New institutional settings

The current status of the Flower scheme leaves the formal final decision power to the European Commission. Reallocations might be conceived either as a complete privatisation of the scheme (example: Canadian eco-label scheme), or as a pure public scheme where private organisations are not involved. Another option would be the strengthening competences of the stakeholders.

In general, a pure privatisation or a pure public management was judged poor. The option to strengthen the stakeholders was favoured - to a minor degree - by stakeholders (3.4), but not accepted by the non-participants and also not welcomed by the participants. But strengthening cou consist of different, not necessarily homogenous elements like new decision structures within EUEB, involvement of frontrunners, improved financial and personnel capacities.

[23] Applicants derive from Australia, Canada, China, Korea, New Zealand and South Africa.

A stronger role of the EUEB and also a formal final decision power for criteria seem to be interesting options for both a broader support especially by stakeholders, and a shortening of decision procedures.
The ***workshop*** participants stated first that institutional aspects "per se" were not a priority for the revision of the Regulation, insofar as there is no problem directly linked with the current institutional framework and functioning of the scheme. Most of the participants shared the view that institutional changes should be pursued in the revision to the extent in which they are meant to pursue other priorities and other objectives, linked to the real problems of the EU eco-label. Therefore, institutional innovations should not imply a downgrading of the criteria themselves. There must be a guarantee that, even if there is "institutional innovation" in the management of the scheme, the criteria must remain restrictive enough to assure the credibility of the scheme.
On the opposite, streamlining should be aimed at supporting the companies (especially those not participating in the scheme) in approaching the criteria and in spreading the scheme. Topics of institutional changes focused on scarce involvement of other Directorates General of the Commission and of industry at large in the working groups elaborating the criteria. This, according to the view of an industry representative, would cause difficulties in the last step of the process (the official approval of the criteria), since some key actors are not properly involved with consequences on acceptability and credibility.
A participant underlined that, rather than to the development of the criteria, institutional improvements of the scheme should aim at enabling the European Commission to play the role of a real driver for the diffusion of the scheme. Most of the participants emphasised that currently the degree of "ownership" of the scheme shown by the European Commission seems rather low, and can be considerably increased. This is demonstrated, for instance, by the fact that other Directorates, or even parts of DG Environment not directly dealing with the EU eco-label, are currently not "recognising" this policy instrument.
Finally, very brief and specific answers by the participants to the questions related to the public or private nature of the scheme and on the centralisation/decentralisation concluded the session with the following positions:

- the optimal framework for the management of the scheme should foresee a mix of public and private actors (just in many EU member countries)
- an effort can be made to further decentralise the management of the scheme, but only if this is useful for the development of the EU eco-label. A higher decentralisation could make sense, for instance, in order to enable a more effective and intense marketing of the scheme by the Member States and/or the Competent Bodies. But, the problem will be the allocation of economic resources to the Member States and to the Competent Bodies, to enable them to perform marketing campaigns.
- Moreover, in case that decentralisation becomes an effective option, we should ask Member States and Competent Bodies if they really would want to be more involved in the application of the scheme. This is, again, a problem of "ownership" of the EU eco-label by the actors operating at the national level.

Market penetration
Currently, the Flower aims at about 20% of market penetration. Two completely diverging approaches could be those of concentrating the scope of the Flower to best-in class-manufacturers and to support their competitiveness, or looking on the other hand for a higher market penetration. Interviewees did not really support these two paths: making the Flower a front runner scheme gets only 2.5 in the average and a higher penetration 2.7. Participants opted in the same way for both paths (2.6) whereas stakeholders tended slightly in favour of the second (2.6 resp. 2.9).
The participants of the ***workshop*** discussed the involvement of frontrunners intensely. The arising question was: "How to do that?" Frontrunners must not have an organisation. It was proposed by an

NGO to reserve two floating seats to them, one seat for a Northern frontrunner and one for a Southern frontrunner; given the case that there do not exists differences between them, they could be represented by only one frontrunner. The same NGO proposed that the NGO itself should look, select and nominate the two frontrunners; this selection could be done in conjunction with the Competent Body responsible for the elaboration of the criteria. It was argued that this involvement of frontrunners could stimulate a new mechanism in the scheme. The COM should at least reimburse travelling expenditures of the invited frontrunners. It was also stressed by an expert that also retailers could be the involved frontrunners due to their roles on the market.
This involvement of frontrunners was partly welcomed, especially by experts, partly sceptically commented by business; one important counter-argument was that the involvement might increase the level of criteria, that it would cause a smaller penetration (potential) of eco-labelled products on the market and that it could also have the consequence of a lower visibility of the eco-label itself on the market; this might prevent retailers to list eco-labelled products in their range.
There was a general hint to distinguish between involving frontrunners and a frontrunner eco-label scheme.

Administration
The current national administration of the scheme is decentralised. A new approach could be to strictly centralise the processes and to regard the national competent bodies as "post-offices" which receive applications and send them to the relevant central institution. The other path is to decentralise much more, e.g. by increasing the importance of regions (for example: German Federal states or Italian regions) and to settle regional contact points. The interviews did not result in a clear picture: participants support more a decentralisation (3.2), non-participants judge both options not very enthusiastically (2.9 resp. 2.1) and stakeholders favour – but still to a minor degree – a decentralisation (3.3), whereas centralisation was ranked weak (2.4).
The ***workshop*** participants discussed the administration issue focussing on the performance level of criteria. A business representative argued strongly in favour of scientific based criteria. According to this, criteria which are not very important should be singled out. The argument has been outlined on some exemplary product groups (tourist accommodations, washing machines and paper products). It was argued by an expert that e.g. 80 criteria for tourist accommodations are too many. Several participants from business argued in favour of a concentration of criteria on key environmental issues. But a representative of NGOs stressed the diverging ecological, cultural etc. conditions of the EU.
Another discussion focused on the issue of self-verification. The verification of the fulfilment of the eco-label requirements is already partly based on some elements of self-verification as explained by a representative of a Competent Body. However, any change of the current system to a complete self-verification system was rejected by the participants. Neither business nor NGOs seemed to back such approach. The main argument was that an eco-label must possess credibility among consumers.

B4.3.2 Analysis of the answers of interviewees on the cluster "Changing framework"

In total, we looked for different possibilities to rearrange policy incentives.

Group / Option	**Cluster**	**Participants (average)**	**Non-participants (average)**	**Stakeholders (average)**	***All (average)***

Group / Option	Cluster	Participants (average)	Non-participants (average)	Stakeholders (average)	*All (average)*
Regulatory relief (administrative procedures, permits, etc.)	*Regulation*	3.5	3.2	3.3	***3.4***
Better co-ordination with regulatory framework (IPPC, safety data sheets) and voluntary schemes		3.7	3.6	3.4	***3.6***
Facilitating access to green public procurement procedure	*Public procurement*	3.7	3.1	4.2	***3.8***
Allow public procurement to refer explicitly to the EU eco-label		3.6	3.0	4.1	***3.7***
Reduce the costs of license	*Financial incentives*	3.5	3.5	3.2	***3.4***
New fee structure e.g. financial transfer to first movers		3.0	3.0	3.5	***3.2***
Support funding (including pilot projects)		3.5	3.1	3.7	***3.5***
Fiscal incentives such as tax abatement in order to reduce prices		4.3	3.7	3.9	***4.0***
Increased knowledge among consumers and retailers	*Awareness raising*	4.7	4.1	4.5	***4.5***
Increased demand for labelled products		4.6	3.9	4.4	***4.4***

A > 3.5
2,5 < B < 3.5
C < 2.5

Eco-label and regulation

Participants, non-participants and stakeholders in general welcome efforts to set regulatory incentives for the Flower. On one hand they welcome regulatory relief, for instance, on administrative procedures and permits. Among different interviewed groups participants scored highest with 3.6. Taking into account that this group (personally) experienced current eco-label regulation procedures, the need for regulatory relief shows empirical evidence. On the other hand, what seems to be even more important is a better co-ordination with the regulatory framework. Such framework includes other European directives such as IPPC, the so-called Seveso Directive, REACH, RoHS, but also voluntary schemes such as Environmental product declarations (EPDs). On average better co-ordination has been judged 3.4.

The ***workshop*** participants also debated on the issue whether policy incentives are reasonable (or not) for making the EU-Flower more effective and efficient. Generally speaking there was a predominantly common sense that eco-labels need direct and indirect policy incentives. This appraisal was based on the assumption that eco-labels – even if being a market tool – meet several barriers such as lack of consumer awareness, producer abstinence etc. However, arguing in favour of policy incentives for the EU-Flower must also lay emphasis on distributive justice among ISO type I labels. Supporting just the European Eco-label with direct and indirect flanking measures may fundamentally disadvantage national based eco-labels. Being contradictory with this common sense appraisal, one business representative argued that, based on free market principles, free competition rules among labels shall distinguish successful from unsuccessful eco-labels. Extra policy incentives for the benefit of just one eco-label (here: the EU-Flower) contradicts fair competition rules.

Furthermore during the **workshop** the co-ordination issue on integration efforts into other policy fields and instruments was intensively discussed. One contribution issued the claim to link the EU-Flower with energy policy, precisely the CO_2 emission trading system. The eco-label certified companies could receive more CO_2 certificates and/or discount prices. However even if linking eco-label with emission trading seems to be a promising idea several colleagues hinted to considerable technical problems for the implementation.

Further integration options were outlined for the forestry sector linking the EU-Flower with sector specific labels such as the FSC (Forest Stewardship Council) and the PEFC (Pan-European Forest Certification) labelling scheme.

Another proposal centred eco-labelling in the field of current product policy developments, that is, the European Integrated Product Policy approach, and the so-called ETAP initiative. ETAP stands for the European Environmental Technologies Action Plan which is composed of activities around the themes “Getting from Research to Markets”, “Improving Market Conditions”, and “Acting globally”. Relating to that point, the discussion elaborated ideas on methodological issues with regard to eco-labelling. As a future vision, measuring environmental product performances with a set of promising methodologies such as ecological footprint could be of importance. Eco-labelling could then play a major role for the measurement of environmental product performance.

Most promising seems to be the integration into the so-called EuP directive [Directive 2005/32/EC on the eco-design of Energy-using Products (EuP)], that is, the product group-related specification currently on it way according to the above mentioned EuP framework directive.

Strengthening the demand side – public procurement

Public demand seems to play a crucial role for stimulating eco-labelling – at least when it comes to the questionnaire results. The interviewees judged as relevant (3.8) facilitating access to green public procurement procedures. Being asked to judge on permitting public procurement to refer explicitly to the EU eco-label, the average score is likewise positive with 3.7. However, it has to be stressed that in particular stakeholders favour public procurement policy incentives (4.2) and explicit references to the Flower (4.1). Business representatives score significantly lower, participants judge it with 3.7 and 3.6 and non-participants with 3.1 and 3.0.

The **workshop** confirmed the questionnaire results in highlighting the need to integrate the EU-Flower requirements into all European calls for tenders. This is considered as a potential driver for the diffusion of environmentally sound products and for a considerable dissemination of the European Eco-label into the market. When it comes to integrating eco-label requirements into national tenders, national authorities should be aware of different national contexts, since there is a distinct role of the EU-Flower. Several product groups, such as tourism, rely on geographical distinctive environmental effects. While water is no issue in the north, it actually is in the south. Therefore, the EU-Flower should allow (criteria)-flexibility in order to cope with regional environmental challenges. Therefore, the role of the EU-Flower has been proposed to set a minimum baseline. Integration into national call for tenders therefore needs adaptations to national necessities.

Eco-label and financial incentives

Setting financial incentives has been analysed within the questionnaire twofold: on one hand reducing administrative costs for participants, that is reducing the costs of license and new fee structures e.g. financial transfers to first movers; on the other hand reducing market costs through supporting funding for instance for pilot projects or through fiscal incentives such as tax abatements in order to reduce market prices with benefits for final consumers. Among these four items introducing a new fee structure scores lowest with 3.2, whereas the reduction of license costs scores 3.4. On top of the range are fiscal incentives to reduce market prices (4.0) while support funding scores 3.5. To conclude, reducing market costs via financial incentives seems to be more promising compared to reducing financial administrative costs.

The ***workshop*** discussed intensively financial policy incentives. Questioned what measures and instruments are promising, participants contributed with an array of proposals and reflections. However, several participants stated that in principle all kinds of measures and instruments should be considered for stimulating the EU-Flower. With regard to fiscal instruments a wide array of economic instruments such as taxes (reduction), subsidies, deposit systems, tradable certifications etc. has been judged as stimulating the EU-Flower. In particular VAT reduction could be attractive, given the fact that price advantages are transferred to consumers. Moreover, different product taxes (e.g. for cars) could be used as flanking measures for the EU-Flower.

Eco-label success through awareness raising activities

Awareness raising and educational measurements and incentives seem to be most important among all policy incentives discussed. Increasing knowledge among consumers and retailers has been judged 4.5 – the highest score of all policy incentive related questionnaire issues. In particular EU-Flower participants encourage policy-makers to invest in knowledge raising efforts (4.7).

The ***workshop*** likewise emphasized the importance of educational measures based on the argument that eco-labelling is a market-based instrument deeply depending on green consumer behaviour and attitude. Therefore, educational measures for consumer capacity building are considered as essential. However, awareness raising is not solely restricted to final consumers, but rather to all (business) actors involved with the aim to encourage co-operation among supply chain actors – especially among retailers, producers and key suppliers.

B5. Contribution of the EU Eco-Label to competitiveness

B5.1 Introduction

The present session is devoted to an assessment of the effectiveness of the EU Eco-Label in supporting the competitiveness of organisations selling and marketing labelled products.
To that end, we have declined a broad and elusive concept as that of competitiveness in some "key-components", such as increase in sales and market shares, innovation, image and customer satisfaction, decrease in production costs, and so on. In order to accurately investigate the relationship between such "dimensions" of competitiveness and the EU Eco-Label, the literature review has been based on a wide range of material, with a specific focus on most recent references, as to provide an up-to-date picture of the current situation.
Different types of "sources" have been taken into account: studies and researches, annual reports from relevant retailers, position papers of industrial or trade associations dealing with the effectiveness of Eco-Label, and other material, magazines and papers available.
Most of the evidence collected refers to those "dimensions", like sales and market shares, that are more directly related to the success of the EU Eco-Label on the final market, as most of the available material deals with such aspects of competitiveness; while other competitive aspects are far less investigated in literature. Moreover, as we anticipated, many studies are focused either on "all" eco-labels, so that it is not possible to single out the "performance" of the EU Flower, or on a specific national/regional label (e.g: Blauer Engel and Nordic Swan). Lastly, we have to point out that, while some data are closely linked to the EU Flower (e.g: shares of labelled products), in some cases the relationship between the label and competitiveness is less clear, as firms themselves are not able to discern which has been, within a given framework (e.g.: increased customer satisfaction, innovation etc), the real benefit actually provided by the label, separating it from other variables.

B5.2 Sales and market shares

Most of the gathered evidence regards the "presence and appeal" of the Flower on the market, in terms of sales and market shares, and of course the closely linked issue of the "visibility" / knowledge of the label itself.
First of all, it clearly emerges that the effectiveness of the EU Eco-Label in supporting the competitiveness of firms is strongly hindered and frustrated by its scarce knowledge among consumers.
The situation has improved in recent years, especially in some Member States such as Italy, France and Spain (Allison & Carter, 2000), in the wake of given promotional campaigns (e.g: Flower Week). Nevertheless knowledge of the Flower is still scarce (Kvistgaard, 2005), and characterised by relevant geographical differences (see chapter B2 for an in-depth analysis of the visibility of the Eco-Label "in the consumer's eye").
There is no agreement upon the degree of support provided by the EU Eco-Label to the competitiveness of companies. Most of the studies show that there is a "limited" but still "existent" impact of the label, while others deny any contribution in this sense. For instance, we can mention the FAEP paper (2005), where the EU Eco-Label is described as "not the recipe for increased competitiveness, given the burdens and the excessive investment costs in comparison to a low benefit ratio".
Moreover, the following figure (Sofres 2001) summarizes the market shares and sales value of EU Eco-Label products in the decorative paints and varnishes sector, in some Member States: we can note that, with rare exceptions, the percentages are low, or even irrelevant:

Decorative paints & varnishes

1999		Sv	Fi	UK	Pt	Es	Fr	Total EU
Market Sales Value in Millions €[b]	a	263	150	1 311	188	506	1 300	3 618
LPs Sales Value in Millions €	b	40	2.4	1.7	0.23	0.222	0.022	44.6
Market Share	b/a	15%	1.6%	0.13%	0.12%	0.04%	0.002%	1.23%

Tissue paper

- in France: 0.6%

Textile products

- in France: 1.2% of interior textile market

However, we have to point out that these are market shares in absolute values (as anticipated in chapter B2), while a look of the growth rate would provide a more consistent indicator for competitiveness.
We therefore analysed the issue from the perspective of the growth (in terms of turnover, etc) that might be driven by the EU Eco-Label.

Again, most of the evidence gathered suggests a positive effect of environmental labels on the competitiveness of companies. An Italian survey (IEFE, 2003), for instance, reckons that more than 50% of companies that have been awarded with the Flower did experience an increase in their turnover thanks to higher sales of eco-labelled products, while no company experienced a decrease in turnover and sales.
Furthermore, the trend seems to be encouraging, as recent studies provide a brighter picture of the uptake of the Flower: the increase of sales of eco-labelled products has been slow until 2001, and then experienced a steady jump. For instance, between 2000 and 2001, the number of items sold rose from 17 million to 54 million, and ex-factory sales volume from € 38 million to € 119 million (EEB 2004). The most successful countries are Denmark, France and Italy, followed by Spain, Greece and Sweden, while the most successful product groups are textiles and paints and varnishes, followed by soil improvers and dishwashing detergents.

Moreover, we can report other positive results for the EU Eco-Label:

- in the 2000-2002 (IEMA 2002) period, sales of EU eco-labelled items have risen by more than 300%, with the French, Danish, Italian, Greek and Spanish leading the market
- by now (Environment for Europeans 2005), sales of eco-labelled products have grown by over 200% in the last two years alone, reaching an ex-factory sales value of approximately €700 million in 2004

The interviews carried out are consistent with the idea of a positive but "soft" push given by the EU Flower to the competitiveness of firms, as far as market shares and sales are concerned.
The following figure summarises the main benefits highlighted by companies holding an EU Eco-Label on its products, as a consequence of the adoption the label. It appears how the acquisition of "new customers and market shares" obtains a positive grade (3,4 out of 5), and places fourth among most relevant benefits. Interviewees hence demonstrated, once again, that the effect of the EU Eco-Label on sales and market shares is not overwhelming as yet, but still positive, with most firms experiencing, due to its adoption, an increase in such dimensions.

We can hereby mention some further evidence emerged within the EVER in-field research, highlighting the importance and the great potential of the EU Eco-Label in having an impact on the market and to create a "communicational bridge" with consumers:

- The EU Eco-Label is actively used to increase sales: 95% of the companies participating in the EU scheme use the Eco-Label in their marketing campaigns (TV and press advertising, promotion initiatives on the point-of-sale, etc.).
- The EU Eco-Label is often able to produce positive effects on the market: 53% of the interviewed companies experienced an increase in the market share or in the number of new customers thanks to the adoption of the EU Eco-Label
- The market reward in terms of turnover is not easily measurable, as only 29% of respondents experienced a quantifiable increase in the turnover after the adoption of the Eco-Label; however, the average increase in turnover (even though based on three observations only) is sensible (11.7%).

Broadening the scope of the investigation, the literature review then analysed other types of environmental labels, as far as their support to competitiveness is concerned. Most of the evidence gathered refers to national/regional labels from Nordic countries or Germany (e.g: Nordic Swan, Blauer Engel), and it emerges that such schemes do support competitiveness.
As regards the outcome of the research on the relationship between other environmental labels and competitiveness, we can mention the study carried out by Neitzel on Blauer Engel awarded firms (Neitzel, 1998). It emerges that the effect on the competitiveness is tangible, with a 76% increase in environmental innovation and a market share increase: over 50% of the companies surveyed had a perceivable improvement in market position. OECD (1997) reports a number of cases of success for eco-labelled products, most of which regard other labels rather than the EU flower, and are geographically located in Nordic countries, where sales of such products continue to increase and in certain product groups reach 80-90 percent.
Again, in 1998 Swedish consumers bought eco-labelled products (the Swan, EU Flower, and others) to the value of about euro 300 per capita, while 3 years earlier the figures were 10 times smaller (EEA, 2001), and the number of eco-labelled products in that country increased from 1.852 in 1995 to 4.059 in 1998.
Many other studies evidence how, while the uptake of national labels achieve high levels, providing tangible competitive advantages to the organisations awarded (Stephens 2001), the Flower lags behind, principally because of a lack of visibility (Piotrowski, Kratz, 1999).
The success of these labels has not been hindered by the introduction and (slow) development of the Flower. Indeed, in recent years their uptake has experienced a steady growth. We can for instance report some of the results of a 2002 research (Bjorner et al, 2002) on Danish consumers and the Nordic Swan: we can note how the percentage of acquiring choices (not necessarily market share) of eco-labelled products is constantly increasing.

	1997	1998	1999	2000	Jan 2001
Toilet paper	4%	13%	23%	29%	35%
Kitchen paper	15%	21%	25%	26%	28%
Detergents	0%	4%	9%	24%	25%

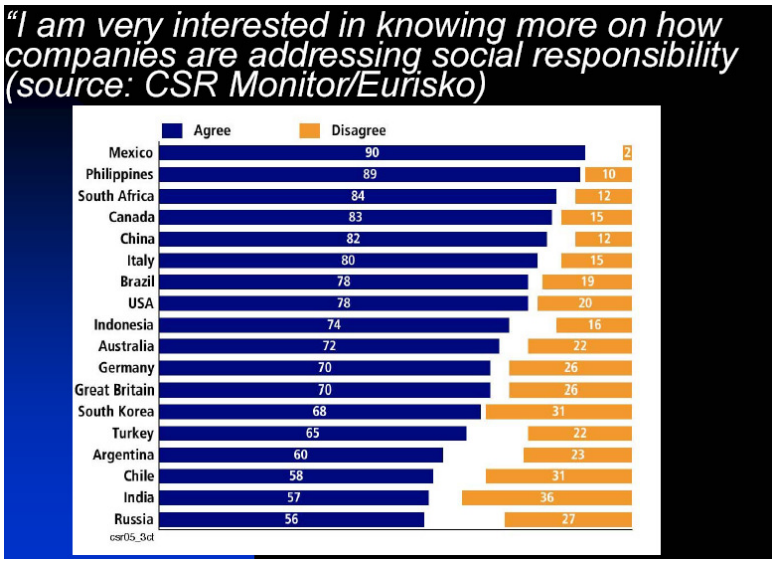
As regards the Blauer Engel, on the other hand, we can mention an OECD (1997: 53) study of the market share concerning eco-labelled paints: it reported an increase in market share from 1% in 1981 to 60% in the do-it-yourself (DIY) sector and 20% in the handicraft sector in 1995. Concerning data on the actual market share of products using the German Blue Angel, very little

information on a case to case basis is available. For recycled paper products, an increase in market share of eco-labelled products was observed as follows: in 1993, ⅔ for sanitary paper products compared to ⅓ in 1986; and respectively 1/4 for administrative paper products compared to 13%.

B5.3 Image and customer satisfaction

As far as the relationship between Eco-label and the "image" of the company on one hand and customer satisfaction on the other is concerned, most studies on the issue deal with a generic relationship between "green products/firms" and the above mentioned determinants of companies' competitiveness, highlighting how an environmentally sound behaviour does actually improve the image of companies as well as the customer satisfaction provided.

Indeed, "green issues" have an impact on corporate reputation at different levels.
The broader one regards social responsibility, which is nowadays of great interest for an ever increasing number of consumers (see also chapter B6). Hence, the reputation of a company is strictly linked to its commitment in such field, and the figure below shows how such interest is well spread in different national contexts, with European countries like Italy, Germany and Great Britain scoring 70% or more.



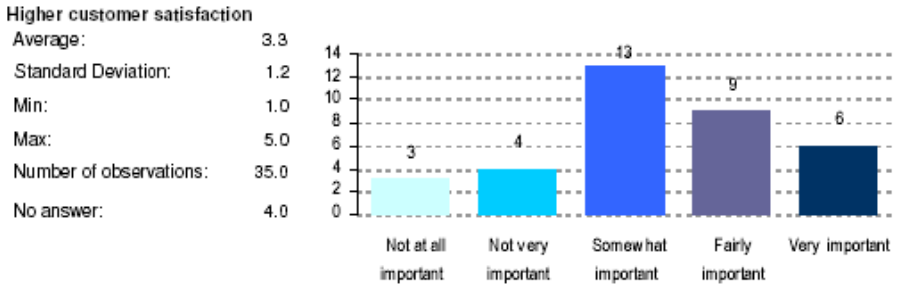
Social responsibility encompasses the environmental sphere, than can be furthermore declined in many different policies and aspects, one of which is that of Eco-labelling.
Indeed, there is evidence that consumers have a positive attitude towards companies marketing "green", Eco-labelled products. A 2003 survey on Italian consumers (Astra Demoskopea) reports that, once informed on the nature and features of the EU Eco-Label, most interviewees affirmed that they will consider the latter as a variable in their purchasing decision process (76%), or even prefer products with the Flower (65%). The problem remains (as we have seen in chapter B2) that very few consumer are aware of the EU Eco-Label.
Another survey on Eco-Labels (Rubik, Frankl 2005) confirms that the impact of such labels on the reputation is relevant, adding that it varies according not only to the geographical context, but also to the different "sources" backing Eco-Labels themselves:

Trust in eco-labels backed by different sources

	Germany	%	Norway	%	Italy	%	Spain	%
1st	Consumer and Environ. Org	78	Consumer and Environ. Org	73	Consumer and Environ. Org	53	Consumer and Environ. Org	67
2nd	Independent body	55	Independant body	63	European Commission	44	Independant body	52
3rd	European Commission Government Producers	28 25 25	Government	53	Independant body	36	European Commission	41
4th			European Commission Producers	27 24	Government Producers	28 28	Producers Government	33 29
5th								
6th	Retailers	12	Retailers	18	Retailers	21	Retailers	21

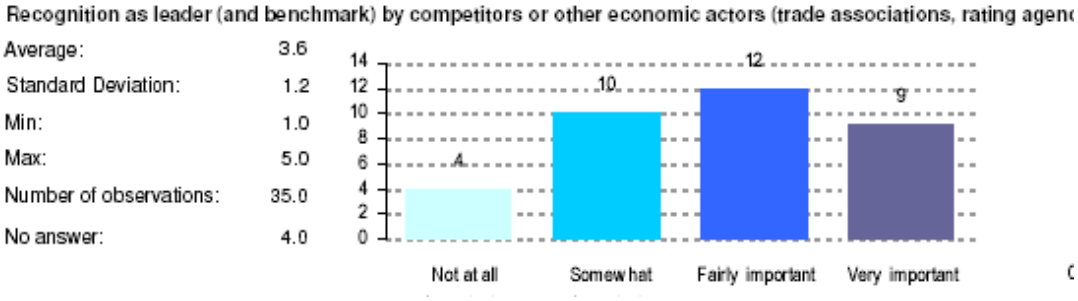
Again, the evidence (Economia & Management n.3, 2004) shows that "green" firms (such as those selling eco-labelled products) will gain important competitive advantages (premium price, customer fidelity, "glow effect", etc). Indeed, the credibility of "environmental friendliness" of companies is strongly supported by forms of external and independent certification, such as the EU Flower. Most of the evidence gathered on the issue (Iefe 2004, Censis-Ipa 1992) supports the fact that product certification provides great credibility, hence improving the image and being a crucial factor for customer satisfaction.

Indeed, this is in line with the outcome of the EVER "in-field" research, as most of the interviewees expressed positive assessments of the overall effect of the EU Eco-Label registration on the customer satisfaction (3,3):



However, we have to note that the credit given to the label in fostering higher customer satisfaction (with only 20% of the sample proving to be unsatisfied from this point of view) is counterbalanced by a scarce improvement of the relationship with all stakeholders, which actually obtained a low score (2,7).

But the "in field" research also evidenced a further positive impact of the EU Eco-Label, as companies selling Flower-awarded products experience a sensible benefit (3,6) as regards the recognition as leader by competitors and other relevant actors:



The findings of the literature review are consistent with the concept that customer satisfaction is directly linked to the coupling of Eco-Labelling with an addressing the individual sphere of consumers (e.g: health, price etc). Indeed, consumers nowadays develop a positive perception of those companies providing them with environmental friendly products, provided that this is not counterbalanced by a lack in other dimensions that are still regarded as essential. We can mention, for instance, the Astra Demoskopea survey, which shows how interviewees affirm the quality (49%) and the price (47%) of labelled products have to be in line with those of "traditional" products.

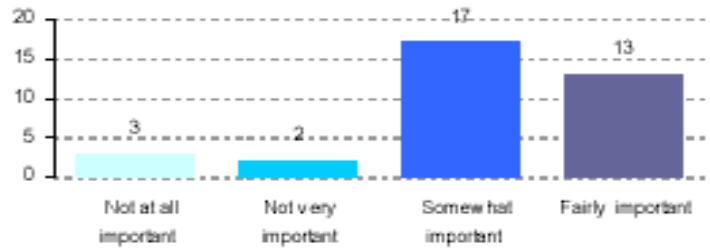
B5.4 Innovation

As regards the relationship between environmental labels and innovation, evidence shows that there is a certain correlation, but it is not sure to which extent such innovation descends from the label itself (Dosi, Moretto 2001). There are doubts that eco-labels spur spontaneous processes of environmental innovation: as we have seen in chapter B2, the survey carried out by Rehfeld et al. (2004) among German companies' examining the influences of Eco-Label on innovation patterns, points out that eco-labelling is only used very little both by environmental product innovators and non-environmental product innovators.

Matto and Singh (1994) assert that there could even be negative impacts, such as the fact that an improvement of image "hitting" all the organisation will support an increase in investments even in traditional, "brown" technologies (complementarity's relationship). In other words, the benefits and resources deriving from an environmentally sound technology/product will display their effects on the organisation as a whole, supporting even those technologies that show little respect for environmental concerns.

Moreover, some of the evidence gathered in the literature review suggest that in some cases eco-labels might hinder innovation. For instance, in the field of detergents, many manufacturers believe that the fixing of a formula prevents companies from "practicing their credo: to continually improve their products", hence being a burden on innovation (tvlink 2005).

The findings emerging from the interviews (see figure below) seem to confirm that the EU Eco-Label is not so able to support innovation. The average grade obtained by the "improved product innovation capability" option is positive 3,1, but places among the least important benefits gained by the EU Eco-Label registration (none of the interviewees regarded it as "very important"):



B5.5 Other dimensions of competitiveness

There is little evidence in literature as regards the relationship between other dimensions of competitiveness and the EU-Eco-Label. However, such flaw has been overcome by the interviews carried out within the project, which have the double merit of being tailored to the Flower (and not to a generic Eco-label) and investigating all chief declinations of "competitiveness".
The evidence emerging, overall, provides a brighter picture of the competitiveness of the EU Flower, compared to what found in the literature review, and previously described.

When asked about the real benefits actually experienced by applying the scheme, most interviewees gave high ratings to many "issues".
Anyhow, even if a "positive" rating was obtained by 18 "benefits" out of the 23 listed in the corresponding question, we should point out that none obtained a "very high" rating, being 3,6 the highest score achieved. This is consistent with the idea of a relevant contribution of the Eco-Label to the competitiveness of firms, which is however pretty "light".

It is important to note how the among the main benefits some regards the environmental field, and not the economic or competitive one. A better environmental performance (3,6) seems to be the one of the brightest consequence of the Eco-Label registration, along with the recognition by competitors or other actors of the position of "leader". In the table below, we report all the benefits connected with the use of the Eco-Label, according to the EVER interviews. The benefits that are more directly linked to a competitive advantage as in bold character.

What kind of benefits did you actually experience by applying the EU Eco-Label? (Part 1)

Recognition as leader (and benchmark) by competitors or other economic actors (trade associations, rating agency, etc.)	**3,6**
Improved our environmental performance	3,6
To improve selection of raw materials	3,5
New customers (or contracts) or market shares acquired	**3,4**
Increased knowledge of products environmental impacts	3,4
Satisfy a specific request by (one or more of) our customers	**3,3**
Increased customer/consumer interest	**3,3**
Higher customer satisfaction	**3,3**
To improve waste management	3,3
Improved employee/management commitment to environmental performance	3,3
Keep up with our main competitors or with the other members of our trade association	**3,2**
Improved our international competitive capabilities	**3,2**
Improved our managerial capabilities in the environmental area	3,2
Improved product design and product development of all our products	3,2
To improve production methods & processes	3,2
Improved our national competitive capabilities	**3,1**

Identified "hot spots" for improvements and external request	3,1
Improved product innovation capability	3,1

It's been highlighted how most of the benefits mentioned by the questionnaire received a "positive grade", no matter whether they concerned the "stakeholder", "economic" or "internal/administrative" sphere. It emerges, however, that there are some exceptions, and most of them are linked to the economic dimension:

What kind of benefits did you actually experience by applying the EU Eco-Label? (Part 2)

Increased our access to public procurement procedures	2,7
Improved relations with our stakeholders	2,7
Increased access to financing and insurance	2,3
Cost savings	2,3

Three out of four "potential" benefits of the EU Eco-Label that have been indicated as the least effective in supporting the competitiveness of firms are, indeed, linked to economic factors, and it is surprising to note how cost savings are at the last place (despite the good results -3,5- obtained in fields that are cost-connected, such as the selection of materials).

B5.6 Key indications

The analysis of existing literature on Eco-label and competitiveness, coupled with the results of the interviews, lead to some general conclusions that can be summarised in the following key-points:

- According to the EVER interviews, the EU Eco-Label does support the overall competitiveness of firms
- such support is hindered by the scarce awareness of the label among consumers (in contrast with other better-known schemes such as the Swan or the Blauer Engel, which achieve better results in terms of market penetration and increase in market shares);
- however, the scenario is changing in recent years, as sales and market shares of EU Eco-Labelled products are on the increase (even in the wake of relevant promotional campaigns such as the Flower week etc)
- there is no agreement upon the contribution of the EU Eco-Label towards innovation, as some studies highlight a positive (however very soft) effect of the former, while others focus on its negative impacts
- customer satisfaction is positively affected by the Flower registration, and the same goes for most of the other dimensions in which "competitiveness" can be declined, even if such impacts (better environmental performance, recognition as leader etc) are not, to date, overwhelming (and in some cases, like cost savings, there are no benefits for organisations selling labelled products).

B6. Eco-Label relationship with other dimensions of Sustainable Development

This part of the EVER study aims at evaluating the contribution of the EU Eco-Label towards *sustainable development,* on the basis of its broadly accepted definition as « the development able to fulfill present needs, without compromising the possibility for future generations to come to fulfill theirs », and usually referred to the three pillars of sustainability.
The potential and actual contribution of the EU Eco-Label to these pillars is partly analysed in other chapters of the study, as regards for example the effects on the economic pillar, largely dealt with in the part relating to competitiveness, or the impacts on the environment, assessed under different points of view throughout the whole study.

This chapter therefore focuses on the social and ethical aspects of sustainability, in order to investigate if and how EU Eco-Label could be usefully redesigned in the revision process as a "sustainable development label", by integrating the economic, social and environmental aspects within the Flower.

Actually, the relations and the contributions of the EU Eco-Label to the social pillar of sustainable development is very scarcely dealt with by existing literature. Relevant studies mainly focuses on socially responsible consumption, as regards in particular two principal aspects:

- *the ethical and social aspects of labelling;*
- *the issue of consumers' protection within labelling*, as regards in particular health and safety aspects.

B5.1 The ethical and social aspects of labelling

In general terms, labels are considered by literature as market-based instruments, which seek to promote a more equitable and sustainable development from the demand side, influencing the purchasing decisions of consumers, retailers, manufacturers and traders. Relevant literature shows that consumers are increasingly interested in the ways goods are produced and marketed, and in the way services are marketed (EURISKO 2005, IEFE 2004, FAO 2003, Maietta 2003, ISO 2002, Vitell *et al*. 2001, Carrigan and Attala 2001, Piepel 2000, Thøgersen 1999, EFTA 1998, Zadek 1998).
Just as an example, a market research carried out by the Institut for Market - Environment -Society (IMUG) estimated that about 50% of German consumers have a preference for products which are socially friendly (TransFair 2000):

Reason for Preference of certain companies	
Those households, who prefer companies that show social responsibility, do so because:	
Of the avoidance of child labour	53%
The products they bought were environmental friendly	39%
Energy and inputs were saved	39%
The company does not deal with countries with grave human rights violations	37%
The company is not in any way linked to the arm's industry	32%
The company shows commitment in developing countries	28%
The company integrated immigrants in their workforce	19%

Fig. B.5.1 Ethical Consumer Interest (Transfair, 2000)

Furthermore, a recent study on social labels (Mazijn *et al.* 2004) suggests that the market shows an interest for an eventual "sustainability label": 60% of the consumers affirm to be interested in the presence of a sustainability label in supermarkets even if, to date, only few consumers (1 to 3 %) actually buy products with a third party certified label regarding these issues.

In response to this concern, a growing number of "sustainability" labels and initiatives, including social, fair trade and een environmental aspects, have been initiated in the EU, from individual manufacturers (e.g. self declared labels), industrial sectors, NGOs, multistakeholders organisations and public authorities:

- ***social labels***: Belgium Social Label, Rugmark Label, Flower Label Program;
- ***fair trade organisations and labels:*** FLO International (Fair trade Labelling Organisations), IFAT (International Federation for Alternative Trade), EFTA (European Fair Trade Association), NEWS! (Network of European World Shops), ETI (Ethical Trading Initiative, UK,) etc.;
- ***labels for organic productions***: *The Soil Association* (UK), *Demeter* (The Netherlands), *Agriculture Biologique* (France), *Eko label* (The Netherlands), *Biogarantie* (Belgium) etc.

Despite the number of labels and initiatives existing, it is difficult to provide a general assessment of the development and effectiveness of such labels, since there is no harmonised system, and different labels represent different aspects of socially responsible behaviour. They generally cover a *single issue* (such as child labour or forest conservation), or apply only to *specific sectors* (such as hand-knotted rugs, soccer balls or cut flowers), or relate to *specific goods* (e.g: The Rugmark, Kaleen and Abrinq labels address the issue of child labour certain industries; the Fairtrade label includes decent working conditions and a fair market price; Max Havelaar stands for a guaranteed purchase price for ecologically and socially responsible coffee, tea, and other fair trade products, etc.).

The issues of eco-labels and social labels in particular don't share the same roots, even if some social and ecological labels reflect an integrated approach. For example, the certification criteria for the Forest Stewardship Council (FSC) Label include ecological criteria, labour standards and participation rights of the indigenous population.
Moreover, first contacts to explore the possibilities of cooperation between fair trade labels, between IFOAM, (the movement for organic agriculture), and the Fairtrade Labelling Organizations International have taken place. Thus, an important challenge for the future seems to be the integration of social and ecological requirements as a basis for the certification under a code or a label of sustainable production.

As regards the impacts of these labels, literature review highlights the difficulties to measure and assess their global effectiveness on the market (Mazijn *et al.* 2004, IEFE 2004, Maietta 2003, Vitell *et al*. 2001, Carrigan and Attala 2001, Piepel 2000). The main impact on the market of labelled products concerns indeed specific product categories and/or specific countries.
Moreover, the ethical and social aspects of sustainability are mostly diffused in sectors that are not covered by the EU Eco-Labelling scheme (i.e.: the food sector).
Some interesting evidence relating the possible synergies between the EU Eco-Label and fair trade labels has been collected in the past, but only with reference to the textile sector (Iraldo, 1997).

According to literature, the main reasons for the consumers' limited willingness to buy socially-labelled products are *price* (e.g. labelled products are generally more expensive than their alternatives), *lack of information and knowledge* and *limited availability*. The proliferation of existing labels is also suspected of diminishing credibility and turning consumers away from labelled products. The relative success of food products from organic agriculture can mainly be attributed to the fact that they are considered healthier (consumers seems to consider taste, quality, environmental and animal welfare considerations less important).

Finally, it has also to be noticed that the multiplication of labelling schemes using different criteria risk undermining their effectiveness, as confusion may arise among consumers on the meaning of the various labels, as it was clearly emphaisised in the EVER Eco-Label Workshop (see Annex II of this study).

B 5.1.1 Key indications

On the basis of the labels and initiatives that are already existing, the perspective of the integration of sustainability issues into a single "sustainable development label" seems to be premature. While labels provide a direct way to translate concern into positive action and promote social and environmental progress by triggering chance in the behaviour of consumers, there effectiveness requires a set of market conditions both on the demand and the supply side, as regards consumers' awareness, accurate, accessible and transparent information, transparency of the certification process etc.

The EVER in-field research is rather consistent with the literature review; it helped to shed light on the relationship between the EU Eco-Label and the social end economic dimensions of sustainability, as regards in particular the possible integration the three pillars within the revision process :

- *there is only a moderate consensus on a possible EU sustainability label:* 55% of all the interviewees is in favour of integrating the EU Eco-Label into a more general label on sustainability. Participants and stakeholders are a lot more favourable than non-participants (only 20% of positive answers in this category of interviewees);
- *in any case, a "soft" solution should be adopted:* according to 66% of the interviewees, if the EU Eco-Label is eventually modified in order to address sustainability issues, this should be done just by including additional information on these issues for the consumers (neither by including mandatory criteria, nor by creating a separate –eventually modular – scheme with a similar logo).

It is also worth nothing that, when asked about the advantages of a process of harmonisation between national labels and the EU Eco-Label, the two most important benefits perceived by Eco-Label participants were related to the possibilities to increase participation in the schemes and to better manage the process:

Easier access to more than one schemes – easier to understand requirements	4,0
Easier controlling process – time saving	4,0
Easier access to more than one schemes – less paperwork	3,9
Easier co-ordination of schemes	3,9
Reduces cost to run schemes	3,8

Finally, as regards the EVER workshop on the revision of the EU Eco-Label, the involved stakeholders agreed upon the following indications:

- the motivation for introducing a label including other pillars of "sustainability" in the long run is undisputable: it would benefit both companies and consumers;
- however, there are many doubts and oppositions on timing (the incoming revision seems to be too early), methodological choices and operational ways to do it;
- any eventual attempt of introducing social responsibility issues must be carried out with a very "soft" approach, the EU Eco-Label must continue to be a label essentially based on environment-related issues.

B5.2 EU Eco-Label and Consumers' protection

Relevant literature shows that when the EU Eco-Label also deals with aspects that are really close to the individual sphere of the consumer, they have more chance to succeed on the market (the so-called "proximity" effect) (Frey et al, 1999). According to this perspective, the literature review considered a specific aspects (within the wider context of sustainability) that the EU Eco-Label often deals with: consumer health and safety.

Among relevant studies (EURISKO 2005, ISO 2002, Mazijn *et al.* 2004, Farnworth 2001, *et al.*), a research carried out by Eurisko (CSR Monitor -Eurisko 2005) shows in particular how companies' systems and processes to ensure the health and safety of their products is considered the most important factor in the eye of the consumer within companies' responsibilities:

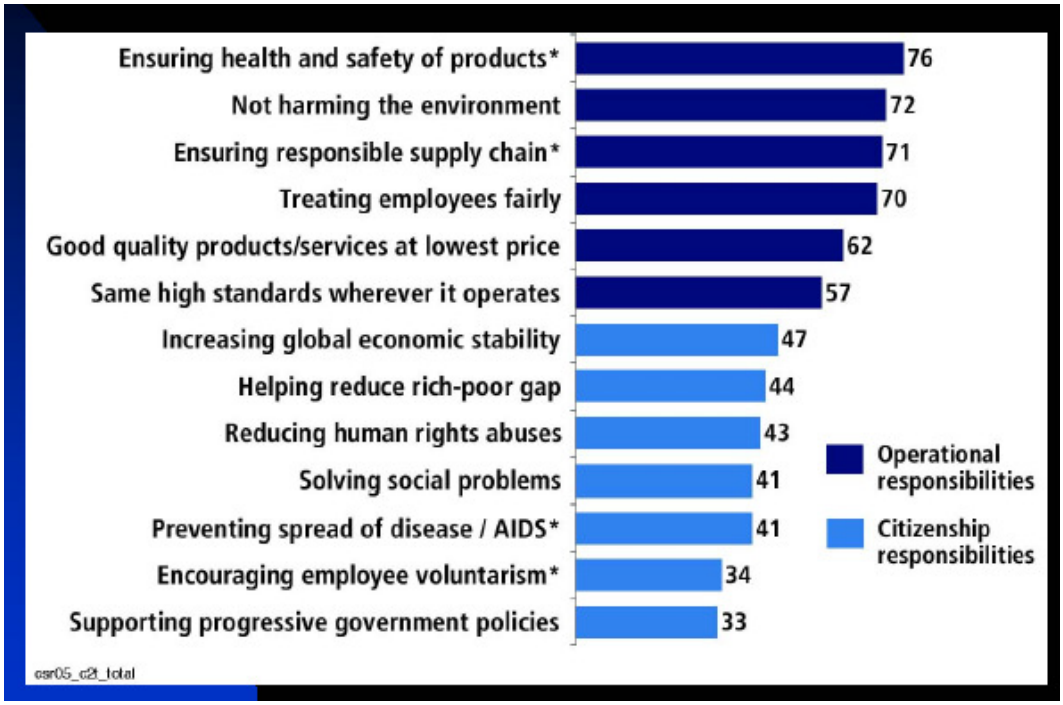


Fig. B5.2 Companies' responbilities (EURISKO 2005)

At the same time, companies have also become increasingly more able to commercialise healthy and safe products and aware of the potential benefits of communicating through labels their socially responsible way of operating (Mazijn *et al.* 2004, IEFE 2004, EFTA 1998, Eurobarometer 1997).
As concerns the effects on safety, it has finally to be noticed that the BEUC has recently released a study which shows that products carrying the EU Eco-Label meet higher safety standards than are legally required (Frey et al, 1999).

B 5.2.1 Key indications

The EVER in field research is consistent with the mainstream literature being analysed.
The interview phase showed in particular that consumer health and safety is already dealt with by many companies, while ethical issues are not: different actions concerning other pillars of sustainability have been carried out by the companies that are using the EU Eco-Label, of which the most diffused are:

- product innovation on consumer health and safety (78%),
- adoption of a certified label concerning consumer health (32%),
- adoption of a EC safety mark within the application of a "new approach" directive (19%) and adoption of a "fair trade" label (16%).

At the EVER workshop on the revision of the EU Eco-Label, there was an agreement among involved stakeholders as regards the possibility to easily and effectively integrate the issue of consumer health into the EU Eco-Label.

PART C: INTEGRATION

INTRODUCTION

The final part of this report is aimed at investigating the opportunities for mutual reinforcement between EMAS and the EU Eco-Label and other environmental policies, in order to identify strengths and weaknesses of the current situation. The collection of evidence and information in both the literature review and the "in-field research" has been focused on the identification of potential/actual, exploited/unexploited and evident/hidden possibilities of promoting the synergetic development of the two schemes and their effective integration and embedment in the policy-making and -implementing in the field of the environmental legislation and regulation.

To this purpose, the concept of "integration" referred to EMAS and the EU Eco-Label has been explored according to three interpretation keys:

- the synergies and co-ordination between the two voluntary schemes of the European Commission
- the potential opportunities for mutual reinforcement and cooperation with other product-related information schemes (specifically with LCA-based Environmental Product Declaration systems)
- the relationship between EMAS / Eco-Label and the existing (and forthcoming) environmental legislation and regulation

C1. RELATIONS AND SYNERGIES BETWEEN EMAS AND ECO-LABEL

A main aim of the EVER study has been to analyse and assess the possible synergies and potential for integration between EMAS and the EU Eco-Label.

At the very first implementation stages of both regulations by the Member States, the implementation itself took place basing on the separate legislations with little attempts of looking for synergies and interactions. Each arrangement got its own unique character, organization and decision flow.
In general, the two schemes were implemented as stand alone schemes, and the attempts by competent bodies and other actors to identify and support the synergies between the two schemes have been few.

However, later experiences show that many elements of the two schemes are overlapping at the operational level, and that sometimes the schemes even support each other in the market place. Such schemes have, to some extent, similar objectives and are based on similar data and working procedures. The possibilities of further synergies through, for instance, facilitating re-use of data, easy management and co-ordinated verification have been identified by many users, but haven't been promoted and supported by the different actors across both schemes.

This chapter focuses on the possibilities and barriers for synergies, as well as on the possibilities of integrating routines in the EMAS and Eco-Label at different organisational levels of the schemes.

The general impression deriving both from the literature review, which includes surveys on the user communities of EMAS and the Eco-Label, and from the EVER interviews that part of the user community see the synergies between the two schemes or the two approaches (Danish Toxicology Centre and Valør & Tinge, 2005). The interviewees see synergies between an Environmental

Management System and an Eco-Label, not necessarily EMAS and the EU Eco-Label – it could be any combination of an Environmental Management System (EMAS and ISO 14001) and a Type I Eco-Labelling scheme (EU Flower, Blue Engle, Nordic Swan, Milieukeur etc.).

According to the EVER interviews, 66 % of the stakeholders and 46 % of the participants see synergies between EMAS and the EU Eco-Label. There is clear no indication of these interviewees in general being familiar with both schemes and if they have worked with both schemes. Also participants having implemented either an EMS or a labelling scheme see synergies.

The fact that more stakeholders see the synergies than participants might be explained with the stakeholder group being more familiar and having more knowledge and experiences with both approaches. Only 9% of the stakeholders have answered "don't know".

Also, we note that many participants (31%) have answered "don't know". Such result indicates that a huge group of participants of EMAS and the Eco-Label are not familiar with both schemes and that there is a lack of information about the possible synergies and the benefits.

Others highlight, however, how the schemes are totally divergent and sometimes even contrary to one another (Nordic Council of Ministers, 2002). In the EVER interviews it emerges that 23% of the participants and 25% of the stakeholders answered "no, we do not see any synergies between EMAS and the Eco-Label". Some of these views are related to the Eco-Label being a B2C communication tool, while EMAS is regarded as an internal management tool and/or a B2B communication tool.

Both in the EVER study and in previous studies, the surveyed actors state that they are not interested in a complete integration of the two schemes. An EMS allows the company to have a broader view on its environmental aspects, while the Eco-Label is narrowed to the selected environmental aspects in the criteria document. In an EMS the scope of the system is either defined by a specific location (a site) or the boundaries of the organisation.

The Eco-Label, on the other hand, allows the company to focus on a selected product category - not the whole variety of products, e.g. only the textile products made from cotton and not the products made from polyester (Danish Toxicology Centre and Valør & Tinge, 2005). In the Eco-Label, the function of the product and/or the product chain defines the scope. This implies that when a company decides to have a product label on one selected product (product category), it only covers this product and not the remaining portfolios of products being produced. This can be a relevant advantage for companies that are strategically focused on the marketing of some "green products", not needing (or not interested in) a thorough environmental management system.

These differences in scopes might be the reason why both participants of EMAS and the EU Eco-Label do not have an interest in merging the schemes into one (see below).

Group / Option	EMAS participants (average)	Eco-label participants (average)
Merge EMAS with the EU Eco-Label into one scheme	2.7	2.5

However, they do have an interest in coordinating and harmonising certain procedures as long as it is not a complete integration. It appears that there is difference among the replies from the participants and stakeholders taking part in the EVER study, as seen below. About half of the participants do think that EMAS registration (or a specific part of EMAS) should be mandatory in order to obtain the Eco-Label, whereas only 30 % of the stakeholders share such opinion.

"In your opinion, should EMAS registration (or a specific part of EMAS) be a mandatory requirement to obtain the Eco-Label?"

Group / reply	Participants	Stakeholders
Yes	52 %	30 %
No	30 %	60 %
Don't know	18 %	10%

This could be seen as an interest in linking the management procedures and control procedures between the two schemes, clearly showing what the links are.

There is more agreement and less interest among the interviewed when it is the other way around – if Eco-Label criteria should be a mandatory performance requirement to obtain EMAS. Here more than half of the interviewed participants and the majority of the stakeholders disagree with such assumption.

"In your opinion, can Eco-Label criteria be a performance mandatory requirement to obtain EMAS?"

Group / reply	Participants	Stakeholders
Yes	14 %	16 %
No	55 %	76 %
Don't know	31 %	8 %

This shows a general resistance to mandatory performance requirements as Eco-Label criteria in EMAS, but we will later see that companies in sectors where Eco-Label criteria are available are using these as a tool in management system.

The challenge is not that of completely merging the two schemes, but that of identifying how an "intelligent integration" of their synergies may take place, benefiting both the user communities. It has to be understood, therefore, how these synergies can be stimulated and developed.

To understand this, both the desk and in-field research of the EVER study have had four focuses:

- Synergies found by participating organisations.
- Synergies in the EMAS verification and Eco-Label controlling processes.
- Links and synergies at marketing level.
- Links and synergies at institutional level.

C1.1 Synergies found by participating organisations

C1.1.1 General synergies of the two schemes

Based on literature and interviews, it can be concluded that companies having either an EMAS (or an EMS) or an Eco-Label or both, find the tools (schemes) very helpful for the organisation, with regard to their internal environmental work.

Many organisations find that the combined use of the schemes creates synergy, and that such schemes complement each other. They believe that an EMAS (or EMS) provides management procedures, discipline and documentation of the environmental activities and ensure continual improvement of environmental performance. The Eco-Label criteria identify the level of environmental performance. The schemes are applicable working tools inside the company and give credibility outside the company (Danish Toxicology Centre and Valør & Tinge, 2005).

For instance, the EVER interviews show that the interviewed groups agree and see the synergy of EMAS as a tool for operation control in the Eco-Label.

Group / Synergy	All (average)
EMAS as tool for operational control in the Eco-Label	3.7

However, companies differ in terms on how they organise the work with the EMS and the Eco-Label.
In general, bigger companies are delegating the environmental work to different people. As an example, the production manager is responsible for the EMS, the marketing director is responsible for the Eco-Label license and the laboratory manager is responsible for the tests and declarations required (Danish Toxicology Centre and Valør & Tinge, 2005). And as an EVER interviewee said: "Today the responsibilities are in different departments. The Eco-Label is in sales and R&D and the EMS in production and quality".

But in SMEs the organisation is different, and therefore the synergies are more obvious, because all environmental responsibilities are held one manager. The general conclusion of some studies (Valør & Tinge 2002, Danish Toxicology Centre and Valør & Tinge, 2005) is that the combination of the work with the EMS and the Eco-Label has improved the effect of both the EMS and the Eco-label.

C1.1.2 Identifying significant aspects and targets

The EVER study shows clearly that the Eco-Label criteria can be used to determine significant aspects in EMAS and that they can also be used for setting EMAS targets. There is genuine agreement among participants and stakeholders on these two issues as seen below.

Group / Synergies	Participants (average)	Stakeholders (average)
Use of Eco-Label criteria for determining significant aspects in	3.6	3.9

determining significant aspects in EMAS		
Use of Eco-Label criteria as target in EMAS	3.7	3.8

These findings are furthermore backed by research among companies having both an EMS and an Eco-Label, as this shows that:

- When the companies are regularly reviewing their list of significant environmental aspects according to the EMS requirements, one of the tools is the Eco-Label criteria document (Nordic Council of Ministers, 2002; Valør & Tinge 2002). Similarly, the criteria document is used for setting targets (ibidem).
- The Eco-Label criteria document is based on international expertise and together with other literature and experts assessments, it gives a credible view of which significant aspects to pinpoint (Valør & Tinge 2002). However, the Eco-Label criteria document does not cover all possible environmental aspects relevant for an EMS (Danish Toxicology Centre and Valør & Tinge, 2005).
- Both schemes require that the participants collect data on environmental performance. In EMAS, the participants must identify their significant environmental aspects and set up criteria for how these were identified. The criteria document, as well as the background analysis for the criteria, identifies several aspects, and therefore can help the EMAS companies identify the significant ones (Danish Toxicology Centre and Valør & Tinge, 2005). This is particularly effective for the identification of the product-related indirect environmental aspects. It has been emphasised (Carnimeo et al. 2002) that EMAS registered companies that have an Eco-Label for their products use the data collected by their Eco-Label suppliers to identify, estimate and assess the indirect environmental aspects linked to other phases of the product life-cycle. The experience of the paper industry in Italy is quite interesting (Pioneer 2006).
- One possible way in which management systems (including EMAS) can be used to support the use of product-related information (e.g.: for the Eco-Label criteria) is the development and maintenance of proper processes for the management of such information (Nuij 2004).
- The emission limits stated in the criteria documents could assist the EMS regarding objectives and targets. As the emission limits are proposed by experts and adopted by authority, the credibility is high. They are valuable bench markers, as they are set so that only the best can meet them (Danish Toxicology Centre and Valør & Tinge, 2005; Pioneer 2006)

C1.1.3 Supply chain management

Research among companies having both an EMS and Eco-Label show that companies with an EMS in some cases are auditing their suppliers on the Eco-Label criteria document or the criteria document is used as a tool in the knowledge transfer from the company to the suppliers (Danish Toxicology Centre and Valør & Tinge, 2005).
Moreover, some companies with an EMS have extended their dialogue with the suppliers when they, at a later stage, were working with the Eco-Label application on top of their EMS. These cases show that supply chain management is one of the most evident synergies of the two schemes. The collection of data - not only at the production site, but in the whole product chain - has overlapping tasks in an EMS and an Eco-Label.

The findings from the EVER study are consistent with the literature and indicate that supply chain audits hold a potential synergy through a more integrated use of an EMS and an Eco-Label. The average result on the question: "Do you see any overlapping task and possible synergy in relation to supply chain audits" is 3.2 and 3.6, respectively for participants and stakeholders.

C1.1.4 Document control

As regards document control, the EVER in-field research indicates a positive genuine attitude and suggests a potential synergy through similar document control, with an average result of 3.6 from all interviewees to the question: "Do you see any overlapping task and possible synergy in relation to document control?".

The literature and research among companies having both an EMS and Eco-Label show that this is already taking place at the operational level (Carnimeo et al. 2002).

Many companies are using their EMS to manage both a product label and the Eco-Label. This means that documentation from suppliers is controlled through their EMS system. For those companies who had an EMS in place at the time they began to prepare for the application of the Eco-Label, they were able to use existing procedures and routines. However, many mention that it would have been helpful if general advice had been available in the Eco-Label user manual on how to build up a documentation system and its relations to other document control systems (Valør & Tinge 2002, Danish Toxicology Centre and Valør & Tinge, 2005). But still, all information needed for the Eco-Labelling cannot be always be generated from the EMS (Nordic Council of Ministers, 2002)

C1.2 Synergies in the EMAS verification and Eco-Label controlling processes

Synergies in the EMS verification and Eco-Label controlling processes are evident for the user community. Research among companies having both an EMS and Eco-Label shows that both the EMS verifier and the Eco-Label controller are looking for the same information and documentation, for instance, in relation to supply chain management. It would be time saving both in relation to preparation of the visits and the visits themselves if the EMS verification and the Eco-Label controlling could be made at the same time and by the same accredited bodies (Danish Toxicology Centre and Valør & Tinge, 2005).

Literature also shows that companies, especially SMEs, are interested in an integrated verification process. In SMEs, one single person is often in charge of and carries out all the work in relation to environmental management, including dialogue with authorities, application for Eco-Label, internal audits etc. When it comes to verification, the authorities, the Eco-Label controller and the EMS verifier carry out their on-site visit at different times and the environmental manager must prepare each meeting individually although they are looking for more or less the same issues and the same documentation (Valør & Tinge 2002, Danish Toxicology Centre and Valør & Tinge, 2005).

These findings are also supported by the EVER interviews, where both participants and stakeholders have the same level of interest in using less time and resources for the verification and controlling processes. The average score to this question is 3.7 of all interviewed.

C1.2 Common verification framework

A general process of product information verification for the use of the Eco-Label is not specified in the EU Eco-Label Regulation or any other official documents, such as for instance for the Nordic Swan label and the Dutch Eco-Label Milieukeur. The criteria document describes the requirements the product must meet and how it must be documented, but it does not specify how the verification of the documentation should be carried out. It is up to the national competent body to set up rules for the process. This might indicate the possibility of having different rules in different countries under the same scheme and thus different stringency of the verification (Danish Toxicology Centre and Valør & Tinge, 2005).

It is different for the EMAS scheme which has a documented and proven verification system based on international principle and it already provides for product coverage as mentioned above. The EU Commission is about to publish a new guideline on how product issues shall be covered by the verification process.

In the EVER study, we have seen that around 50% of the interviewed today find the whole verification processes too different from one scheme to the other, although there are some overlapping issues.
But the results show a strong wish from both participants and stakeholders for similar (or even same) procedures for the verification processes:

Group / Synergy	All (average)
Same procedures for verification – easier to administrate	3.8

Therefore, even though they see some barriers in processes today, there is an even stronger wish to overcome these barriers, because many benefits for the participants, especially for SMEs, are expected.

A common and integrated verification process could be established and create benefits especially for the small and medium sized companies. This could also create more credibility to the verification of the individual schemes (especially for the Eco-Label scheme, which today has no common European verification framework).

The credibility of the verification and controlling process is essential. If a common verification system is conceived and applied, merging the EMAS and Eco-Label competences and basing on the existing EMAS approach, then the accreditation requirements for an EMAS verifier should be extended.
There should be an expanded focus on (Danish Toxicology Centre and Valør & Tinge, 2005):

- *Products* – requiring current technical knowledge of the product and knowledge of its critical environmental characteristics
- *Life-cycle approach and assessment* – requiring knowledge of LCA
- *Performance evaluation and data auditing* – requiring a broader and more comprehensive knowledge on test, monitoring and measurement methodologies.

C1.3 Links and synergies at marketing level

Considering the number of possible and potential synergies between the two schemes, and how the participating organisations are already working with them, there should supposedly also be synergies at the marketing level.

Like all other business, EMAS registered and Eco-Label-licensed organisations are interested in tools that can help them market the organisation and its products and differentiate them from their competitors. EMAS and the EU Eco-Labels could be such attractive marketing tools, but they have not turned out as such (see chapters A5 and B5 of this report). One of the problems is the fact that EMAS and the EU Eco-Label are little known in the market place.

The EVER interviews found out that both stakeholders and participants see potential synergies, in particular or reduction of costs, through joint marketing efforts and an easier communication of ambitions and performance. The interviewees did not see a problem in marketing the two schemes jointly and even agreed that both logos can be displayed on the product.

Group / Synergies	All (average)
Common marketing will reduce cost	3.6
Both logos should go on the product	3.3
Easier to communicate environmental ambitions and performances	3.8

However, at the same time, the interviewees are cautious and see a potential barrier in having the EMAS logo directly on the product – namely that the consumers and customers will be confused. The concern is higher among the Eco-Label participants.

Group / Barrier	All Eco-Label (average)	All EMAS (average)
EMAS-logo on the product will confuse the consumers and customers	3.5	3.1

C1.4 Links and synergies at institutional level

C1.4.1 Overlapping data requirements

In general, there are overlapping data requirements within the different mandatory and voluntary environmental information systems (IPPC, PRTR, EMAS and Eco-Label). The data requirements needed to fulfil the criteria of each scheme are similar in several areas, but rarely identical (Danish Toxicology Centre and Valør & Tinge, 2005).

One of the main barriers for ensuring synergies between the systems is the inconsistency in the identification and designation of the environmental aspect and impact categories. They are used

with different terms and definitions depending on the information system without any kind of alignment.

A co-ordination of the data collection strategy and an introduction of common terms for the description of the aspects and impact categories could give a significant synergy effect. A centralized set-up of uniform data criteria is recommended as the workload of the data collection process could be significantly reduced for participating organisations. An optimal planning of the data collection process will also ease the verification process.

As seen below, the interviewees in EVER study strongly agree on the synergies concerning the review of environmental aspects and impacts in for the two schemes and to the common data collection process. Particularly, the stakeholders see this as being a relevant gain, as seen below.

Group / Synergy	Participants (average)	Stakeholders (average)
Review of environmental aspects and impacts	3.6	4.2
Common data collection	3.9	4.1

A broadly accepted data foundation and collection strategy would ease the data collection process significantly. This would require a co-ordinated management of all schemes to be established. A possible barrier for such a co-ordinated approach is the image of stand alone schemes. At the institutional level there is a lack of knowledge of these synergies as indicated by the EVER study, and reported below.

Group / Barrier	All (average)
Some institution do not see the overlap and possible synergies – lack of knowledge	3.3

C1.4.2 Administrative coordination

The management of the two schemes is implemented by different national agencies or other type of organisations. Also at the EU level each scheme has its own competent body forum. There are no formal established mechanisms for coordination at management level neither at national nor at EU-level between the two schemes.

The EVER study shows a large interest among participants and stakeholders in ensuring a better co-operation and/or co-ordination as indicated below. An unifying competent body and increasing levels of cooperation with regards to marketing efforts seem to play a relevant role:

Group / Synergies	All (average)
Competent bodies could be the same – fewer resources spent	3.9
Better co-operation in marketing	3.9

Better co-operation on requirements and criteria – less bureaucratic for participants	3.7

However, several of the interviewees are also aware that there might be some barriers for this co-operation and/or co-ordination, as not all institutions do see any benefits of mutual initiatives and cooperation. As one interviewee commented: "EMAS and the Eco-Label are NOT competitors, but some institutions seem to think so".

Group / Option	All (average)
Some institution do not prefer co-operation	3.3

Therefore mechanisms should be established to promote the formal co-ordination between the schemes at both national and Community level. The EU Competent bodies for EMAS and Eco-labels could merge into one single body to promote coherence between the schemes themselves.

C2. ENVIRONMENTAL PRODUCT DECLARATIONS AS COMPLEMENTARY TO EMAS AND THE EU ECO-LABEL

When looking at possible integrated and cooperative approaches between EMAS / EU Eco-Label and other certification and information schemes, the EVER consortium of consultants agreed that it was of relevance to look mainly at the Environmental Product Declarations (EPDs) as a tool for obtaining synergies.
EPDs appear to gain support among an increasing number of producers and stakeholders around Europe. The International Standardisation Organisation, ISO, will launch a standard on EPD programme setting in spring 2006. Sweden was the first country with an ISO Type III label programme, called "Environmental Product Declaration", established in 1997. The Swedish government appointed the Swedish Environmental Management Council (SEMC, owned by the state, industry and local authorities) to be the competent body for the system of certified EPDs. The system for certified EPDs in Sweden is initiated and driven by business. The Swedish scheme is open to companies located in other EU Member States (relevant participation from Italian companies). Other European countries recently set up or are setting up full schemes or schemes for selected products group, such as Norway, Denmark, France and Germany.

EPDs are quantified environmental product-related profiles (drafted according to ISO CD 14025), including information derived by means of an LCA (Life Cycle Assessment) applied according to the ISO standards of the 14040 series and presented as a set of parameter categories. The certification of the EPDs is generally based on independent verification.
EPD can be produced for any product group. Product Category Rules should be developed (if not existing yet) to establish the specific contents that must be considered to identify the requirements necessary for carrying out the LCA study and for publishing the EPD for each product or group of products. This is necessary to make sure EPDs within the same product group are comparable and based on the same rules for conducting the underlying LCA (Nuij 2004).
EPDs are objective and do not contain any assessment of whether the product has a smaller or bigger impact on the environment with respect to competitors. EPDs are therefore different from environmental labels and product claims, which do not provide "numbers", but indicate that the product is among the best in class. EPDs are thus a supplement to environmental labels and other environmental communication forms.

In order to assess if there are potential synergies and opportunities for an integrated and cooperative approach between the two EU schemes and an EPD scheme, the EVER study carried out an overview of the available literature and devoted a specific section of the questionnaire for the interviews with both EMAS and Eco-Label "participants".

This part of the review focused, on one hand, on the way in which literature considers the opportunities to integrate the LCA approach and the so called "product dimension" with the Environmental Management Systems and, on the other hand, on the synergies under different points of view, between EMAS / Eco-Label and the LCA-based Environmental Product Declaration schemes.

Many authors take into consideration the opportunity of progressively assimilating a "life-cycle" thinking into environmental management systems, seeing it as the most interesting "innovation" towards a fuller concept of sustainability that can be pursued by industrial organisations (Welford, Young, 2000).

A recently shared vision is that the "product dimension" and the life-cycle approach are a necessary complement to environmental management: if the company has so far focused on "housekeeping" (managerial and organisational processes, responsibilities and tasks, procedures and operational instructions, monitoring systems and surveillance of the environmental aspects pertaining to its production processes), today it is increasingly looking "beyond the boundaries of its production site and its organisation" (Klinkers et al., 1999) towards the whole life cycle of the product.
Some authors even argue that the EMS cannot be considered just as a corporate tool anymore, but should be considered as a wider approach, by means of which many actors of the supply chain manage the environmental aspects relating to the different phases of a product life-cycle (Sharfman et al., 1997). The use of an life-cycle approach is identified as an opportunity for an "*inter-organisational environmental management*" (Sinding, 2000): the only effective way to pursue coordination and cooperation between companies within the supply chain.
Other authors emphasise the difficulties tackled in applying a life-cycle approach, insofar as the company's management control on the relevant environmental aspects in the supply-chain can be too weak, and its management and contractual powers within the business relations are not sufficient to influence these aspects (Fuller, 1999).

As far as the diffusion of the LCA-based approaches and tools among industrial companies and other organisations are concerned, we registered great lack of empirical data in the literature, although many authors (Baldo 2001, Carnimeo et al. 2002, Baumann 1996, etc.) report of increasing adoption rates, especially by large companies. The only available figure seems to be that reported by Heiskanen (2000) who asserts that approximately 50% of the companies classified as the best performing 500 in 1999 by the Fortune magazine are applying an LCA in some form (e.g.: in a streamlined way). The same author clarifies that these companies apply the LCA with a "defensive" attitude (e.g.: following a complaint or a boycott action by an environmental NGO), more than with a proactive and marketing-oriented approach.
This attitude is confirmed by other studies (e.g.: Ayres, 1995; Cowell et al., 1997), that draw a more pessimistic picture of the diffusion of the LCA-based approaches and tools.

The literature review also focused, more specifically, on the uptake of the LCA approach and of the "product dimension" among EMAS registered (or other EMS-certified) organisations.
Despite product aspects are explicitly included in the international EMS standards and EMAS, they are not as clear in the emergent practice. A relatively large number of companies has started to incorporate more explicit environmental considerations in their product development as a result of EMSs. Few authors emphasise in their works the potential integration between the product dimension (including LCA and also Eco-Label – see the previous paragraph) in some of the key processes and activities of environmental management: the environmental initial review (Baldo 2001), the environmental policy and programmes (Pujari, Wright, 1999), audit (Carnimeo et al. 2002), supply chain management (the Xerox case in Bennet, James, 1999), R&D and design (IPTS 2000, Baumann and Cowell, 1999), marketing management (Fuller 1999, Cooper 1994, Sullivan Ehrenfeld, 1992), etc.
It is, however, very unusual for this to be a formalised component in the EMS. Specific methods and supportive tools to include products in the EMS are still relatively unknown (NUTEK, 2003).

The Netherlands have been a frontrunner experiment aiming at including the product dimension in management systems already at the beginning of the 1990s with so-called POEM (Product-Oriented Environmental Management) projects.

POEM is a management tool to ensure that the environmental aspects and impact along the product chain can be constantly controlled, minimized and avoided wherever possible by a systematic approach towards all processes and activities (Han Brezet et al. 2000).

The reasons for the participating companies to start on product-oriented environmental management were often related to improving their understanding of certain environmental issues in the company and the product chain, and the need to create structure in their own environmental policy. Many positive results came out of using this tool but in the short term environmental product design this not yield any tangible results. Other constraints were also found in the evaluation of the study. Time and money were considered to be the major barriers to the successful introduction of product oriented environmental management. Companies found it difficult to estimate what it would required to carry out a POEM project. Moreover, it was difficult to find the right information. Similarly to what stated in NUTEK (2003), suitable tools for processing this information quickly and effectively also appeared to be lacking (Han Brezet et al. 2000).

The picture becomes more positive if we focus on the synergies in "external communication".
In order to evaluate the potential synergy between environmental management and the product dimension in communication, the desk research aimed at answering two specific questions:

- are EMAS registered companies eager and ready to communicate environmental information and data on the product (as it can be done with an EPD)?
- are the most active companies in product-related communication also interested in (and eventually already applying) EMAS or other forms of certified EMSs?

The answer to the first question is not easy, since recent data are not available in literature. Nevertheless, if we take into consideration the results of a wide-scoped survey on 150 EMAS environmental statements published by companies from all the EU Members States (Gorla et al. 2001), we find out that approximately one third (32,5%) of the whole sample includes some kind of product-related information in the Statement, of which:

Issue	**% of EMAS statements**
Product-related commitments in the Environmental Policy	26,0
Environmental aspect connected with products presented among the most relevant aspects	11,3
Targets and programmes for the improvement of product environmental performance	10,6
Data and indicators relating to the product life-cycle	1,3
Presentation of an eco-labelled product (not necessarily with the EU Eco-Label)	1,3

Source: Gorla et al. 2001 (some statements included more than one issue).

If we consider that this survey was carried out before the approval of the current EMAS Regulation, that introduced the product-related "indirect aspects" as a requirement, we can estimate that the percentages today are much higher.
It has to be noted that recently an accredited verifier in the UK validated, for the first time, a sort of environmental product declaration as an "extract" of information from the full EMAS Statement.

To reply to the second question, within the EVER desk-research IEFE Bocconi collected and examined information from direct sources.
The outcomes of the desk-research seem to provide evidence of a positive relation between the choice of publishing an EPD and the adoption of an EMS.
First of all, we considered all the "front runner" companies that published an EPD certified according to the Swedish EPD scheme. The geographical representation of these companies is reflected in the following table:

Country	N° of EPD	% on the total
Belgium	18	19%
Finland	1	1%
Italy	27	28%
Japan	22	23%
South Korea	1	1%
Poland	1	1%
Sweden	26	27%
TOTAL	**96**	**100%**

Source: SEMC, October 2005.

It is very interesting to note that the large majority (75%) of these companies also implement an ISO-certified or EMAS-registered (only 6%) management system. They are marketing-oriented companies, mostly with a B2B market, that were probably spurred and facilitated by the fact that many of the necessary (primary) data for the EPD were already collected, processed and monitored by the Environmental Management System. This result also shows that many companies that were certified according to ISO 14001 preferred to use a product-oriented communication tool as the EPD (presumably for marketing reasons), rather than one mainly focused on the organisation, as the EMAS statement (which, as we have seen, is not tailored to the needs of a market-related target – see the Excursus in chapter A5).

	n°	%
TOTAL N° OF EPD IN THE SWEDISH EPD SCHEME	96	100%
of which from a ISO 14001 company	72	75%
of which from an EMAS company	6	6%

Source: own elaboration by the EVER consortium within the desk-research

A further confirmation to this comes from a very innovative EC LIFE Project concerning the EPD issue, aimed at developing an international standard. Most of the 15 pioneer companies participating in this LIFE project, with the aim of developing an EPD, relied on a previously existent EMS, certified according to ISO 14001 or registered in EMAS (see: Intend 2005).

Finally, the EVER in-field research tried to fill a relevant lack in the literature, by exploring the opportunities of creating and exploiting synergies between EMAS / Eco-Label and the EPD schemes.

The response rate for questions related to the EPD was rather low indicating that quite a few of the interviewed were not very familiar with EPD and did therefore not contribute to the findings below. Those who answered were generally positive towards EPDs and saw synergies in the same areas as identified between EMAS and the EU Eco-Label. But only very few have practical experience with

EPDs and the results of the interviews rather indicate expectations than real experiences of synergies.

The EVER study shows that around half of the interviewed do see the EPD as a complementary tool to both EMAS and/or the EU Eco-Label. It seems clear that the stakeholders are more positive towards the EPD than the participants of EMAS and the Eco-Label.

"Do you consider an Environmental Product Declaration as a future complementary tool to EMAS?"

Group / reply	Participants	Stakeholders
Yes	47 %	60 %
No	37 %	29 %
Don't know	16 %	11 %

"Do you consider an Environmental Product Declaration as a future complementary tool to the Eco-Label?"

Group / reply	Participants	Stakeholders
Yes	51 %	63 %
No	35 %	27 %
Don't know	14 %	10 %

"Do you consider an Environmental Product Declaration as a future complementary tool to the Eco-Label and EMAS?"

Group / reply	Participants	Stakeholders
Yes	44 %	51 %
No	36 %	34 %
Don't know	20 %	15 %

C2.1 Links and synergies at the operational level

The interviewees see a range of possible synergies with the most apparent ones being the reviewing of environmental aspects and impacts and the EPD as a supporting tool of LCA data to both EMAS and the Eco-Label.

Group / Synergies	All (average)
EPD review similar environmental aspects and impacts - common data collection	4.0
EPD support the Eco-Label with LCA data	3.8
EPD support EMAS with LCA data when looking at products	3.7

EPD as an additional EMAS requirement, if the company wants to use the logo on the products	3.5
EPD support supply chain audits	3.6
EPD by supplier provides guarantee on Eco-Label supply chain criteria	3.5

Some of these potential synergies are confirmed by evidence collected in the literature review. It has been proposed, for instance, to formally recognise the role of EPDs issued under specific Type III schemes or independently verified EPDs as acceptable evidence of conformity with certain eco-label criteria (Nuij 2004).

C2.2 Links and synergies at the marketing level

Again, we see a trust in possible synergies at the marketing level due to closer cooperation between EPDs and the EU schemes on EMAS and Eco-Label. Here the interviewees in general agree to the following points:

- EPDs give quantified environmental information from the whole product chain and therefore support EMAS and the Eco-Label with further environmental information for marketing in B2B relations, give more evidence on environmental ambitions and performance, and could also give further relevant environmental information in relation to public green procurement
- If EMAS should have a stronger focus on the product and product chain environmental information the EPD could be the tool which give evidence of product performance in the EMAS environmental statement.

Group / Synergies	All (average)
EPD support marketing with B2B information	3.8
EPD as a part of EMAS environmental statement on product performance	3.7
EPD supports communication of environmental ambitions and performances with further information than EMAS and the Eco-label	3.5
EPD support communication for Green Public Procurement	3.9

C2.3 Links and synergies at the institutional level

To establish a coherent product (value) chain information system an EPD scheme is necessary. An EPD which deliver LCA-based data from the company to its suppliers and professional customers. EPD will link together the Eco-labels (target group: the consumers) and EMAS (target group:

organisation) and may be the system needed for EMAS to further develop into a product orientated environmental management system.
Literature confirms the possibility of mutual synergy. For instance, the study by Nuij (2004) proposed that the process of developing PCRs is used to establish eco-label criteria or vice versa, with subsequent benefits in terms of reduced time and costs and increased harmonisation.

But a prerequisite to ensure coherence between EMAS, Eco-label and an EPD scheme is one competent body, which should be given the responsibility for the coordination, maintenance and promotion of the schemes benefiting the participating organisation at operational level and in the market place. Also the extent and quality of the third party verification of the various systems should be coherent. It requires a verification system which ensures that the same level of verification is performed in all member countries and that the burden for the users is the same. The interviews of this study support this point of view.

Group / Synergies	All (average)
Competent bodies could be the same – less resources spent	3.8
Better co-operation in marketing of schemes	3.7
More efficient marketing per Euro spent	3.6
Better co-operation on requirements and criteria – less bureaucratic to participators	3.6
Same procedures for verification – easier to administrate	3.7

C3. INTEGRATION AND EMBEDMENT OF EMAS AND THE EU ECO-LABEL IN POLICY MAKING AND IMPLEMENTING

The final paragraph of this report is devoted to a crucial aspect for the development of both EMAS and the EU Eco-Label: their actual embedment and integration in "traditional" and forthcoming environmental policies.
The issue has been dealt with by very few authors in the literature, and there is poor empirical evidence from studies or projects that are aimed at studying this relationship.
Most of the evidence on which this paragraph is based, is therefore taken from official documents by the European Commission and by Member States, or experimental activities aimed at improving the capability of the two voluntary schemes to be effectively integrated and used in a co-ordinated way with the other existing or forthcoming environmental policies.

In order to analyse the current degree of EMAS and EU Eco-Label integration and embedment in the environmental legislation, we can start by briefly reporting some examples of EU policies in which there is a reference to one of the two schemes, implying that they have been used as support policy measures in policy making.

As to EMAS, the following (non exhaustive) examples can be made:

- The EU Directive establishing a scheme for greenhouse gas emission allowance trading[24] establishes that the scheme will be subject to a close verification of reports submitted by operators in compliance with article 15 of the Directive (*guidelines for monitoring and reporting of emissions*). Among the criteria for the verification process, the verifier is required to take into account whether the site is EMAS registered.
- For IPPC installations (EC Directive 96/61), EMSs are regarded as tools that operators can use to address the design, construction, maintenance, operation and decommissioning issues in a systematic and demonstrable way. It is acknowledged that standardised systems such as EMAS and ISO 14001 can give higher credibility to the EMS. It is further acknowledged that EMAS provides additional credibility due to its inherent mechanism that delivers compliance with the relevant environmental legislation and to the interaction with the public through the Environmental Statement.
- In the EC Recommendation *providing for minimum criteria for environmental inspections in Member States*[25], under provision IV regarding *Plans for environmental inspections,* advises that Member States should ensure that inspections activities are planned in advance, also by taking into account relevant available information in relation to specific sites or installations. The Recommendation explicitly mentions the environmental information available through the EMAS Environmental Statement as an effective way for achieving this task.

Similarly, some examples can be made for the EU Eco-Label:

- Directive 92/75/EEC of 22 September 1992, issuing an EU Energy Label, established that the EU Eco-label logo is also allowed to be used within the Energy label, provided of course the product has been awarded the Eco-label. The consequences of this provision, though, seem to have been more relevant for the Eco-Label than for the Energy label. As reported by Nuij (2004): "the Eco-label has consistently adopted the top levels of the energy label (where available) as the basis for its appliance criteria documents".
- The EuP-Directive (2005/32) foresees in its article 9 (3): "EuPs which have been awarded the Community eco-label pursuant to Regulation (EC) No 1980/2000 shall be presumed to comply with the Ecodesign requirements of the applicable implementing measure insofar as those requirements are met by the eco-label". A similar provision is foreseen for EMAS-registered management systems. We have to wait future developments in the implementation of this Directive to see if this provisions are to be effective in terms of co-ordination and integration with the two EU voluntary schemes.

Further explicit links with other EC acts or provisions that are "closer" to voluntary instruments (IPP, CSR, etc.) are identified and analysed in other chapters of this report.

It has to be underlined, though, that practically all the available evidence converges on the fact that the efforts made by the European Commission to effectively embed and integrate EMAS and the EU Eco-Label in its own environmental policies are far from been relevant.
This view was shared by a large majority of the actors that were either interviewed for the "in-field" research or involved in the EVER workshop. During the EMAS workshop, for example, there was a

[24] Directive of the European Parliament and of the Council amending the Directive *establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms*. COM(2003) 403 final of 23.7.2003.
[25] Recommendation of the European Parliament and of the Council *providing for minimum criteria for environmental inspections in Member States.* OJ L 118/41 of 27.4.2001.

general agreement on the fact that the lack of integration with other legislation and regulation has been one of the most relevant problems for the development of EMAS in the last years. In spite of the fact that the need for this integration is explicitly stated in the EMAS regulation itself, very few attempts have been made in the past. Complaints have been reported from some Member States (e.g.: Germany, Italy) on the fact that EMAS organisations were not able to obtain substantial benefits within the IPPC Directive application, e.g.: in the renewal or extension of the integrated permits in cases of relevant modifications to the processes and/or to the plant.
Other significant complaints on the lack of integration with other policies were expressed with respect to the Environmental Liability EC Directive 2004/35[26], which totally ignores the guarantees that Emas might provide with respect to the organisational and managerial aspects of environmental risk.
Another "negative" example refers to the "Communication on the integration of environmental aspects into European standardisation"[27], from the Commission to the Council, the European Parliament and the European Economic and Social Committee. Despite the main issue at stake is integrating environmental aspects into European standardisation, the EU Eco-Label is not even mentioned in the official text.

On the opposite, participants in the two schemes and stakeholders have very high expectations on a fully "integrated approach". A considerable consensus has been registered by the EVER in-field research on the strong need for integrating and embedding EMAS and the EU Eco-Label in other policies and tools. A general request is being made by stakeholders and organisations for a truly effective and consistent embedment of EMAS and the EU Eco-Label in existing and forthcoming legislation. Some of the most frequently suggested policy areas for promoting synergy were, for EMAS: the IPPC directive, the Emission trading directive, the Seveso Bis Directive; for the EU Eco-Label: EuP, RoHS and, to a minor extent, REACH.
With reference to the Eco-Label, for example, EVER interview results show that 89% of the interviewed stakeholders favour the linkage of the EU Eco-Label with other measures and activities of their specific policy areas (e.g. IPP) and only 11% denied it. 84% of the interviewed stakeholders think that the Eco-Label could be used as a basis for compliance with requirements of the so-called "New approach" and other EU directives (like EuP), only 16% rejected this idea. These percentages are among the highest reported in all the EVER interviews results.

As a second step, we can analyse the way in which EMAS and the EU Eco-Label are used in "policy implementing", meaning by that the granting, enactment and enforcement of the EU Directives (and other national legislations) by national, regional or local governments.
We will propose some considerations specifically referring to EMAS (where literature and normative references are wider), but they could similarly apply to the EU Eco-Label.

As provided by Article 10(2) of the current EMAS Regulation, Member States should consider how registration can be taken into account in the implementation and enforcement of environmental legislation, in order to avoid unnecessary duplication of effort by both organisations and enforcement authorities.
The recent COM(2004) 745 from the Commission to the Council and the European Parliament, emphasises how EMAS can support Member States both in policy making and policy implementing, in order to "alleviate the burden of regulatory pressure and streamline their own resources".
The possibility to use EMAS within this framework lies in the "strict requirements regarding compliance with environmental legislation" and in the role of "the independent and external verifiers to ensure that the organisation can demonstrate legal compliance".

[26] On the relationship between Directive 2004/35/EC and environmental management systems see: Battaglia et al. 2005.
[27] COM (2004) 130.

Basing on this possibility, as literature reports, some Member States and regional / local authorities are using what the abovementioned Communication defines *regulatory flexibility,* including both *regulatory relief,* construed as substitution of legal requirements without changes in environmental legislation as such, and *deregulation,* which involves changes in the legislation itself.
In many Member States (such as Italy, Germany) regulatory relief strongly bases on the principle of "differentiated regulation", meaning by that that the self-regulation of companies is recognised by law. In Germany, for example, "substitution" prevails i.e. the environmental authorities change the implementation but not the scope and content of the laws (Freier 2005). In regard to EMAS, "substitution" implies that the scheme can directly replace legally required measures (Provincia di Lucca, 2004). It also means that the implementation of environmental regulation changes, but without changing the existing law (SMUL 2003). The legal base for substitution is the so-called *principle of functional equivalence*: measures of companies undertaken for implementing EMAS or ISO 14001 can substitute the legally required measures. This can be implemented, for instance, to monitoring and reporting measures (Freier 2005). These measures do not need to be exactly identical, but have to be comparable in terms of scope and quality (StMUL Bayern 2001, also Schneider 1999, Gallus 1998).
The first and very comprehensive attempt to introduce substitution was made in Bavaria. In 1995, the Bavarian government and a business association (Verband der Chemischen Industrie, VCI) jointly developed the so-called *substitution catalogue*, a comprehensive catalogue containing detailed proposals for changing existing environmental regulations.
In other Member States, regulatory flexibility is being experimented as the most effective way to integrate EMAS in the existing environmental legislation, involving both national and local authorities. The experience of Italy is quite interesting: a law approved in 2001 enable EMAS registered companies to self-certify the compliance to relevant requirements as concerns, for example, authorisation and permit procedures in the field of water discharge, air emissions and waste treatment. Following the enactment of this law, many local institutions (the "Provincie") developed pilot project to adapt and integrate the regulatory procedures, in order to fully implement these measures. This was the first opportunity for them to consider EMAS as a fully operational and effective policy tool, and perceive it as an integral part of the legislative body of the Member State (see Provincia di Lucca 2004).
As reported by the abovementioned EC Communication (2004), many other attempts are following in different Member States. Elaborating on the indications provided by this Communication, the main ways in which EMAS is today used by the MSs for regulatory flexibility are the following:

- as a substitute for certain legal requirements, such as periodical reporting, authorisation and permit procedures, etc. (DE, AT, IT, ES, SE, NL, UK, LU)
- as a factor in risk assessment, with effects on site inspections frequencies (UK, DE, NO, PT, NL), insurance (CZ), governmental fees (UK) and penalties (AT),
- as a condition enabling for a longer duration of environmental permits (LU, SL, DE, IT)

It is quite obvious that these measures also work as a powerful incentive for EMAS registration (see paragraph A3.4). It has not been possible, though, to identify and collect relevant evidence on their effects in practice, since most of the above mentioned measures are very recent and, in many cases, they are not fully available and effective yet.
Nevertheless, the in-field research provides an interesting insight in the organisations' and stakeholders' view on the integration of EMAS in policy implementing.
According to the interviews results:

- EMAS is perceived as a useful support for policy makers, regulators and other institutional and economic actors: 93% of the stakeholders holds that EMAS makes the implementation of environmental regulation more effective.

- 71% of the whole sample (including participants, non participants and stakeholders) believe that regulatory relief and flexibility is a fairly or very important incentive for EMAS diffusion
- Very interestingly, when asked "why do you think some registered organisations dropped registration and abandoned the scheme?", the stakeholders indicated the following two most important reasons: "no reward by environmental authorities" and "no regulatory relief" (both averagely scoring 4.0 on a maximum of 5)
- As in the case of economic incentives, permanent institutional measures are the "most wanted" support, with a particular reference, in this case, to regulatory flexibility and to the use of the environmental statement in the relevant administrative procedures.

The positions expressed by the participants in the EVER EMAS workshop were consistent with the abovementioned results (see Annex II of the EVER study) and focused on some proposal for a better integration of EMAS into policy making and implementing (see Report 1)

Finally, we should also underline that literature emphasises some problems linked to the operationalisation of regulatory flexibility.
Two main type of problems seems to arise (Freier 2005):

- The first is linked to "documentation". The documentation elaborated for EMAS in the company is practically not equivalent to the required documentation by the environmental administration in most of the Member States (Provincia di Lucca 2004, Moeller 2002, SRU 2002). The environmental statements do not contain all the necessary information that is needed to fulfil reporting and documentation duties due to their lack of specification.
- The second is linked to "monitoring and controlling". This problem is particularly evident in some Member States: the German Federal Ministry for Environmental Protection, for examples, holds that the monitoring by the environmental authorities cannot be replaced by EMAS because the scheme requires the compliance with laws in this case with the request to monitor the emissions. EMAS itself does not contain a provision for monitoring emissions (Moeller 2001). This example shows that the existing environmental legislation has to be changed in order to allow substitution.

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EVER:
Evaluation of EMAS and Ecolabel for their Revision

Annex I

INTERVIEWS: METHODOLOGY AND SUMMARY OF THE RESULTS

Consortium leader: IEFE – Università Bocconi

Partners: Adelphi Consult

IOEW, Office Heidelberg

SPRU, Sussex University

Valør & Tinge A/S

December 26th 2005

Foreward

The present Annex presents the methodological approach adopted by the EVER consultant for carrying out the interviews and summaries their main findings.
A detailed presentation of the results of the EVER interviews can be found in Annex IV.
This Annex has four sections: in the introductory section we briefly describe the approach that was adopted for the interview phase (including a description of the sample), the other sections report the main findings: part A is focused on EMAS, part B on the EU Ecolabel and part C on the possibilities to integrate the two schemes, among them and with other systems and legislation.

It should be noted that the present Annex only reports the results of the interview phase. Many other research activities have been carried out during the EVER study, both for the "in-field" research (see Annex II on workshops and Annex III on the case studies) and for the "desk" research (literature review, direct collection and elaboration of relevant information and data).
A complete overview of the research findings of the EVER study is proposed in Report 2. On those findings we based the Recommendations and Suggestions proposed in Report 1.

Introduction: methodology and sample

The interviews were based upon a standard version of a questionnaire, developed at the beginning of the project. The standard questionnaire has been adapted, in a modular way, to 8 different typologies of interviewees, according to their specificities. Some of the questions were reformulated, to investigate specific aspects relating to each typology of interviewee, and others were kept identical, in order to guarantee a certain comparability between different typologies. The eight typologies of interviewees were classified as follows:

- *"EMAS participants":* registered organisations (with the exception of public institutions)
- *"EMAS non-participants":* private or public organisations of different size that could be registered in EMAS but opted not to join the scheme, chosen among organisations that are sensitive towards the environmental issues (including ISO 14001 or other EMS certified companies)
- *"EMAS stakeholders":* any stakeholders interested in the scheme (including environmental and consumer NGOs, trade associations, verifiers, competent bodies, etc.)
- *"EMAS participants - public institutions" :* including a sub-group of participants with peculiar characteristics, especially as concerns the application of the scheme requirements and the role they can play in its implementation
- *"EMAS drop outs":* organisations that were registered in EMAS and abandoned the scheme
- *"Eco-label participants":* companies that have a licence for the use of the EU Ecolabel on one or more of their products or services
- *"Ecolabel non participants":* private or public organisations of different size that could apply for the EU Ecolabel but opted not to join the scheme, chosen among organisations that are sensitive towards the environmental issues (including companies having another Ecolabel, e.g.: a national label)
- *"Eco-label stakeholders":* any stakeholders interested in the scheme (including environmental and consumer NGOs, trade associations, governments, competent bodies, etc.)

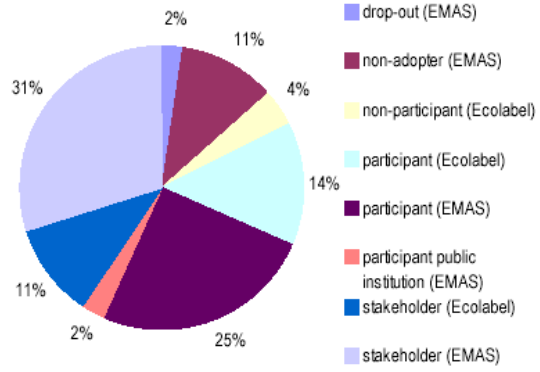
The questionnaires contained different "segments" on the various research issues mentioned in the call for tender and representing the structure of Report 2. The number of questions included in each questionnaire varies from a minimum of 48 to a maximum of 65.

The questionnaire have been the basis for the interviews. The number of interviews carried out is 280, of which 199 on EMAS and 81 on the EU Ecolabel.
Of these interviews, 124 were carried out "face to face" and 157 were carried out by phone. The interviews were carried out by members of the EVER research team.

The number of interviews per typology of interviewee was the following:

Distribution of Interviews by type:

Type of questionnaire	Number
stakeholder (EMAS)	84
participant (EMAS)	70
participant (Ecolabel)	39
stakeholder (Ecolabel)	31
non-adopter (EMAS)	31
non-participant (Ecolabel)	12
participant public institution (EMAS	7
drop-out (EMAS)	7



Whilst for the "stakeholders" and the "non participants" is not possible to establish a statistical significance of the sample (being the original population too wide), we can say that the samples relating to the "EMAS participants" and to the "Ecolabel participants" are able to provide robust elaborations. Considering that the original population of EMAS registered organisations amounted, at the beginning of the project, to 3072 units and that the Ecolabel population amounted to 295 units, we can say that:

- The EMAS sample (77 organisations) more than satisfies the criterion of the "square root" established by the applicable EA standards (55) and implies a minimal error (ε =11%)
- The Ecolabel sample (39 companies) is overwhelming with respect to the "square root" criterion (17), even if caution should be used due to the small original population, and implies a very small statistical error (ε =14%)

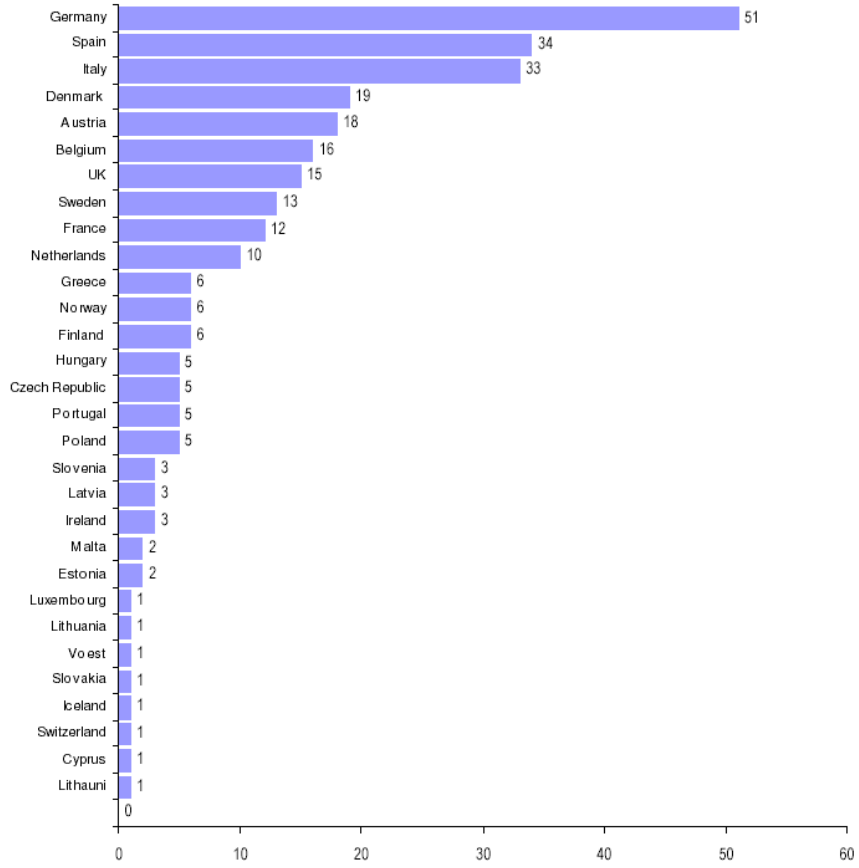
The reader can consult the statistical appendix to this document for further details.

The interviewees were selected according to the following criteria:

- representative regional distribution
- representative distribution of organisation sizes
- representative distribution according to the type of organisation

With respect to the regional distribution, the project team proposed a set-up which reflects the "numbers" of participants in the two schemes in the various countries. Some adjustments were made in order to take into account the weight of some countries (e.g.: Germany for EMAS) and to

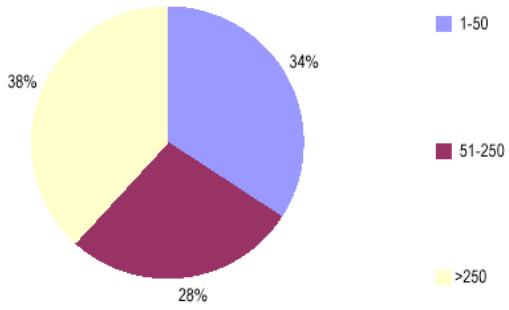
guarantee a proper representativeness also to newly accessed countries, where the two schemes are not very diffused yet.



As to size distribution, the graph below shows how the sample included a relevant number of small companies, which represent more than one third of the sample.

Size of the interviewed companies and institutions:

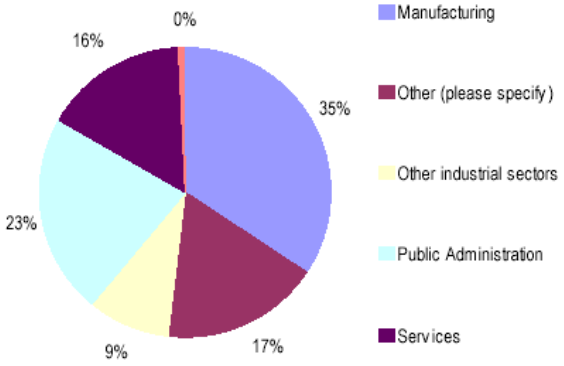
Size	Number
1-50	84
51-250	68
>250	94



Finally, for what concerns the brake down by sector, it should be noted that the significant presence of public administrations is mostly concentrated in the "stakeholder" typology: competent bodies, governments, etc.
"Others" include NGOs, trade associations and those organisations that operate in more than one of the other sectors (e.g.: manufacturing and retailing).

Sectors of the interviewed companies and institutions:

Sector	Number
Manufacturing	78
No answer	1
Other (please specify)	40
Other industrial sectors	21
Public Administration	52
Services	37



Summary of the interview results:

PART A: EMAS

A1. Contribution of EMAS to the improvement of environmental performance

- *EMAS is an important factor for environmental improvement:* 68% of EMAS registered organisations believe that the environmental management system is a (fairly or very) important factor for stimulating and achieving environmental improvement. Participation in EMAS as a whole, considering not only the management system but also the other requirements, is considered a (fairly or very) important factor by only 51% of the participants. Both the EMS and EMAS are overcome by other more effective factors, such as environmental regulation and technical progress.
- *EMAS tends to produce improvements in environmental performance:* for 94% of the participants, the environmental performance is (somewhat or much) improved in recent years. This indication relies on the fact that 78% regularly measures the environmental performance in all or most areas, 19% only in some areas. In addition to this, 59% of the EMAS participants believe that their environmental management system is contributing to a "considerable or great extent" to producing continuous improvements; 30% believes that it is contributing "to some extent".
- *EMAS participants perceive their performance as better than the others'*: 67% of the respondent assesses its environmental performance as (somewhat or much) better than the performance of competitors or similar organisations, operating in the same sector. It is interesting to note that a relatively high percentage of respondents (24%) "does not know", because of the lack of comparability (but would be interested in benchmarking with competitors and/or other EMAS registered organisations).
- *EMAS provides considerable benefits in the area of legal compliance:* quite interestingly, the three most important benefits perceived by the interviewed EMAS-registered organisations are connected with the monitoring and management of legal compliance. Greater awareness of regulatory requirements was identified as a fairly or important benefit by 70% of the EMAS participant, better compliance by 69% and better planning of actions for legal and regulatory compliance by 67%. These benefits are perceived as far more important than economic (e.g.: resource) savings and competitive advantages on the market, and slightly more important than organisational and managerial benefits.

A2. FURTHER – INDIRECT - EFFECTS LINKED TO THE EXISTENCE OF EMAS

- *Promotion projects are perceived as moderately effective in terms of EMAS registrations, but they seem to have considerable indirect effects:* external and "impartial" observers (the EMAS stakeholders) estimate that only 50% of the companies participating in promotion projects achieves EMAS registration (this percentage varies according to the Member State), but 90% of the stakeholders is convinced that the other 50% of the companies benefited from participating in a promotion project and, thanks to this, improved their environmental management.
- *EMAS is not widely seen as a benchmark, this indirect effect can be improved:* only 62% of the whole sample (including participants, non participants and stakeholders) thinks that EMAS is regarded and used as "best practice" for environmental management among

industrial sectors or other types of organisations. Most interviewees believe that this can be enhanced by making EMAS a real "standard of excellence", e.g.: by strengthening the requirements regarding the use of performance indicators, by making it a more "performance-driven" scheme or by enabling benchmarking on performance between participant and non-participant organisations.

- *EMAS is positively affecting environmental management within the supply chains:* 77% of the EMAS participants supports its suppliers in the adoption of measures and initiatives for environmental improvement and 72% declare that the environmental management system influences the product performance in other phases of its life-cycle and/or in the supply chain. It has to be noted, though, that the "entity" of these effects has not been measured in our survey, but according to many interviewees it appears to be rather small.
- *EMAS is perceived as a useful support for policy makers, regulators and other institutional and economic actors:* 93% of the stakeholders holds that EMAS makes the implementation of environmental regulation more effective. 75% of the whole sample, for example, believes that EMAS can be effectively used as a support for green public procurement initiatives and 71% that it can be used to ease the regulatory burden on both the institutional and the economic system.

A3. DRIVERS AND BARRIERS FOR EMAS DEVELOPMENT

A3.1 Motivations

- *In the past, organisations have mainly achieved EMAS registration for reasons that were not related to competitive advantages:* the three most important reasons that motivated current participants to register, in fact, were the willingness to better manage and guarantee legal compliance, the aim of improving environmental performance and the desire to better manage risk and prevent environmental liability. The improvement of competitive capabilities has not been as important as suggested by literature (it ranks only 6th).
- *Today, competitive advantages and stakeholder-relations are instead the main drivers for potential new applicants:* rather interestingly, the two main reasons to eventually register in EMAS for non-participants would be the aim of obtaining a competitive advantage on the market and the willingness to improve the relations with the stakeholders and the local communities. The third most important reasons for non-participants to achieve EMAS registration would be to keep up with the main competitors (another competitive reason) and to benefit from eventual regulatory relief.

A3.2 Barriers

- *The barriers to achieve EMAS registration are those "traditionally" identified by literature* - The most significant difficulties met by EMAS participants in obtaining the first registration were: the cost of implementation (including the consultant), the lack of human resources and competence and the difficulties in involving and motivating the internal personnel. We have to say, though, that these barriers did not affect the implementation process very much: in fact, none of these barriers was averagely assessed as "important" or "very important" by the respondents, but just as "somewhat important".
- *The barriers in maintaining EMAS are instead linked to a lack of external feedbacks or incentives* - The three highest barriers perceived by the participants relate to: a lack of recognition by public institutions (including regulatory relief), a lack of competitive rewards and advantages from the customers and a lack of external incentives (including support

funding). These barriers are averagely assessed as "important" and can be identified as the main reasons why some organisations left the scheme.

- *Similarly, the perceived lack of feedbacks and incentives is today discouraging potential new applicants:* the same three barriers (but in a different order of importance: lack of market payback, external incentives and institutional recognition) are today preventing non-participants from applying for registration. These barriers are judged as averagely "important". Other two kinds of barriers that non-participants judge "important" are: the lack of recognition by the stakeholders and the lack of recognition at the international level. Very interestingly, neither the costs of implementation and registration, nor the lack of human or financial resources are perceived as disincentives.

A3.3 Benefits

- *EMAS improves the capability to face up to legal and regulatory requirements:* as anticipated, the three most significant benefits perceived by (close to 70% of) the participants are connected to a better monitoring, management and guarantee of the legal compliance.
- *Also organisational benefits are strongly associated with EMAS implementation*: a second typology of benefits, in order of importance, are those relating to organisational aspects. Approximately 61% of the participants experienced an increase in the motivation and involvement of personnel, while 63% achieved a better definition of responsibilities.
- *EMAS is able to bear cost savings, but to a lesser extent if compared with previous benefits:* a third typology of benefits perceived by the participants is connected with economic savings connected with a more eco-efficient operational management (e.g.: 56% experienced a fairly or very significant cost saving through a decrease in resource use, reuse or recycling).

A3.4 Incentives

- *Permanent institutional measures are the "most wanted" incentives:* the two "most wanted" support measures, or external incentives, by all the interviewees are: fiscal incentives (e.g.: income-tax abatement) and regulatory flexibility (with a special mention to the use of the environmental statement in the relevant procedures).
- *The respondents (all groups) also agree on the importance of "indirect" incentives, aimed at increasing the demand for EMAS:* the third and the fifth most important incentives are, respectively: the setting up of information and promotion campaigns for EMAS by public institutions and the inclusion of EMAS in Green Public Procurement.
- *Upgrading EMAS to an internationally recognised scheme would be a powerful incentive:* all the interviewees mention this opportunity as important; for the "non-participants" this is the third most effective incentive (74% believes it would be fairly or very important).
- *Direct funding and technical support are less requested*: only 24% of the organisations that today are not participating in EMAS, for example, think that technical training and information support (including guidelines and manuals) would be a fairly or very useful incentive
- *The desired incentives for SMEs are controversial:* simplifying the access to the scheme for SMEs is seen as a possible measure, whereas there is fewer consensus on the so-called "staged approach" (e.g.: 53% of the EMAS stakeholders believes it would be useful and effective, 47% think it would not be).

A4. EMAS CONTRIBUTION TO COMPETITIVENESS

- *The most important competitive advantage is an "improved image":* 84% of the EMAS participants perceived this immaterial and non-quantifiable advantage as fairly or very important.
- *Competitiveness is positively affected by EMAS under some other points of view, none directly related with the customer or consumer response:* improved innovation capabilities, cost optimisation and recognition as leader by competitors and trade associations (not by the market) are other important competitive advantages for the participants.
- *Market payback is significantly less perceived:* competitive advantages directly linked to any sort of "market reward" are perceived only by a minority of the sample: 45% acquired new customers or market shares thanks to EMAS registration and 39% obtained a higher customer satisfaction.
- *If EMAS is an effective tool for competition or not, remains a controversial matter:* 54% of all the respondents considers EMAS as useful and effective for competitiveness. This datum hides a considerable difference between participants (62%) and non-participants (only 32%). This seems to be one the most significant problem for EMAS uptake: few organisations outside the scheme believe it can produce competitive advantage on the market.
- *All in all, EMAS seems to pay back its cost and it is worth maintaining:* taking into consideration all the above mentioned benefits and competitive advantages, 60% of the EMAS participants believes that registration has paid back its entire cost and 95% will continue to be registered in the scheme.

A5. EMAS RELATIONSHIP WITH SUSTAINABLE DEVELOPMENT

- *Sustainability-targeted initiatives are rather diffused among organisations:* 65% of the respondents (summing up all groups) carried out in the past initiatives for employee involvement in social issues, 47% performed stakeholder engagement on social issues, 67% developed (or is developing) an occupational health and safety management system (OHSAS 18001 or others) and 43% drafted (or is drafting) a sustainability report. No significant difference in these percentages between EMAS participants e non participants is reported.
- *Promoting and favouring integration between EMAS and health and safety is an interesting option:* 62% of all the interviewees is in favour of integrating health and safety into EMAS (68% among participants).
- *An upgrading of EMAS to a wider scheme on CSR and/or sustainable development is controversial:* 50% agrees on this opportunity, 50% does not (48% agrees and 52% doesn't among participants). Largely preferred is the possibility of including CSR-related issues in EMAS, as an add-on of the current scheme (with a "modular" approach).

PART B: ECOLABEL

B1 & B2. Contribution of the EU Ecolabel to changing the consumption and production patterns: direct and indirect effects

In order to assess the contribution of the EU Ecolabel to changing the consumption and production patterns, an evaluation of the effects in terms of performance has been carried out, focusing on both direct and indirect effects.

B1 Direct effects

- *The EU Ecolabel is used to improve environmental performance:* for 59% of the participants in the scheme, the aim of improving the environment was fairly or very important in the decision to use the label and 73% thinks that the EU Ecolabel has contributed to setting targets for the improvement of product environmental performance, at least in some areas of the life-cycle.
- *At the micro- level: the EU Ecolabel is frequently able to produce an improvement in the environmental performance:* approximately half of the respondents experienced an improvement of the environmental performance of the product life-cycle thanks to the adoption of the EU Ecolabel (50% in air emissions, 47% in water emissions, 47% in water and resource use, 45% in waste and recycling). It has to be noted, though, that many interviewees did not measure the environmental performance or did not have direct information.
- *At the meso-level, the EU Ecolabel can induce an improvement in the performance of other companies in the supply chain:* 74% of the participants in the scheme agrees (or strongly agrees) on the fact that the adoption of the EU Ecolabel influenced the demand on their suppliers concerning the environmental performance
- *At the macro-level, there is no clear opinion on what should be the level of performance requested to the companies that adopt the EU Ecolabel:* 38% of the stakeholders agrees (or strongly agrees) that the label should be awarded only to front-runners, while 50% agrees (or strongly agrees) that it could be awarded also to slightly environmentally "better" products (i.e. the label can be used mostly as a marketing tool, focusing on a high market penetration).

B2 Indirect effects

- *Policy-related indirect effects are known to and appreciated by the stakeholders:* 54% states that the Ecolabel supported national processes for defining Ecolabelling requirements (only 26% believes that the Ecolabel supported the process of developing sector oriented Ecolabelling approaches). 74% of the EU Ecolabel stakeholders believes that the EU Ecolabel should be more closely linked with other measure or activities of the national policy areas and 84% thinks that the Ecolabel should be used as a basis for compliance with requirements of the new approach and other directives (like EuP)
- *There is a strong market-related indirect effect on competitors:* 80% of the companies that do not participate in the EU scheme declare they use the Ecolabel criteria as informal benchmarks to measure the environmental performance of their products
- *The other market-related indirect effects should be empowered:* close to 90% of the stakeholders believes that the EU Ecolabel should be used as a guideline for private

consumers, public purchasers and professional purchaser and 81% that its criteria should be used for product tests by third parties.

B3. Ecolabel and national labels

- *The national labels are not necessarily preferred by producers:* although a large majority of all the respondents is aware of the existence of national labels, they do not prefer them over the EU Ecolabel (the most interesting case being that of the non-participants in the EU scheme: 83% knows at least one national label, but 75% *does not prefer it* rather than the Ecolabel).
- *The national labels are not necessarily perceived as more successful than the EU Ecolabel:* actually, even if the larger diffusion in terms of number of licences and products is undisputable, the fact that national labels are perceived as more successful than the EU Ecolabel is controversial: only 47% of all the interviewees agrees (or strongly agrees) with this point of view.
- *The presence of national labels is not considered totally positive or negative:* 44% of the whole sample states that there are advantages in having both the EU Ecolabel and the national labels, while 45% thinks that there is no advantage. Even more controversial is the issue of direct competition between national labels and the EU Ecolabel: 39% of the sample believes they compete with each other, 43% does not.
- *In any case, harmonisation is the solution:* in order to avoid competition, a stronger harmonisation is asked as the largely preferred option. Very low consensus is instead obtained by the options of abolishing either the EU Ecolabel or the national labels.

B4. Drivers and Barriers

B.4.1 Drivers to implement the EU Ecolabel

- *Competition and marketing potential are the most powerful drives:* the five most relevant reasons for adopting the EU Ecolabel (on a list of 18) are all strictly connected with the willingness to improve the competitive capabilities on the market (e.g.: to respond to an increased demand or interest by the consumer/customer, to take the leadership in the market, to increase customer satisfaction, etc.).
- *The public sector is a key target for many companies, and therefore public purchase can be an effective driver:* a potential better access to the public procurement procedures is indicated as a fairly or very important motivation to obtain the EU Ecolabel by 53% of the participants (the sixth most relevant driver).
- *Environmental performance is a far less important motivation to adopt the label*: improving the impact of products on the environment is mentioned as the seventh most important driver, well behind the “competition-oriented” ones.

B.4.2 Experienced benefits from the EU Ecolabel

- *Even if it is not a strong driver, the improvement of environmental performance turns out to be a relevant benefit:* it is worth noting that the improvement of the environmental performance (i.e.: not a competition- or market- related variable) is one of the two most relevant benefits perceived by the participant in the EU scheme

- *Corporate image and other immaterial benefits play a key role:* the other most perceived benefit of the EU Ecolabel is the "recognition as leader" by the competitors and by the trade associations (not quantifiable in monetary terms and not directly connected to a reward given by the consumer/customer). Other "immaterial benefits" results as important from the interviews, generally relating to the supply-chain management: an improvement in the selection of the raw materials and a better knowledge of the product environmental impacts in its life-cycle.
- *Market-related results are less perceived:* only the fourth most relevant benefit refers directly to the market reward: an increase in the market share (or in the number customers/consumers).

B.4.3 Barriers in implementing the EU Ecolabel

- *Procedural and organisational barriers were difficult to overcome for those who applied and obtained the EU Ecolabel:* the three most significant barriers in implementing the EU Ecolabel identified by the participants in the scheme are the degree of formality and the documentation required, the difficulties in getting the relevant documentation from the suppliers and the costs of implementation
- *Cost is the highest barrier for potential applicants:* if we focus on the opinion of the non-participants (i.e.: the producers that did not choose or were not able to apply for the EU Ecolabel), the most relevant barrier in implementing the EU Ecolabel is the cost of license and of implementation (including the consultants)
- *Technical aspects are less perceived as barriers*: the lack of internal human resources and competence to implement the necessary requirements and the lack of external technical support and information are not mentioned by a significant number of interviewees (they are even less perceived among the non-participants). This is considerably different from the results of previous studies, that identified the "technicalities" of the scheme as a barrier, especially for SMEs.

B.4.4 Barriers in using the label for product marketing

- *The low awareness largely prevails as the most significant barrier:* the lack of recognition and knowledge by different actors is perceived as a very significant barrier both by participants and non-participants, in the following order of importance: lack of recognition 1. by the consumers and the public at large, 2. by the public institutions (also through green public procurement), 3. by the intermediate customers and 4. by the retailers. On these barriers we reckoned the highest level of consensus of the whole in-field research.
- *It is not just a problem of knowing the EU Ecolabel, but also of choosing it on the market:* the lack of competitive rewards by all the above mentioned actors is perceived as a considerable barrier. Interviewees confirmed that, even if customers are aware of the EU Ecolabel, they are not eager to buy labelled product, providing a real reward to companies that applied. A frequently reported example refers to green public purchasers.
- *This barrier is particularly high for new potential applicants:* it is worth noting that the lack of recognition and reward by the final consumers is a relevant barrier for nearly all (88%) the companies not participating in the scheme (these lacks were indicated also as reasons to eventually abandon the scheme).

B.4.5 Incentives

- *Promotion and marketing.* The four most important support measures and incentives for the EU Ecolabel refer to the need of diffusing the knowledge about the scheme and its logo and increasing the demand for Ecolabelled products. Very high percentage of all the interviewees (close to 90% for all the following options) believe that information and promotion campaigns and other actions aimed at increasing the knowledge and the demand of the EU Ecolabel are the most effective measures to support the scheme and endorsing its success as a marketing opportunity (and, therefore, as a policy tool).
- *External incentives.* A second group of desired measures is related to two kinds of external incentives that can favour Ecolabelled products over the competitors. The first concerns fiscal incentives, such as tax abatement, that can enable producers to lower the prices of Ecolabelled products (76% of all the interviewees considers it fairly or very important, regardless of the recent negative outcome of the debate on VAT reduction). The second kind of incentive is the inclusion of the EU Ecolabel as a facilitating condition for public procurement (67% of the whole sample).
- *"Internal" improvements.* Other desired measures directly relate to some modifications that can be introduced in the Regulation or in its institutional and applicative framework (e.g.: streamlining the application and verification procedure, defining more product groups, etc.)
- *Refused options.* Making the EU Ecolabel an entirely private-managed scheme obtained the lowest degree of consensus of all the proposed measures, but also the idea of making it entirely public-managed has been refused. The interviewees opposed the idea of making the EU Ecolabel a pure front-runner scheme, but also the opposite solution (opening the scheme to 60% of the products in the market) has not been appreciated. The proposal of centralising more the management of the scheme, with a higher level of intervention of the European Commission has been refused, while the idea of decentralising more with respect to the current sharing of tasks obtained some consensus (37% agreed or strongly agreed). Lowering the number and/or the level of the criteria to "ease-up" the application of the scheme were not appreciated as possible options. Finally, it has to be emphasised that the proposal of having a graded label, strongly debated in recent years, seems to be definitely refused by the interviewees (only 18% believes that this could have fairly or very important effects, while 41% thinks that the proposal is not important at all).

B5. Contribution of the EU Ecolabel to competitiveness

- *The EU Ecolabel is actively used to increase sales:* 95% of the companies participating in the EU scheme uses the Ecolabel in their marketing campaigns (TV and press advertising, promotion initiatives on the point-of-sale, etc.). It is rather surprising that 5% of the respondents has adopted the EU Ecolabel but believes that the market context is not sensible and "mature" enough to use it in an effective way.
- *The EU Ecolabel is often able to produce positive effects on the market:* 53% of the interviewed companies experienced an increase in the market share or in the number of new customers thanks to the adoption of the EU Ecolabel
- *The market reward in terms of turnover is not easily measurable:* only 29% experienced a quantifiable increase in the turnover after the adoption of the Ecolabel; the average increase in turnover, based on very few (3) observations, is 11.7%.
- *The reason for the limited reward is well known:* as emphasised above, according to the interviewees the low competitive reward is explained by the lack of recognition and knowledge of the label by different actors on the market: consumers, public purchasers, intermediate customers and retailers

B6. Ecolabel relationship with other dimensions of Sustainable Development

- *Consumer health and safety is already dealt with by many companies, ethical issues are not:* different actions concerning other pillars of sustainability have been carried out by the companies that are using the EU Ecolabel, of which the most diffused are: product innovation on consumer health and safety (78%), adoption of a certified label concerning consumer health (32%), adoption of a EC safety mark within the application of a "new approach" directive (19%) and adoption of a "fair trade" label (16%)
- *There is only a moderate consensus on a possible EU sustainability label:* 55% of all the interviewees is in favour of integrating the EU Ecolabel into a more general label on sustainability. Participants and stakeholders are a lot more favourable than non-participants (only 20% of positive answers in this category of interviewees)
- *In any case, a "soft" solution should be adopted:* according to 66% of the interviewees, if the EU Ecolabel is eventually modified in order to address sustainability issues, this should be done just by including additional information on these issues for the consumers (neither by including mandatory criteria, nor by creating a separate –eventually modular – scheme with a similar logo)

PART C: INTEGRATION

- *To some extent, the product dimension is already part of EMAS*: 72% of the EMAS participants declare that the environmental management systems influences the product performance in other phases of the life-cycle and/or in the supply chain. Only 6% states that this influence is "great" (for the others it is "considerable"). The environmental improvement produced by EMAS on product-related indirect aspects (such as the transport phase), though, is still low if compared with the one on direct aspects. The overall impression derived from the interviews is that the potential for integrating the "product dimension" in EMAS is interesting for companies, but far from being fully expressed.
- *There is a certain awareness of the potential benefits emerging from a stronger link and synergy between EMAS and the EU Ecolabel:* 46% of the respondents on both sides (i.e.: companies participating in one of the two schemes) sees potential synergies between EMAS and the EU Ecolabel. The synergies that could be implemented with the new revision of the schemes are found at the operational, marketing and institutional level, at the same (high) level of interest.
- *"Synergy" does not necessarily mean merging the two schemes:* slightly more than half of the participants to one of the two schemes (52%) believes that EMAS should become a mandatory requirement to obtain the EU Ecolabel; only 14% thinks that the EU Ecolabel should be fully integrated with EMAS, so to become a mandatory requirement to obtain registration; while a higher number of respondents on both sides (46%) thinks that the Ecolabel could become an additional requirement in a more product-oriented EMAS. As a general note, we have to underline that for all the above mentioned answers there is a lack of knowledge, implying a high number of "non respondents" or "don't know".
- *ISO type III labels can be a synergetic tool for both schemes:* the majority of respondents (among the participants to one of the two schemes) considers the EPD (or other environmental profile) systems as complementary to EMAS and to the EU Ecolabel. As for the previous evidence, it should be noted that a high number of participants on both sides were not able to answer, due to a lack of knowledge on type III labelling.
- *Many opportunities were identified (and appreciated) for pursuing integration with ISO type III labels:* when it came to operational, marketing and institutional synergies, the respondents showed a general positive attitude towards many of the proposed opportunities to rely on the complementarities and to exploit the synergies (e.g.: common data collection, possibility to support both EMAS and the EU Ecolabel with data on the product life cycle, possibility of connecting the development of an EPD or environmental profile to the opportunity of using the EMAS logo on products and/or of communicating product performance in the EMAS statement, etc.).
- *A major issue is integrating and linking the two schemes with existing legislation and environmental policies (to a wider extent)*: a considerable consensus has been registered during the in-field research on the strong need for integrating and embedding EMAS and the EU Ecolabel in other policies and tools. This outcome fully confirms the results of the literature review: a general request is being made by stakeholders and organisations taking part in the two schemes for a truly effective and consistent embedment of EMAS and the EU Ecolabel in existing and forthcoming legislation. Some of the most frequently suggested policy areas for promoting synergy were, for EMAS: the IPPC directive, the Emission trading directive, the Seveso Bis Directive; for the EU Ecolabel: EuP, RoHS and, to a minor extent, REACH.

Statistical appendix:

In order to determinate the statistic relevance of the two samples, EMAS participants and Ecolabel participants, we proceeded through the calculation of the confidence interval of the samples extracted by the population. We assumed, for the population, to distribution of binomial probability. In such case, the sample to be interviewed is given by fixing a value for the standard error, whose expression is the following:

$$\varepsilon = z_{\alpha/2}\sqrt{\frac{p(1-p)}{N}}$$

Where:

- N is the greatness of the sample;
- $z_{\alpha/2}$ is the value of the standardized variable z that defines to its right an area under the curve equal to $\alpha/2$ of the total area;
- p is the value of probability
  ε is the standard error.

In our case, at the moment of the composition of the sample[1], the population of EMAS participants was 3072, and the chosen sample was composed by 77 subjects; that of ECOLABEL participants was 295; and the chosen sample was composed by 39 subjects.
As the variance is not known, we considered the most disadvantaged case, (that is that which maximizes the function (p), and that therefore corresponds to p=0,5) we settled a level of confidence equal to 95% (for which α= 5%) that corresponds to $z_{\alpha/2}$ = 1,96.

The sample M selected for the EMAS participants conducted therefore to an error ε =11%, while that chosen for ECOLABEL participants conducted to ε = 14,6%,
The confidence interval will be therefore the double of the error (%) and the extremes are individuated through the following:

$$\left(p \pm z_{\alpha/2}\sqrt{\frac{p(1-p)}{N}} \right)$$

In conclusion, in the case of the sample chosen for EMAS participants we had as extremes of the confidence interval: CI=[0,39;0,61]; in the case of the sample chosen for Ecolabel participants we had: CI=[0,35;0,65].

[1] as we are in the case of ended population n, a corrective coefficient is adopted, for which the interviewed sample M is given through the following:

$$M = \frac{N}{1 + \frac{N-1}{n}}$$

EVER:
Evaluation of EMAS and Ecolabel for their Revision

Annex II

WORKSHOPS FOR THE REVISION OF THE TWO SCHEMES

Consortium leader: IEFE – Università Bocconi

Partners: Adelphi Consult
IOEW, Office Heidelberg
SPRU, Sussex University
Valør & Tinge A/S

December 26th 2005

INTRODUCTION

The workshops aimed at:

- Presenting the findings emerging from both the literature review and the in-field research of the EVER study
- Involving relevant stakeholders in a consultation process aimed at obtaining feedbacks on the above-mentioned findings, as to activate a discussion over possible evolution of the schemes
- Identifying main problems and barriers for the development of the two schemes
- Discussing the positioning of the schemes themselves, in the range of EC sustainable development environmental policies
- Gathering suggestions and indications for the revision process

The participants in the workshops have been selected keeping into account factors such as their expertise or interest and involvement in the application of each scheme, both as subjects/bodies directly involved (competent bodies and verifiers) and institutions, and as actors of the system (firms, consultants etc).
A specific focus has been put on companies, to gather "first hand" indications by those actors and practitioners that are more directly involved in the application of EMAS and the EU Ecolabel.

The workshops started with a general presentation of the study, followed by the setting up of parallel sessions, each angled towards a specific issue. At the beginning of such sessions, whose results and findings will be hereby presented and outlined, the consultants provided some "interpretation keys", showing further data specifically linked to the issue being discussed.
Some preliminary indications were given, such as the questions spurring the dialogue, the time available for the discussion and information on how to send, in second place (e.g: via e-mail), further comments on the discussion itself.

This report contains a synthesis of the discussions taking place during the parallel sessions. The contents and ideas expressed within such sessions represent the position of the persons, not the institutions they represent. That is the reason why we do not mention the names of participants in the following synthesis, but only, if the case, the typology of institution representing (company, Public sector, etc). The complete list of participants is appended at the present report.

The information, positions, and suggestions gathered during the workshops represent, along with the literature review and the interviews, empirical evidence for the study.

Both the workshops were organised and carried out thanks to the great support of the European Commission - DG Environment and of the EMAS Helpdesk. We wish to sincerely thank all the persons involved.

EMAS WORKSHOP - *Brussels September 27, 2005*

(registered participants: 48)

a) External incentives and structural/institutional changes for EMAS development (12 participants)

Moderator and rapporteur: Walter Kahlenborn (Adelphi Consult)

Question 1: A large number of structural/ institutional improvements have been brought forward with respect to an optimisation / simplification of the EMAS regulation, e.g..:

- a return to the three year period for validations at least for SMEs.
- a reduction of the necessary information to be provided in the environmental statement.
- a reduction of the range of indirect aspects

Which structural/institutional improvements do you think are the most relevant and why?

Question 2: Some interviewees argue, that the external benefits connected with an EMAS participation in general are too little. Do you think there is much leeway for further external incentives and what does that require from the EMAS system and the EMAS regulation?

Question 3: Some interviewees declared they experienced difficulties connected with the institutional setup and functioning of the scheme. Do you believe that the institutional setup behind EMAS should be modified by changing the share of tasks between the European Commission and the member states? Do you think that the scheme should be more centralised or more decentralised?

Initially, Walter Kahlenborn presented briefly some of the findings of the study regarding the topic of the workshop. After the presentation the workshop participants discussed three questions:

1. A large number of structural/institutional improvements has been brought forward with respect to an optimisation of the EMAS regulation, e.g..:
   - a return to the three year period for validations at least for SMEs.
   - a reduction of the necessary information to be provided in the environmental statement.
   - a reduction of the range of indirect aspects

   Which structural/institutional improvements do you think are the most relevant and why?

2. Some interviewees argue, that the external benefits connected with an EMAS participation in general are too little. Do you think there is much leeway for further external incentives and what does that require from the EMAS system and the EMAS regulation?

3. Some interviewees declared they experienced difficulties connected with the institutional setup and functioning of the scheme. Do you believe that the institutional setup behind EMAS should be modified by changing the share of tasks between the European

> Commission and the member states? Do you think that the scheme should be more centralised or more decentralised? Do you believe that EMAS should be managed by a third independent party other than the European Commission (eventually a private organisation)?

The workshop participants mostly agreed that there is both a wide potential for improvement of the benefits for EMAS participants and a need for such improvements. However, a number of workshop participants also pointed out that there is a need to solve some strategic questions first: If EMAS is seen and kept as a public system which imposes some burdens on the participants than they should receive public benefits in exchange. If there is no willingness to provide such benefits, it would be better to switch the system to a private one which would allow for radical simplifications.

A second strategic issue is the positioning of EMAS as "FIAT or BMW": Should EMAS remain a scheme which targets all possible participants and should it rather be simplified or should it target preferably those which have more resources for implementing an environmental management system and potentially even rise the requirements? Most workshop participants agreed that EMAS should keep the current level and should not lower its requirements.

A general feeling was that EMAS currently does not differentiate itself enough from ISO 14001. This in turn leads to the fact that many promotional activities for EMAS cannot be restricted to EMAS, but often include ISO 14001 (and sometimes other environmental management approaches as well). A number of workshop participants suggested that the differences between EMAS and ISO 14001 should become stronger.

With respect to potential external benefits for EMAS participants discussed intensively the linkage of EMAS with other policy instruments. Experts complained that the Commission started rather late with attempts to link EMAS with other EU policy instruments. Also, the outcome of such attempts has been disappointing. It was argued that the regulation should provide for an obligation to promote EMAS within other EU policies. However, the workshop participants recognized also the problems of policy integration. Any attempt to integrate EMAS into other regulations causes other advocacy groups to ask for an equivalent treatment of ISO 14001 participants. Also, public authorities usually feel unhappy to grant benefits to EMAS participants and to lower regulative requirements for them. Instead, they put more trust in their own regulations.
To avoid fruitless discussions to integrate EMAS in other regulations one participant suggested including specific regulatory alleviations for EMAS participants directly into the EMAS regulation itself.

An area of particular relevance is public funding. The Commission failed to include EMAS as a requirement for receiving structural funds. Also, within the LIFE program EMAS is no requirement. Currently, the importance of EMAS within LIFE even decreases. The workshop participants suggested instead stronger links between EMAS and public funding mechanisms.

Views on promoting EMAS were somewhat divided. On the one hand, experts argued that without increased public awareness a success of the scheme was impossible and that calls for more external benefits for EMAS participants would be heard only if the system itself was better known. Also, some experts stated that EMAS should develop more into a brand, which required a marketing strategy. Others however cautioned. The question was raised if EMAS ever could become as well known as ISO 14001. Also, it was pointed out that promotion campaigns had been running in the past with only limited success. Instead of promoting EMAS to the broad public, promotion of the scheme should focus on B2B-relationships.

The workshop participants agreed that public procurement is potentially an important leverage for promoting EMAS. However, since EMAS is restricted to Europe and not worldwide applicable, tender provisions referring to the scheme violate WTO regulations. Still, some leeway to include EMAS in tender specifications exists and should be made better known.

The workshop participants also agreed that as a symbolic step it would be important that the Commission "takes its own medicine". So far very few EU bodies have registered under EMAS. Instead the whole Commission, i.e. all directorates, should register under the scheme.

While there is a large potential for improving the external benefits for EMAS, most of that refers to changes in the framework of the EMAS and not to changes of the regulation itself. Several participants pointed out that only few changes of the regulation itself were needed.

Among the changes which were asked for was an improvement of the conditions for the usage of the EMAS logo. The guidelines for the use of the logo should be simplified and reduced to one page.

Less agreement was on changes for the validation period. Some experts argued that a return to the former three-year period was preferable. Others opted against such a move. Providing transparency, it was said, its one major any advantage of EMAS and any deterioration with respect to that would be detrimental to the scheme. Also, it was pointed out that ISO 14001 foresees an annual certification and that it did not cause major problems to ISO 14001 participants either.

Apart form the issues discussed more in depth, a number of further potential initiatives was raised by the workshop participants as well:

- starting with small steps which are easy to implement, e.g. introducing EMAS in the speeches of EU Commissioners
- giving more visibility to positive side effects of EMAS, e.g. how EMAS participants can easier comply with financial reporting obligations, how they can better involve employees, how they can obtain more easily licensees etc.
- developing a guidance document on how to move forward from an EMAS company towards a socially responsible company
- integrating H&S and other managements systems into EMAS so that SMEs have to implement and certify only one system instead of several
- creating an overarching policy which integrates EMAS, EPD, the EU Label etc. Companies, it was argued, would appreciate if they were provided with one coherent information system by the Commission

b) EMAS as a reporting and communication tool (15 participants)

Moderator and rapporteur: Juan Mateos Garcia (SPRU)

Question 1- Many interviewed companies have identified improvements of the public image as one of the most relevant benefits of EMAS registration, although they argue that these benefits could be higher if the EMAS was more effective under the communication point of view.
Is the EMAS Environmental Statement as it is conceived today the most effective tool for communication with stakeholders and the public, and for the diffusion of environmental innovations?
Can it be improved and can other solutions be proposed in the prospect of the revision?

Question 2- Many interviewees complained about the heterogeneity and diverse quality of the EMAS environmental statements, arguing that this limits benchmarking possibilities and reduces transparency and competition.
Is it necessary or useful to implement some sort of reporting standards for the EMAS Environmental Statement in the new revision?
How should this be eventually done?

Question 3- The results of the interviews also show that reporting is considered a key-aspect in EMAS. Can EMAS be turned into a scheme mostly aimed at the verification and certification of the reporting by organisations (e.g.: making the requirements on the Management System non-mandatory)? What benefits and risks would such a possibility generate?

As regards the first question, participants showed surprise at the suggestion of the possible use of the EMAS statement as a tool for the diffusion of innovation: companies are not keen on revealing innovations as their Eastern Asia competitors are very fast in imitating them. On the other hand one of the participants pointed out that it would be extremely interesting if the EMAS statement could be used in such a way.
Another participant stated that in his sector, the EMAS Statement is seen as the defining element of EMAS, and that companies choose between EMAS and ISO 14001 depending on their need for communication, that is, those that need to communicate use EMAS because of the presence of the statement.
There was a controversy regarding the need to simplify the Statement in order to increase its effectiveness: some participants (verifiers, accreditation bodies and NGOs) argued that the requirements of the statement regarding data content are too weak and that in some occasions 'it would seem as if it had been written by the marketing department'. From their point of view the EMAS statement is a formal document with information and 'hard data' about a company's environmental aspects, management system and performance. On the other hand, industry members argued that they have found accreditation bodies in charge of the assessment of their statement too strict, demanding excessive page lengths and too much data and thus limiting the possible effectiveness of the Statement as a communication tool with the public. These actors seem to consider the statement as an element of a company's public image management in addition to the environmental communication functions.
So it seems that different actors have diverse, in some occasions conflicting understandings of the functions of the EMAS statement. It also appears that there is variation in the stringency and expectations of different national accreditation bodies regarding its contents (these manifests in the different demands placed in companies depending on the state in which they are registering).

There was an agreement on the limitations of the statement as a communication tool in its current form: there was frustration about the fact that it is mostly students who request it, and a perception of it being too complicated and confusing for the lay public. One participant argued that in some cases companies are opting for a combination of ISO 14001 and a CSR report instead of EMAS.

As far as the second question is concerned, some participants seemed sceptic about the possible use of the EMAS statement as a tool for benchmarking. It was argued that the circumstances of companies in, for example, different geographical areas, are too diverse for this kind of comparisons to be meaningful. On the other hand, some participants replied that there must be some sort of absolute criteria that can be used to assess environmental performance ('even if a company operates in a remote area where no-one can hear it, it still should conform to noise regulations', argued one of them).
Another reason for scepticism seemed to be that a focus on benchmarking will not address one of the main problems of the statement mentioned above, that is, its lack of readability and appeal to the mass public.
There was an agreement regarding the impossibility of fixing strict reporting standards, although the group seemed in favour of establishing some sort of guidelines for the elaboration of the statement, as well as of enforcing more consistency in the requirements and expectations of different national accreditation bodies. One participant suggested that in this context a return to EMAS 1, where the inclusion of data in the statement was compulsory, would be desirable.

As regards the last question, all participants agreed on the essential aspect of the EMAS statement, however it was also pointed out that it is the EMS part of the scheme what fills it with content and makes it credible and verifiable. Moves towards a stronger focus on reporting should not neglect the EMS part of EMAS, although it would seem desirable to be more flexible about it and 'open up to a (EMS) world outside ISO14001' (this would be especially interesting in order to facilitate the registration of SMEs).
Participants argued that as it is know, the EMS part of EMAS is too bureaucratic and not enough focused on performance. It was also suggested that it would be interesting to try to include some sort of product life-cycle/supply chain verification in the statement.

c) EMAS and public institutions (9 participants)

Moderator and rapporteur: Fabio Iraldo (IEFE Bocconi)

Question 1: The EVER study shows that, even if the interviewed Local Authorities and public institutions consider the "indirect environmental aspects" one of the key features of EMAS, they still face difficulties in measuring their performance in this field, assessing their significance and managing/improving them. How can EMAS be modified or enriched in order to enable public institutions to overcome these difficulties?

Question 2: Few interviewed public institutions (among those registered in EMAS) are today adopting procedures for green public procurement. Do you believe that this is an essential task for a registered public institution? How do you think its adoption can be improved by means of the new EMAS revision?

Question 3: Many interviewees believe that special attention should be given to the EMAS requirements for public administrations in the new revision. Some of them even suggest a separate EMAS scheme for Local Authorities. Some other requested strong guidelines. Do you agree? What are the pros & cons and how do you think these measures can be implemented in the new EMAS regulation?

Some preliminary consideration expressed by the participants emphasised the importance of Public Administrations for the future of EMAS. The stakeholders agreed that Public Administrations should be considered as a priority by the Commission, considering the key-role they are playing and can play in the diffusion of the scheme. There was a certain consensus on the fact that, in order to be effective, the development of the scheme has to rely on a possible contribution by local authorities and public administrations, in general. The participants pointed out different aspects motivating the priority of this particular "actor" of the scheme: someone underlined that EMAS should be promoted as a policy tool mainly aimed at Public Administrations; other participants emphasised the potential diffusion of the scheme among a large number of local, regional and national institutions; others finally focused on the role that an EMAS-registered administration can have as a "trigger" and a "multiplier" to endorse and stimulate the adoption of the scheme in its territorial area (both by giving a "good example", and by means of direct measures: incentives, funding, green procurement initiatives, and so on).

As concerns the aspects relating to the implementation of EMAS by Public Administrations a first relevant statement was supported by virtually all the participants: whereas the Regulation as it is conceived today is not a problem for Public Administrations, they often find problems in the implementation of its requirements. A first important indication, provided by the stakeholders, is that accompanying measures "tailored" to the needs and specificities of Public Administrations can be useful, rather than modifications or significant changes in the Regulation or in its institutional framework.
This approach can effectively be adopted, for example, for the issues relating to the "indirect environmental aspects". In this case, the most relevant difficulties for the Public Administrations are related to the lack of competence and knowledge within these organisations, as well as to the lack of operational and practical guidance by the Commission. Indirect aspects for Public Administrations are very much connected with knowledge-intensive activities, requiring very

specific competence: urban and land planning, transport and mobility, procurement policies, etc. It has been stated that indirect environmental aspects are often localized in "soft departments", instead of technical departments, increasing the difficulties of their identification and assessment.
The same problem relating to the lack of competence is registered also with respect to the role of other actors: for instance, a participant emphasised how many public institutions are not prompted and incentivated to properly take care of the indirect aspects, because the verifiers are not focusing on these aspects very much, due to their lack of competence in this field.
Providing technical training and information support (including guidelines and manuals) is considered one of the main options to support and incentivate EMAS adoption by public institutions. This would provide a very effective tool for the identification, assessment and management of the indirect environmental aspects. To this purpose, many participants agreed on the fact that a guideline should be developed and published by the Commission, to support EMAS application in Public Administrations, starting from the very synthetic content and generic indications provided by EC Decision 681/2001 point 8 (on the "Entities to be registered"). This guideline should mostly focus on "indirect aspects" and, in particular, should provide: a list of aspects to be taken in consideration (categorising the main kinds of indirect aspects for a public administration), suggestions on how to measure indirect aspects (for example, by proposing a set of indicators) and, most important of all, practical examples and best practices taken from interesting experiences.

The idea of creating an EMAS scheme for public institutions did not obtain a high level of consensus by the participants, even if someone suggested that this solution could be effective, provided that it is applied only by defining a specific set of requirements, not a completely separate scheme. Most of the participants stated that a separate scheme would mean a separate approach, different rules and verification procedures, therefore weakening the credibility of the scheme. Moreover, the fact that the same scheme can be applied in every sector is a powerful tool to promote the awareness on EMAS and make it known and diffused throughout the society.

Another issue in the discussion concerned the way in which EMAS is applied and "used" by different kinds of organisations. While, on the one hand, EMAS today helps industrial companies in identifying opportunities, enhancing innovation, prompting technical and organisational improvements and, consequently, producing beneficial "side effects" (such as economic savings and paybacks), on the other hand, the scheme seems not to be used by Public Administrations with the same approach. In the experience of some stakeholders (including a local authority), Public Administrations are applying the scheme merely to manage the most relevant environmental aspects, focusing on the "housekeeping" of the main problems (the "negative" side of the coin) rather than stimulating the environmental efficiency and effectiveness (the "positive" side). This is an area on which the Commission, and the other "actors" of the EMAS system, should work.
Sharing of experience and exchange of information and competence were identified as very effective ways to obtain a positive outcome. Two participants strongly suggested that operating by "clusters" or networks of Public Administrations, co-operating in EMAS implementation, can produce very interesting results. The Commission could have a leading role in organising and promoting these "clusters" and networks.

A significant part of the discussion was devoted to the role to be played by Public Administrations in their community. First of all, it was pointed out that today registered Public Administrations are not fully exploiting all the communication opportunities that are offered by EMAS. For example, many participants agreed on the fact that, since local authorities are elected by the people, they must consider people's expectations and satisfactions in their EMAS programmes and activities. Consistently, registered local authorities should intensively communicate with the local communities and aim at sensitising and informing them. The feeling of the participants was that this

is a “neglected” part of EMAS by local authorities today, mainly because they face difficulties in effectively communicating with their territory. A shared view, then, was that EMAS III should give public institutions more effective tools to communicate about their environmental decisions and actions, and to better interact with the social stakeholders.

A last issue to be discussed was Green Public Procurement. Most of the participants believed that this is a crucial aspect for public institutions, even if it was controversial if the European Commission should oblige Member States to set rules for stimulating and enabling local authorities and other public institutions to include EMAS in their public procurement choices.
Public institutions can’t oblige their contractors to have EMAS registration (as it is a voluntary tool), but they should include EMAS requirements in their contracts. Another possibility could be that of a contract stating “the company is committed to achieve EMAS within the contract itself and/or within a specified period of time…”.
A final question was the following: should GPP be mandatory for public institutions to obtain EMAS? The answer to this question was negative: even if GPP is seen as a fundamental step to promote and diffuse EMAS through the supply chain, the general opinion was that this should remain as one of the most important “indirect environmental aspects” and managed as foreseen by the Regulation, with no additional requirement.

d) EMAS, global competition and effectiveness as a market tool (10 participants)

Moderator and rapporteur: Kathrin Ankele (IOEW)

Question 1: Most interviewees think that EMAS today is not a very effective tool to support the competitive strategy of participants with regard to increasing sales, gaining market share and acquiring new customers. What can be done to improve the competitive capabilities of EMAS with respect to customers and consumers on the market?

Question 2: The evidence collected by our study shows that many economic and social actors would like to make EMAS an internationally applicable scheme, overcoming the borders of the EU. What are the pros and cons of this perspective? How can this eventually be pursued in the revision?

Question 3 :Many interviewees asked for a broader and easier use of the EMAS logo, for competition purposes. Do you agree? What measures can be introduced in the new EMAS Regulation to favour a wider use of the logo by the registered organisations in their marketing strategies?

As regards the first question, the discussion started with a controversy, if competitive capabilities are really important. Some argued, that EMAS started as an environmental tool and not as a tool for enhancing the competitiveness of participants. The Commission should decide on what they want since the goals and therefore developments are different. Others argued, that it was always important to motivate companies through market-related advantages.

There was consensus on the fact that EMAS should be different, more ambitious (compared to ISO 14001), and that the differences should be highlighted. Possible elements to distinguish EMAS from ISO 14001 could be:

- product dimension
- CSR
- Combination with EPD

Supportive approaches/measures to improve competitive capabilities of EMAS could be:

- Green public procurement
- More flexible use of the logo (also on products, but with a clear indication what it means)
- Better conditions of financial institutions
- Better marketing for EMAS (image of a frontrunner)
- Focus marketing on “additional effects” as compliance or product dimension and not so much on environmental management system

There was another line of arguments in the session concerning advantages of EMAS as a stepwise approach ending up with an integrated system which would then be a benchmark. But this was not supported by the majority.

As regards the second question, global applicability was not seen as crucial. It was controversially discussed if EMAS is really better than other instruments and therefore recommendable to be

adopted worldwide. It was asked, if the results of the EVER-study allow to favour EMAS over ISO 14001 (with regard to methodology: self-assessment of organisations without validation on-site).

Global applicability could be good for the diffusion of EMAS, but also difficult due to e.g. different environmental legislations in Member States and Non-Member States, the role of the verifiers, realisation of for quality checks, potential as a trade barrier. Furthermore EMAS is even in the EU little known, how should it then be marketed worldwide.

Finally, as far as the use of logo is concerned, t**he majority of the session participants was in favour of a broader use of it.**

A key element for the competitive capabilities and the success of EMAS are the customers. Therefore it must be better marketed and better known and the logo is crucial for this. It should be possible to use it on products, as long as clear indications are given (e.g. logo because manufactured in an environmentally friendly site). It must be clearly distinguished between product and site information. And the use on products shall also be combined with specific requirements (life-cycle-approach along the supply chain or life-cycle-management approach focussing on areas where the organisation has full management control). It was stressed that this might be a barrier for SMEs or even too complicated altogether. It was also proposed that the Commission should publish a guideline how to use the logo (better than the existing one).
Here once more there was a controversy whether a stepwise approach would be helpful, distinguishing also different logos for each step.

e) EMAS and the product dimension (13 participants)

Moderator and rapporteur: Kim Christiansen

Question 1: Many interviewed companies think that EMAS should focus more on product related aspects and producer responsibility along the product chain. Do you agree? How do you think this result can be obtained in the new EMAS Regulation?

Question 2: Which tools / schemes should EMAS be further linked to if product related aspects get more focus in EMAS? Can the EPD – Environmental Product Regulation- be an effective tool in this prospect? Dom you envisage the possibility and opportunity (as some interviewees did) of merging EMAS and the EU Ecolabel in a unique scheme or creating more synergies between them?

Question 3: Some interviewees emphasised the opportunity of involving the suppliers in EMAS implementation. Do you think that obtaining environmental information from the supply chain should be a requirement for EMAS registration? How should this requirement be eventually included in the new EMAS regulation?

As far as supply chain and the necessity to gather information on it are concerned, most of the participants agreed that it all depends on the type of product and on the relevance of the supply chain, as information should be provided as long as there are relevant aspects within the supply chain itself.

Other comments regarded the necessity to "re-write" the whole system, so that it is the customer that "pushes" the supply chain, and the fact that for an EMS it is an overload to go all the way up the supply chain.

Two options are hence emerging:

- Put pressure on suppliers
- Choose suppliers fulfilling the requirements

It all depends on the market and the product, and the influence that can be exerted on suppliers.

There is not a better option for all situations, but the new text should take into account both of them.

It's been stressed that supply chain cooperation is already part of the implementation of EMAS by many organizations but the requirements and recommendations in EMAS could be much more clearly stated

Participants also agreed that not only the "before" is important, but also the "after": Product Chain Management should be hence implemented and strengthened.

As regards the possibility of linking EMAS to other tools and schemes, most participants support the idea that if we link EMAS itself to Ecolabel, then we should link them to LCA, EPD etc as well, being these all integrated in a unique, flexible tool.

It appears that EMAS should be more closely linked to both Ecolabel and New Regulations (e.g: EuP), BUT we should avoid that specific and precise criteria are lost.

However, some participants pointed out that it is necessary not to focus too much on Ecolabel, as this would shift the instrument into the marketing of a product, with no attention for production processes.

What is clear is that, as today, there are little synergies between EMAS and Ecolabel, so that it is advisable to change at least one of the two systems. The benefits might regard both marketing advantages and a strategic approach to environmental improvement.

A participant of the workshop stressed the fact that, however, Ecolabel criteria do already consider the production process.

In conclusion, a broadly agreed-upon solution is that of a STEPWISE APPROACH (e.g: EMAS then EPD then Ecolabel). Most participants, however, pointed out that it is necessary to introduce and stress differentiations, as to foster competition and award “frontrunners”.

f) EMAS, CSR and the other pillars of sustainability (12 participants)

Moderator and rapporteur: Walter Kahlenborn (Adelphi Consult)

Question 1: EMAS often is seen as one instrument with respect to CSR. Do you agree? How can EMAS be best integrated into CSR policies both at company and at political level? What does that mean for the development of EMAS?

Question 2: Some interviewees recommend to enlarge EMAS and to include - as a voluntary add-on feature - health and safety aspects. Do you agree? Would you add other facets as well?

Question 3: Another option would be to redesign EMAS into a broader CSR scheme, covering all social and environmental aspects (with variations according to size and sector of the participant). Do you think such an option would help to develop EMAS in the right direction? How do you think this result can be obtained in the new EMAS Regulation?

Initially, Walter Kahlenborn presented briefly some of the findings of the study regarding the topic of the workshop. After the presentation the workshop participants dicussed

1. EMAS often is seen as one instrument with respect to CSR. Do you agree? How can EMAS be best integrated into CSR policies both at company and at political level? What does that mean for the development of EMAS?

2. Some interviewees recommend to enlarge EMAS and to include - as a voluntary add-on feature - health and safety aspects. Do you agree? Would you add other facets as well?

3. Another option would be to redesign EMAS into a broader CSR scheme, covering all social and environmental aspects (with variations according to size and sector of the participant). Do you think such an option would help to develop EMAS in the right direction? How do you think this result can be obtained in the new EMAS Regulation?

Participants of the workshop largely agreed that EMAS is one tool in a big box called CSR. Today organisations use EMAS as an instrument for the implementation of their CSR strategy, with respect to the environmental dimension. Other tools are used for health & safety (e.g. OHSAS18000) or socially (e.g. SA8000) related issues.

While EMAS is seen as valid tool within the concept of CSR, most workshop participants agreed that it would be premature or even completely impossible to integrate CSR within EMAS. A number of arguments were put forward to support that position:

- The concept of CSR is still quite vague. With no clear definition of the social requirements that might enter into EMAS a first problem would be to single out and define the CSR aspects to undergo regulation.
- Generally, there are no clear methods how to measure compliance with CSR. Hence, a universally valid and recognised rules' system does not exist, as yet, and a verification of compliance with CSR requirements is not possible.
- Including CSR aspects in EMAS would result in increased costs for the implementation and verification. Verification costs would especially rise substantially if verifiers would check

for social issues in the supply chain (e.g. child labour at Asian suppliers). It is unlikely that any benefits arising from an enlargement of EMAS would outweigh this disadvantage.

- EMAS is already well known as a brand. Including CSR would change substantially the content of the scheme and need a costly re-branding of EMAS.
- A further aspect which emerged in the discussion regards the fact that CSR is company-related and not site-related: inserting CSR elements in EMAS would require the individuation and definition of the requirements applicable at a site-level; at the same time certain aspects of CSR are by their very nature not site-related.
- Given the fact that other tools for social issues exist and given the big resistance against any CSR management system, the EU should not commit the mistake to start to develop a tool on its own for that dimension.
- It was also felt that if EMAS doesn't deliver the expected results than it would do so even less, if the scheme would be enlarged and encompass additional issues.

While a clear majority of workshop participants opposed the integration of CSR in EMAS, there were a number of experts which advocated on the other hand the integration of health and safety aspects in EMAS. H&S is already based on a solid framework; one does not encounter the uncertainties connected with CSR. The integration of H&S would make the implementation of both issues (environmental and H&S) less costly and easier. At the same time grey areas between the two dimensions could be eliminated. Also, the current distinction between protection of human beings (the company staff) (H&S) and protection of nature and the environment (EMAS) was partly regarded as somewhat artificial. Pushing up the door of EMAS towards H&S and developing tools in that direction, including giving guidance and best practice information might bring substantial benefits to EMAS.

A particular issue discussed more in detail was H&S information in the environmental statement. On the one hand, H&S issues often are seen by companies as more sensitive than environmentally related information. Therefore, they might resist publishing information on these issues. On the other hand, not necessarily companies must be obliged to disclose H&S information in the same way as they have to do it with environmentally related matters.

Furthermore, the argument was put forward that H&S information might be more interesting to the public and therefore increase general interest in environmental statements. Enlarging the scope of environmental statements provides the opportunity to introduce issues of general interest, such as gender issues, information on working policies, risk related information, etc. The point was also made, that companies in general prefer sustainability reports rather than environmental reports.

g) Integration of EMAS with other policy instruments (10 participants)

Moderator and rapporteur: Fabio Iraldo (IEFE Bocconi)

Question 1: Most EVER interviewees stated that EMAS should be more integrated with other policies. They particularly signalled the opportunity of integrating EMAS with the IPPC directive framework. What would you suggest can be done to this purpose in the EMAS revision (considering the experience of the Member States in applying the IPPC Directive)?

Question 2: Another relevant finding of the study focuses on the Emission Trading Directive. Some interviewees emphasised the operational synergy in collecting, elaborating and managing the significant indicators relating to CO2 emissions, at the same time complaining about the fact that no synergy has been conceived for the application of the directive. What do you think can be done to support this synergy in the EMAS revision process?

Question 3: The interviews show that there is still a great expectation concerning the use and valorisation of EMAS in the command and control system as a guarantee and an opportunity for regulatory relief (and that very little has been done by Member Countries in this area). How do you think the new EMAS revision could help and support the Member Countries to develop such a desired and expected initiative?

Before the group started discussing the questions included in the presentation, as a participant requested, it was made clear that the "issue at stake" was not if EMAS is able to deliver compliance with other policy instruments (such as command and control legislation). The only aim of the discussion was how to better integrate EMAS as a voluntary scheme with other regulations and instruments, in order to valorise its positioning and role among the EU environmental policies.

As a starting point of the discussion, it was stated that the regulator should be confident in the data that are provided by EMAS and, particularly, by the management system and by the environmental statement. An example was made with reference to the UK Environmental Agency implementing OPRA, a vetting scheme that enables enforcement authorities to better target industry using the risk manager's analysis of level of risk and environmental performance. The UK Environment Agency gives the highest level of recognition to EMAS in this risk-rating scheme under the Integrated Pollution Prevention and Control regime.

According to some participants, for a registered company it should be possible to use the validated data and indicators that are produced by its environmental management system, in order to comply with the different monitoring, assessment or authorisation requirements made by the Member States. If this is the objective, than one should make sure that all the relevant environmental data are properly validated by the accredited verifier and, in any case, the requests by the regulator should be focused on few data and indicators. Otherwise, it would be too difficult for the companies to provide a high number of data and indicators through the EMS documents or through the statement.

A participant suggested that the EMAS statement can be used as a report for compliance, to satisfy different requirements made by the regulator. He also emphasised, though, that there would be an harmonisation problem, due to the heterogeneous requirements and parameters adopted by the Member States. This would really support a fuller integration of EMAS in existing legislation, which has never been pursued in the past.

There was a general agreement on the fact that the lack of integration with other legislation and regulation has been one of the most relevant problems for the development of EMAS in the last years. In spite of the fact that the need for this integration is explicitly stated in the EMAS regulation itself, very few attempts have been made in the past. Complaints have been reported from some Member States (e.g.: Germany, Italy) on the fact that EMAS organisations were not able to obtain substantial benefits within the IPPC Directive application, e.g.: in the renewal or extension of the integrated permits in cases of relevant modifications to the processes and/or to the plant. Other significant complaints on the lack of integration with other policies were expressed with respect to the Environmental Liability EC Directive, which totally ignores the guarantees that EMAS might provide with respect to the organisational and managerial aspects of environmental risk.

A participant pointed out that the reason why EMAS has not been integrated with existing policies in the past, is that many observers and practitioners believed that, by way of a higher integration, the Commission and the Member States wanted to make EMAS a mandatory policy tool. But renouncing to this opportunity, meant that many EMAS organisations lost the possibility to effectively use EMAS also for other purposes (e.g.: legal compliance).
In order to enable and support the integration, it is absolutely essential that the Commission provides guidelines or other useful documentation that compares EMAS requirements concerning the measurement and reporting of environmental data with the needs and the requests made by legislation (both at the EU and at the national level). This could be done by drafting and publishing a sort of "bridging document" that identifies the ways in which EMAS can provide data and indicators to comply with the different requirements made by environmental legislation and regulation.

Virtually all the participants supported this option. One of them particularly focused the attention on the environmental statement: a guideline could specify how this should be drafted in order to comply with all the possible monitoring, assessment or permitting data requests. Another participant supported the idea that the Commission provides guidance on reporting issues by means of an official act (possibly by developing and deepening the content of Rec. EC/532/2003).
This approach could also be used by local authorities to obtain wider guarantees on legal compliance. For example, even when a company requests a permit for a completely new part of the plant (on which it cannot provide any data by means of the EMAS statement), it might anyway obtain a "fast lane" procedure, thanks to the fact that it is able to provide reliable and validated data on its general environmental performance.

Many participants emphasised that, if the option of providing guidance on reporting for legal compliance is pursued, than all the institutional "interlocutors" of the EMAS organisations should be sensitised and trained, in order to fully understand and correctly use the provided environmental information.

A good example on how the data and information validated by the environmental management system could be used, is the Emission Trading (ET) Directive. In this case, although the opportunity of a direct link with EMAS has been lost in drafting the text of the Directive, a strong connection between the data requested by the ET Directive and the role of the EMAS verifier can be effectively made. Some Member States are working in this direction.

The standardisation of reporting for legal compliance purposes should be carried out with a flexible approach. According to many participants, the Commission should define a set of "core" and basic indicators, for different legal-compliance purposes, that should be agreed upon by Member States.

At a later stage, Member States can enrich this set of core indicators with additional indicators, based on the specific national legislation and regulation.
The set of proposed indicators, as a participant emphasised, should be "modular", according to the different legal requirements which the EMAS company wants to comply with.

It was also pointed out that the data and indicators must be properly generated and validated by the EMAS environmental management system. Once they have been validated by the company and by the verifier, they should be "usable" for all the legal compliance-related purposes.
Furthermore, the standardisation work by the Commission should not produce a rigid "standard model" for the EMAS environmental statement, that must remain a very flexible communication tool. The reporting standards should be an optional reference, just for those companies that want to use the statement for supporting legal compliance procedures.

Finally, the participants discussed a last important issue: the link between EMAS and the enforcement of legal requirements.
A shared view was that EMAS must be used as a way to support and facilitate the enforcement of legal requirements. In particular, controls and inspections should take into account that a company is EMAS registered.
Even if a EMAS verification will never be a substitute for an inspection by a control body, some participants emphasised that it should be able to guarantee that the registered organisation is fully capable of managing, updating and maintaining compliance with relevant legislation and regulation. On this basis, and once it is demonstrated that this guarantee is provided by EMAS, registered companies should benefit from relief and simplification in the control activities.

To this purpose, it would be necessary to analyse in depth and share a common view among Member States and the Commission on what is meant by "legal compliance" within EMAS application, and on who and how (what approaches and methods) must check this compliance. This should be done also to avoid the risk of a non –homogeneous application of the "legal compliance" pre-requirement in the verification and registration procedures, between the different Member States.

h) EMAS and Small and Medium Enterprises (11 participants)

Moderator and rapporteur: Juan Mateos Garcia (SPRU)

Question 1- Do you believe that allowing organisations to base on less formal environmental management systems (rather than the present ISO-like EMS) to obtain EMAS can be a useful approach to foster the diffusion of the scheme among SMEs?
Do you believe that this approach will imply the same difficulties linked to the verification process and the verifier-costs encountered today by SMEs (as the EVER interviewees show)?
Do you think that enabling SMEs to apply a simplified and guided version of EMAS (such as what is done with the EMAS-easy approach) can be an effective solution?

Question 2- Some interviewees argued that the so-called staged-approach or step-wise approach could be an effective solution to overcome the barriers and difficulties encountered by SMEs in the implementation of the EMAS requirements.
Do you agree?
Should this approach be introduced in the new EMAS Regulation?

Question 3- Do you believe that the application of EMAS within business clusters (such as supply chains, industrial districts, tourist areas, etc.) should be further developed in order to facilitate the diffusion of the scheme among SMEs?
In this regard, what kind of requirements or guidelines can be eventually introduced in the new EMAS Regulation?

Before the group started discussing the questions included in the presentation, participants stated their dissatisfaction with what they consider an 'anti-industry' bias in the distribution of the population of EMAS interviewees. According to them not enough industry representatives are included in it.

It was also pointed out that it would be desirable to disaggregate certain results more (Eg. in some of the slides presented in this session it would be interesting to have the results only for SME respondents).

The discussion that took place about the first two questions will be presented in a single section as participants argued that the main way in which EMAS can be made simpler and easier for SMEs to implement (question 1) is through a staged approach (question 2) and thus most of the points raised are relevant for both.

One participant argued that one of the main problems that SMEs face when considering the possibility of registering in EMAS is the existence of à priori undefined costs, mostly related to the implementation of the EMS. This uncertainty could be removed through the acceptance of staged approaches in EMAS.

Another participant pointed out that in the course of his research on EMSs in Europe he has found 30 different 'less formal' staged approach EMS models covering 10.000 participants, most of which do not register into EMAS or ISO 14001 because they do not need it. In this context, EMAS should

not try to become a competitor with these standards, which incorporate important cultural elements and tend to be popular and accepted in specific regions, but instead, become an umbrella that integrates them. The way of doing this would be to recognise those local standards that fulfil a number of conditions, mostly related to their credibility and effectiveness in improving environmental performance, that is, those standards that comply with a 'higher' one accepted at an European level. In his own words 'a staged approach should be introduced not in the new EMAS regulation, but outside'.

One of the main barriers to the adoption of this more flexible EMAS scheme would be the need to differentiate fully registered and partially registered companies. One participant indicated that in his experience, a possible strategy to address this issue is the establishment of limitations to the time a company can spend in each of the stages, and a strict verification of improvement in environmental performance for each period.
The final observation made regarding the possibility of a broader acknowledgement of local, less formal, staged approach EMS outside EMAS regulation is that it is an idea that will be very difficult to 'sell' to the European Commission.

It was also argued that it would be desirable to simplify the language used in the EMAS regulation while trying to avoid giving SMEs the impression that they were registering to some sort of 'EMAS for dummies' scheme.

Another issue that in the opinion of participants is essential for the acceptance of EMAS by SMEs is a perception of stronger advantages and benefits for those companies that register. They argued that a very important proportion of SMEs who have invested the effort and resources to register in EMAS do not receive any relevant benefits or appreciation, feel that are being treated unfairly and finally drop out with a very negative impression of the scheme. Public campaigns raising the visibility of the scheme and priority in the granting of public procurement contracts would be desirable incentives in this context. Another participant argued against this, stating that in his view EMAS registration does not constitute sufficient demonstration of an improvement in environmental performance and therefore such advantages should not be warranted to registered companies.

As regards the last question, participants discussed initially the definition of cluster (a term with different meanings depending on the country) and concluded that the decision on this issue should be left open for member states, as it is very relevant in some (eg. Italy) but not in others (eg. UK). One participant also mentioned the idea of a 'convoy' of collaborating companies, each of them registered to EMAS individually in contrast to that of clusters of companies (or even industrial sites) registered collectively.
The group concluded that the role of the European Commission should be to remove barriers and facilitate cluster registration where this can be a driver for improvements in environmental performance, instead of creating them through an excessively bureaucratic and legalistic approach to the definition of EMAS.

ECOLABEL WORKSHOP - *Brussels September 26, 2005*

(registered participants:43)

a) The institutional aspects of the EU Ecolabel (11 participants)

Moderator and rapporteur: Fabio Iraldo (IEFE Bocconi)

Question 1: Controversial evidence emerged from the interviews concerning the institutional aspects of the scheme. Should the way the scheme is managed be changed? (e.g. by the creation of an independent body for organising the scheme- that could imply a level of independence from Commission)

Question 2: Should the present sharing of tasks between the Commission, Member States and the EUEB be modified, and how?

Question 3: Should the EU-Ecolabel scheme as a whole be more centralised or decentralised?

A first and preliminary indication emerging from the participants (mostly agreed upon) is that institutional aspects "per se" are not a priority for the revision of the Regulation, insofar as there is not a problem directly linked with the current institutional framework and functioning of the scheme. Most of the participants shared the view that institutional changes should be pursued in the Revision to the extent in which they are a means to pursue other priorities and other objectives, linked to the real problems of the EU Eco-label.

For example, some of the participants stated that the there could be modifications in the institutional framework only if this can help in "streamlining" the process of developing the criteria and of checking the compliance of the products to the criteria.
First of all, a shared view by the participants was the following: the institutional modifications of the criteria development process must not imply a downgrading of the criteria themselves. There must be a guarantee that, even if there is "institutional innovation" in the management of the scheme, the criteria must remain restrictive enough to assure the credibility of the scheme. On the opposite, streamlining should be aimed at supporting the companies (especially those non participating to the scheme) in approaching the criteria and at diffusing the scheme.

A participant from a newly accessed country, for instance, emphasised how the problems in the diffusion and application of the EU Ecolabel can be different from country to country. In the case of Eastern Europe, the "streamlining" process should take into account that there is a strong lack of competence in the companies regarding the label and the connected criteria and procedures.

Particular attention was devoted by the participants to the opportunity of "streamlining" the development of the criteria. The starting point of the discussion was the acknowledgement that, at present, developing the criteria related to a new product group takes more or less 2 years. The

Commission stated that, averagely, one new product group criteria are finalised each year (including the consultation and approval phases).
Some of the stakeholders did not complain about this performance; on the opposite, they confirmed that having one new accessible product group every year is a good performance and they would not expect more than that. Many participants agreed that 2 years to develop new criteria is a relevant length of time, if one wants to guarantee a fair and transparent elaboration process.

The problems of the elaboration process should be searched elsewhere. For example, a representative of the industry stated that a major difficulty is linked to scarce involvement of other DGs and of industry at large in the working groups elaborating the criteria. This, in his view, causes difficulties in the last step of the process (the official approval of the criteria): since some key actors are not properly involved, they oppose to the criteria, stopping the process at the very end (when a huge effort has been already done).
This opinion was not shared by many participants and by the Commission, that emphasised how other DGs (such as DG Enterprise) are officially involved in the criteria development process. But this does not prevent opposition to the criteria from emerging in the end of the process, anyway.

On the other hand, the idea that the development process is "inverted" (industry develops and proposes criteria and the Commission together with the Member States approve the criteria after an assessment process) has been refused, first of all by the participants coming from the private sector and from industry.

It was also emphasised that, if the objective is to involve to a larger extent the Competent Bodies in the process of elaborating the criteria, or to incentivate a higher number of new product groups (and corresponding criteria) developed every year, then the economic resources should be found and made available in order to sustain the connected costs.
The participants agreed on the fact that the development of the criteria (and the potential "streamlining" of the process) is more connected with the availability of economic resources than related to institutional improvement of the scheme.

A participant underlined that, more than to the development of the criteria, institutional improvements of the scheme should aim at enabling the European Commission to play the role of a real driver for the diffusion of the scheme. Most of the participants emphasised that today the degree of "ownership" of the scheme shown by the European Commission seems rather low, and can be considerably increased. This is shown, for example, by the fact that other DGs, or even parts of DG Environment not directly dealing with the EU Ecolabel, are today not "recognising" this policy instrument, e.g.: they do not take it into account when elaborating and drafting consistent or potentially inherent directives and other provisions, they do not participate in the elaboration of criteria, they do not use it as a selection criteria in their procurement policies. In few words, they do not demonstrate by facts that the Commission "owns" the EU Ecolabel.

Very brief and specific answers by the participants to the questions related to the public or private nature of the scheme and on the centralisation/ decentralisation concluded the session.
These can be summarised in the following positions:

1. the optimal framework for the management of the scheme should foresee a mix of public and private actors (just like the scheme is managed today in many EU member countries)
2. an effort can be made to decentralise more the management of the scheme, but only if this is useful for the development of the EU Ecolabel. A higher decentralisation could make sense, for example, in order to enable a more effective and intense marketing of the scheme by the Member States and/or the Competent Bodies. But in this case, the problem will be the

distribution of economic resources to the MSs and to the CBs, to allow them to perform marketing campaigns.

3. Moreover, in the case decentralisation becomes an effective option, we should ask to MSs and CBs if they really want to be more involved in the application of the scheme. This is, again, a problem of "ownership" of the EU Ecolabel by the actors operating at the national level.

b) The setting of the EU Eco-Label criteria and the application / validation procedure (15 participants)

Moderators and rapporteurs: Frieder Rubik and Dirk Scheer (IOEW)

Question 1: The empirical evidence collected by the EVER study generally indicates that a higher level of stakeholders' involvement could be desirable. Should the elaboration process involve more front-runner companies in environmental innovation and other "environmental leaders" and if yes how could this be stimulated?

Question 2: Some interviewees suggested that the way in which the criteria are set can be effectively modified. How stringent should the performance levels of criteria be? Should they be reduced to ensure that more companies can participate or should they strengthened to signal environmental leadership? Should the number of criteria for product group be modified (reduced or increased)?

Question 3: Do you think that the approach of self-verification can be introduced in the new Ecolabel Regulation? What are the pros and cons of such an approach?

As regards the first question, a higher involvement of stakeholders seems to be welcomed. Currently – so the remark from an NGO – industry joins the meetings of the elaboration of the requirements with a high number of participants each one representing a specific part of the chain, but the effect is a clear dominance of business in comparison to NGO's. The participant saw two possibilities to balance this: a) Restriction of the participation of industry, or b) Involvement of different NGOs representing the different environmental media. In addition to that point of insufficient balance, it was remarked that retailers and media should more be involved. The restriction was rejected by a business representant: "Presence is quite good".

The involvement of frontrunners was discussed intensively. The question arose: "How to do that?" Frontrunners must not have an organisation. It was proposed by an NGO to reserve two floating seats to them, one seat for a Northern frontrunner and one for a Southern frontrunner; given the case that there do not exists differences among them, only one could represent them. The same NGO proposed that this NGO itself should look, select and nominate the two frontrunners; this selection could be done in conjunction with the Competent Body responsible for the elaboration of the criteria. It was argued that this involvement of frontrunners could stimulate a new mechanism in the scheme. The COM should at least reimburse travelling expenditures of the invited frontrunners. It was also stressed by an expert that also retailers could be the involved frontrunners due to their roles on the market.

The consortium partners explained at this stage the conceptual ideas behind the involvement of frontrunners and its potential. But it was also stressed that this involvement is not a good for its own, but must be embedded into more environmental ambitions during criteria development.

This involvement of frontrunners was partly welcomed, especially by experts, partly sceptically commented by business; one important hint against it was that the involvement might increase the level of criteria, would cause a smaller penetration (potential) of eco-labelled products on the market and could also have the consequence of a lower visibility of the eco-label itself on the market; this might prevent retailers to list eco-labelled products in their range.

There was a general hint to distinguish between involving frontrunners and a frontrunner eco-label scheme.

Three short side-lines of discussions were:

- Another intervention coming from a business representative dealt with the relationship between brands and the recognition of the eco-label: It was argues that the brand itself should include top environmental performance and signal environmental leadership. Based on this the key challenge is: "How to stimulate the market", i.e. how could consumers encouraged to consider environmental issues more? However this intervention was not considered further during the session.
- Another – shortly – stressed topic was the issue of marketing, as an expert remarked: Currently, marketing does not really understand what eco-labelling is about. Appropriate information seems to be missing.
- The current funding of NGOs to join the EU-eco-labelling scheme was regarded as not sufficient by a representative of these organisations. Funding should be increased, perhaps also financially supported by Member States.

As far as the second question is concerned, a business representative argued strongly in favour of scientific based criteria. According to this person, criteria which are not very important should be singled out. In the following, the discussion was focussed on some exemplary product groups, namely tourist accommodations, washing machines and paper products. It was argued by an expert that e.g. 80 criteria for tourist accommodations are too much. The consortium partners showed at the example of washing-machines that a certain type of bargaining might occur during the elaboration process of criteria: "If you accept my criteria, then I accept yours" – with the consequence of an increasing number of criteria.

Several participants from business argued in favour of a concentration of criteria on key environmental issues. But a representative of NGOs explained that the diverging ecological, cultural etc. conditions of the EU 25 are reflected in the requirement and this – also – explains the number of criteria. The representative concluded: "We must to live with it".

Eco-labels are not only an environmental policy tool, said a representative of an NGO. It is also a communication and information tool. As such they could "translate" complex environmental goals into the world of consumers. And then it might be justified that the requirements encompass more criteria.

Another argument supporting the larg(er) number of criteria deriving from the same person was: It should be made transparent by modelling and scenario techniques what any cancellation of criteria (and also a weaken of the criteria) could induce which impacts.

An expert intervened in this discussion with the question: Are these general or product-group specific observations?

Short side-lines of discussions were:

- Another intervention from business hinted to the development of the requirements: The eco-label started with environmental issues, which were expanded with health & safety issues; currently CSR might come. The French AFNOR makes – according to this source – strong pressure for quality systems.
- "How to integrate evolution of technology?" questioned one representative from business. However, this question was not discussed during this session.
- A business representative hinted to the challenge of the insufficient basis of the frequency control.

As regards the third question, the verification of the fulfilment of the eco-label requirements are already at least partly based on some elements of self-verification was explained by a representative of a Competent Body (CB).

However, any change of the current system to a complete self-verification system was rejected by the participants. Neither business nor NGOs seemed to argue in favour of such an approach. The main argument was that an eco-label must possess credibility among consumers.

What was claimed was an agreement among the Competent Bodies how they conduct practically verification. The reason behind this claim was that actually quite diverging personal resources exist in the EU 25 to carry out this task. It was proposed by an NGO representative to offer some centralised services to the CB and by business to strengthen the co-operation among the present CB of the Member States.

A side element of discussion was that a fully developed quality system within business is the best way to verify.

c) Ecolabel and marketing (16 participants)

Moderator and rapporteur: Anette Petersen (Valor & Tinge)

Question 1: The empirical evidence collected by the EVER interviews shows that a large majority of the companies and stakeholders believe that the EU Ecolabel should be better marketed and diffused. How could future information and promotion campaigns be organised? (Please discuss the following options: partnerships with license holders, retailers and stakeholders? Central promotional unit within the Commision? Mandatory participation for all Member States and, consequently, mandatory promotion campaign by Member States?)

Question 2: Many interviewees expressed a desire for dialogue between license holders and companies with their customers. How could such dialogue foras/platforms where license holders and customers can exchange experiences and discuss expectations and business opportunities be established?

Question 3: Our study also shows the need for a broader use of the Ecolabel logo. Should a broader use of the logo be allowed and how? (please discuss the following options: change logo design and wher it can be placed; associate ecolabel with environmental NGO logos)

Some of the findings emerging within the workshop session can be summarised as follows:

First of all, there is agreement upon the fact that the Commission should play a key role as driver and co-funding institution.
It is important that national and local campaigns are co-funded by EU (COM) (e.g. 50%) and that application is easy i.e. not LIFE; funding opportunities by public-private partnerships should be investigated and used more
Moreover, there should be a yearly event from the Commission, but then the implementation should be at national level (with different means for different product groups and target groups)
Many participants are in favour of a "toolbox" of marketing means; some of the indications emerging are to: differentiate among means, target groups, national culture, experience from other schemes; and among product groups; use the tools where customers are e.g. festivals (local community fairs or trade fairs), festivals, conferences of sector organizations etc.
The EU Ecolabel secretariat at the Commission level should have a homepage where all experiences from EU Ecolabel campaigns are available, not only Commission driven, but also others at national, regional and local level
Some participants believe that all Member States should establish a national marketing centre – with the competent body; showrooms, guidance etc.
Competent Bodies should establish a showroom with product examples, meeting facilities etc., hotline and other information (some member states already have); moreover, they should organize 1-2 national assemblies at the national level for all participants in ecolabelling and other interested parties
Finally, there is awareness that the logo is not good, but many participants believe we shouldn't change it if the benefits are not very clear (considering, also, the money needed for such a big marketing effort), especially in member states where the old logo is very well known

d) Policy incentives for the Ecolabel (15 participants)

Moderators and rapporteurs: Frieder Rubik and Dirk Scheer (IOEW)

Question 1: Should policy-makers actively support the EU-Flower with setting direct policy incentives?

Question 2: And if so, which policy measures and instruments do you judge to be effective and efficient?

Question 3: Strengthening of eco-labelling can be reached through integration of eco-labelling in other policy initiatives (e.g. public procurement, energy policy, waste policy etc.). Which integration efforts do you consider could be promising?

As regards the first question, participants debated on the issue whether policy incentives are reasonable (or not) for making eco-labels (i.e. the EU-Flower) more effective and efficient. Generally speaking there was predominantly common sense that eco-labels need direct and indirect policy incentives. This appraisal was based on the assumption that eco-label – even if being a market tool – meet several barriers such as lack of consumer awareness, producer abstinence etc. However, arguing in favour of policy incentives for the EU-Flower must also lay emphasis on distributive justice among ISO type I labels. Supporting just the European Eco-label with direct and indirect flanking measures may fundamentally disadvantaging national based eco-labels. Being contradictory with this common sense appraisal, one business representative argued that, based on a free market principles, free competition rules among labels shall distinguish successful from unsuccessful eco-labels. Extra policy incentives for the benefit of just one eco-label (here: the EU-Flower) contradicts fair competition rules.

Policy incentives discussed to be promising centred on the following issues:

- Economic incentives: VAT reduction could be attractive; different product taxes (e.g. for cars) could be used as flanking measures for the EU-Flower.
- Capacity building: use more systematically data input from member states concerning products on the market (e.g. for criteria elaboration); elaboration of manuals for design and public procurement as support (EU-criteria as guidance tool); build up a better information base.
- Build-in incentives: create advantages for producers and end-users.
- Distinct role of EU-Flower: several product groups such as, for instance, tourism rely on geographical distinctive environmental effects. While water is no issue in the north it is in the south. Therefore, the EU-Flower should allow (criteria)-flexibility in order to cope with regional environmental challenges. Therefore, the role of the EU-Flower has been proposed to set a minimum baseline.

Referring to the second question, when asked what measures and instruments are promising, participants contributed with an array of proposals and reflections. To begin with, one participant

doubted the compatibility of setting European / national economic incentives with international free trade principles. However, several participants stated that in principal all kinds of measures and instruments should be considered for stimulating the EU-Flower. The following measures and instruments as promising:

- Intensify environmental research: with regards to product-related environmental knowledge a lack of quantitative and qualitative scientific knowledge has been stated.
- Fiscal instruments: the wide array of economic instruments such as taxes (reduction), subsidies, deposit systems, tradable certifications etc. might stimulate the EU-Flower.
- Integration in EU-Call for tenders: the integration of EU-Flower requirements into all European call for tenders is seen as a potential driver for the diffusion of environmentally sound products.
- Educational measures: since eco-labelling is a market-based instruments depending deeply on green consumer behaviour and attitude, educational measures for consumer capacity building are essential.
- Integration into EU-directives: when it comes to EU product policy, the EU-Flower should be integrated in EU regulation. Most promising seems to be the integration into the so-called EuP directive [Directive 2005/32/EC on the eco-design of Energy-using Products (EuP)], that is, the product group-related specification currently on it way according to the aforementioned EuP framework directive.
- Encourage product-chain co-operation: co-operation among supply chain actors should be encouraged, especially among retailers, producers and key suppliers.

The discussion following question three intensified promising integration efforts into other policy fields and instruments. One contribution emphasized to link the EU-Flower with energy policy, precisely the CO_2 emission trading system. The eco-label certified companies could receive more certificates CO_2 and/or discount prices. Even if linking eco-label with emission trading seems to be a promising idea several colleagues hinted to considerable technical problems for the implementation.

Further integration efforts were outlined for the forestry sector linking the EU-Flower with sector specific labels such as the FSC (Forest Stewardship Council) and the PEFC (Pan-European Forest Certification) labelling scheme.

Another proposal centred eco-labelling in the field of current product policy developments, that is, the European Integrated Product Policy approach, and the so-called ETAP initiative. ETAP stands for the European Environmental Technologies Action Plan which is composed of actions around the themes “Getting from Research to Markets”, “Improving Market Conditions”, and “Acting globally”. Tied up to that point, the discussion elaborated on methodological issues with regard to eco-labelling. As a future vision, measuring environmental product performances with a set of promising methodologies such as ecological footprint could be of importance. Eco-labelling could then play a major role for the measurement of environmental product performance.

e) Ecolabel and the other pillars of sustainability (13 participants)

Moderator and rapporteur: Fabio Iraldo (IEFE Bocconi)

Question 1: The interviews carried out in the EVER study show that some companies and stakeholders would like to see the EU Ecolabel open to other aspects of sustainability, especially consumer health and fair trade. Do you agree with this prospect and why?

Question 2: A significant majority of these interviewees think that there shouldn't be any mandatory requirement concerning these "new" issues, but only requirements for "additional points" or the chance to provide qualitative information on these issues to the customer. Do you think this is operationally feasible and how can it be done?

Question 3: What positive and negative consequences will an enlargement of the EU Ecolabel to other sustainability issues have for consumer information and for licence-holder competitiveness?

The debate in this parallel session has been intense and fruitful, the opinions of the stakeholders were controversial and, in the end, it was not possible to obtain a wide consensus on the options foreseen by the three questions.

The first part of the session focused on the opportunity and on the potential advantages and disadvantages connected with the prospect of including other aspects of sustainability in the EU Ecolabel, with particular reference to consumer health, social responsibility and fair trade. There was no common view on this issue.
Some of the participants (especially among the industry representatives) were in favour of opening the Ecolabel to social issues. The reasons for this, as reported by these stakeholders, is twofold: on the one hand, there is a growing interest shown by companies operating in many sectors for obtaining and using a product certification based on social grounds, in order to improve their image and the relations their stakeholders. On the other hand, consumers seem to increasingly pay attention to social issues, also driven by the echo of some recent events and by the media. In addition to this, some of the participants underlined that there is an issue (made especially by environmental NGOs and consumerist associations) for harmonisation in assessing products and informing consumers on 360° (under different points of view: environmental impact, social implications, consumer health, etc.).
Moreover, a favourable factor pushing for the inclusion of these aspects in the EU Ecolabel is the opportunity of regulating the "market" of social product certification (which is rather confused), as it has been done with the EU Ecolabel for the environment, and to deal with these issues at the institutional level with an integrated approach (i.e.: by means of a EU "sustainability label"). This might also offer potential synergies and savings of time and resources to the interested companies (a "one-desk" solution for all certification procedures was mentioned as a potential benefit).
Another potential benefit emphasised by those stakeholders that agreed with the possibility of integrating the EU Ecolabel with social issues, relates to the area of "chain management". Some of the industry representatives stated that it could be more effective to manage the relations with the supply chain with an integrated approach, in order to obtain simultaneous guarantees on both environmental and social issues by the providers. The reason, in this case, was that it makes no sense in asking to the suppliers just some guarantees (environment) and not others (social issues).

Finally, the issue of credibility was raised by those in favour of opening the EU Ecolabel to social considerations. It is very dangerous under the image and reputation profile, they said, if a company holding an Ecolabel is included in a social "black list" or is simply perceived as a company that violates the basic rules of a socially-responsible behaviour. This eventuality can strongly damage not only the company itself, but the EU Ecolabelling scheme as a whole.

Other participants were against the inclusion of any kind of social aspect in the EU Ecolabel (with the significant exception of consumer health which, they emphasised, has been already taken into consideration for criteria development in some product groups, with positive results). Many reasons for this opposition were presented by the participants.
First o all, some participants pointed out that the Commission has to acknowledge that the EU Ecolabel is not successful on the market and it is not diffused among producers. Therefore, the real issue at stake is understanding why the Ecolabel is not successful as expected, focusing on the possible solutions to the barriers and difficulties met by the current scheme, based only on environmental concerns. Extending an unsuccessful scheme to other aspects can generate negative consequences and even be counterproductive. The adoption of a "sustainability" label can imply even more complicated procedures than the current ones; adding criteria for social issues can make it more difficult for interested companies to guarantee appropriate performances; marketing a scheme based on "sustainability" can be even harder, due to the uncertainties and the lack of knowledge by companies and consumers on social aspects.
Moreover, it should be considered that, for some social issues, many private labels already exists and some of them are proving to work very effectively on the market (e.g.: consumer health private labels, fair trade certifications,…). There is no need for additional labels in these areas.
The real challenge today must be to promote the EU Ecolabel as it is, and make it more accepted and diffused; once the scheme will be successful, then it could be feasible to extend it to new borderlines.
It has to be noted, though, that some participants replied that the choice of marketing a label focused on both social and environmental issues can also produce positive consequences: there could be, for example, an "amplifier effect" for consumers.

Coming back to those who opposed the extension to social issues, some participants emphasised that it could be extremely difficult to define product-related criteria concerning social responsibility. This concept can be applied to the corporate strategies by means of a flexible and rather wide-scoped approach, basing on general principles and guidelines for action; but when it comes to product and life-cycle issues, it will be very difficult to focus on specific criteria and, especially, quantitative requirements.
These considerations triggered a discussion on the possibility to elaborate sustainability-related criteria for products. A positive experience relating to a sustainability label was presented: although this initiative (undertaken in Belgium) is still at an early stage, the attempts in defining social-criteria by means of a life-cycle approach have been fruitfully carried out.
In this case, a general consensus emerged from the participants on the need for the Commission to work on possible approaches to develop such criteria. It was agreed by most of the stakeholders that, if any effort is eventually to be made to include social-responsibility criteria in the scheme, this has to be made in a "soft" way.
A proposed solution was to focus on some "baseline" social criteria, as prerequisites to access the EU Ecolabelling scheme. Another proposal was to introduce requirements regarding exclusively consumer information on social issues. These solutions were opposed by many participants, who identified some drawbacks, due to the high uncertainty and heterogeneity (what social "baseline"?) and to the discretional power given to the companies (the power to decide if or not to include information on social responsibility can affect transparency).

A final agreement was achieved on the general indications that this parallel session should provide to the Commission. Even if the opportunity of "opening" the Ecolabel to social issues is very controversial, there is consensus on the fact that:

- the "moral" and ethical basis for introducing a label including other forms of producer responsibility (in addition to the environmental one) or even "sustainability" at large, in the long run, is undisputable; the doubts and oppositions are on timing (the incoming revision seems to be too early), methodological choices (not as an extension of the EU Ecolabel) and operational ways (what kind of criteria) to do it
- consumer health is an issue that can be easily integrated into the EU Ecolabel, especially for some product groups
- any eventual attempt of introducing social responsibility issues must be carried out with a very "soft" approach, the EU Ecolabel must continue to be a label essentially based on environment-related issues

f) The EU Eco-Label and the national schemes (13 participants)

Moderator and rapporteur: Anette Petersen (Valor and Tinge)

Question 1: The EVER study identifies a strong need for harmonisation between the EU Ecolabel and national Ecolabelling schemes (ISO type I multi criteria / single criteria) should be included in an harmonisation process / initiative with the EU Ecolabel?

Question 2: how can harmonisation of national Type I labels and the EU Ecolabel be pursued and implemented on an operational level? In particular: which parameters should be included? How to overcome barriers?

Question 3: Our study also shows that the interviewees are interested in other types of labels, such as ISO Type III (e.g: EPD – Environmental Product Declaration) and Type II (self claims) and believe that the EU Ecolabel can play a role in connection with them. Is there a need for harmonisation (or an opportunity for integration and mutual reinforcement) with these labels and how can this be pursued?

Participants believe that the Flower should keep on setting the standard (i.e. labels at national or supranational level should follow criteria and criteria level from the Flower). The performance levels can be differentiated according to geography and culture and/or differentiated among product groups
Many argue that labelling is not a goal, but a mean. Moreover, it's been stressed that Type I and Type III are different; while Type I sets performance requirements; Type III gives only information.
The Commission should develop a common framework (umbrella) based on a stepwise approach starting with EMAS (organization learns how to work with significant aspects and impact, how to involve employees and other interested parties, how to work with procedures, how to communicate externally etc.); step 2 could then be Type III i.e. communication on products and their performance but no requirements on performance levels; step 3 could then be Type I with performance requirements; significant aspects, EPD parameters and performance criteria in ecolabelling should be coordinated for specific sectors and product groups
It's been expressed the opinion that the verification of EMAS, Type III and Type I could also be better coordinated
The development of the previously mentioned stepwise approach seems good for industrial organizations as part of an environmental strategy and verifiers could be core ambassadors for the model.

EMAS WORKSHOP - *Brussels September 27, 2005*

List of participants

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ECOLABEL WORKSHOP - *Brussels September 26, 2005*

List of participants

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CHRISTIANSEN	Kim	Expert
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EVER:
Evaluation of EMAS and Ecolabel for their Revision

Annex III

EMAS AND ECOLABEL CASE STUDIES BASED ON "ON-SITE" VISITS

Consortium leader: IEFE – Università Bocconi

Partners: Adelphi Consult
IOEW, Office Heidelberg
SPRU, Sussex University
Valør & Tinge A/S

December 26th 2005

Introduction

A crucial part of the EVER study has been devoted to the carrying out of five on-site visits, aimed at analysing in-depth some experiences of particular interest. These experiences focus on the application of EMAS and the EU Ecolabel regulations by organisations, groups of organisations, institutions and other stakeholders.

The aim of the on-site visits, and of the connected case studies presented in this report, was to enrich the overview provided by the EVER interviews with a more detailed insight of interesting experiences. The experiences were identified and selected by the EVER consortium on the basis of their capability to offer more specific indications regarding strengths and weaknesses of the two voluntary schemes, as a basis to propose the options and recommendations for the revision (see report 1).

As we will see in the following paragraphs, the proposed case studies build upon the failures or the successes of some approaches that can be adopted, both at the company and at the system level, to support the development of the two schemes.
From a methodological point of view, the EVER consortium elaborated specific guidelines for the on-site case analysis, in order to tailor the investigation to the features of the experiences being object of the study. The guidelines mainly consist of open semi-structured "research questions" covering selected topics, that are summarised by the titles of the sub-paragraphs of each case study.

As far as Emas is concerned, the selection of the experiences to investigate took into account the need to consider different "typologies" of organisations. As a result, not only companies (Hanover Displays Ltd) have been visited, but also companies operating in clusters, as that of paper industry in Lucca, Italy, and Emas in Public Administrations has been investigated, as well.

A similar approach has been adopted for the EU Ecolabel, as well. The research team analysed both a single organisation (National Procurement Ltd) playing a crucial role in promoting the label and a whole sector, assessing the German situation of the Flower for washing machines.

The following paragraphs present the reports of the five on-site visits carried out by the EVER consortium.

CASE STUDY 1

Hanover Displays Ltd. Lewes, East Sussex UK.

"Visions of EMAS adoption by a non-participant"

by SPRU – Sussex University

1.1 Motivation of case-study

EVER interviewees, especially in the United Kingdom, have argued that one of the main barriers to EMAS registration is the lack of differentiation with the internationally accepted ISO 14001 standard. In our case study we have decided to focus on a technological leader in its market that has not adopted an Environmental Management System yet – even ISO 14001. Our aim is to assess the reasons why the company has not found it necessary or useful to integrate environmental management into its quality management systems, and determine what sort of modifications in EMAS would constitute drivers for its implementation over competing alternatives such as ISO 14001 or BS 8555.

1.2 Hanover Displays Ltd. Lewes.

Hanover Displays Ltd. is the leading European manufacturer of electronic displays for public transport systems: it supplies customers in Europe, the Middle East, Asia and Australia, and has received several awards for its innovativeness. Although its main production centre is located in Lewes, it has subsidiaries in Spain, France, Italy and Australia. All parts are manufactured in the UK and sold through the subsidiaries.

The company has 28 employees in the UK and turnover last year was just over £10m/year.

The company makes all of the display equipment that it sells. Some signs are based on flip-dot technology, but increasingly they make use of LED lighting. These are assembled from individual LED lights on site in the Lewes factory. Products are guaranteed for 10 years and this is part of the way that they differentiate their products from those of emerging competitors in China.

1.3 Environmental challenges and the company's response

The company has faced some considerable technical challenges of an environmental nature that have stemmed from new regulations. The company uses thousands of printed circuit boards that need soldering and cleaning. A new European directive has required the introduction of lead-free solders by summer 2006, and the company is in the process of converting its production. This has involved considerable capital expense and they have been early adopters. Also, once the decision was made to switch, they decided to switch all production even though in some of the markets they sell to (e.g. Hong Kong), lead-free solder is not required.

Their main environmental impacts are waste, energy use, chemical use and packaging. They separate all their waste – the big ones are cardboard, paper, packaging and metal. They have to pay for this to be taken away, even the metal. With the latter they used to receive payment from a scrap merchant but prices have fallen. Also, they powder coat the metal making it more difficult to re-process.

There has been some correspondence with a client over styrene use in packaging, which resulted in continuing with the same material rather than a biodegradable alternative due to concerns about the need to protect the product in transit.

Energy use is set by the type of machinery they use to make their signs, and there are few possibilities for cutting energy use.

They are controlling chemical use in line with the new regulations for lead-free solder. The other main chemical they use is within the machines for cleaning after the solding process.

1.4 Environmental management systems

The company has ISO 9001 because their customers demand it: when bidding for contracts it is often a matter of 'if you have ISO9001 go to page 46 (missing out all the intervening pages), and for some customers it is a requirement.

By contrast, the company has never had a customer require or request ISO14001 or EMAS. The chief engineer is aware of ISO 14001 and has a copy of the specification and requirements to register, but he has never seen the need to implement and it would require a significant investment of time so the general attitude is 'why bother?' He also thought the material on 14001 'not well written' and involving 'a lot of admin for not much gain'. The material is 'very general' and does not provide many ideas on how to actually improve environmental management and performance.

The company was not aware of the requirements of EMAS but again has never had customer demand for this so there is little chance it will be interested in adopting it.

Some customers such as those from the Scandinavian countries are occasionally concerned to ask about environmental management and performance, and Hanover is happy to help in these cases, for example by showing people around the factory. They have received visits from companies such as Scania. This has always been sufficient to meet the customers' demands.

Supply chain management is a serious concern when regulations require an auditable chain to show that products are, for example, lead free. The company uses up to 50,000 different components and these need to come with 'declarations' that guarantee that they are e.g. free of lead solder.

Communication with other stakeholders: the company occasionally receives a request to host a student from abroad but they have never had any requests about environmental performance from local people or government.

Employee involvement: the staff is kept aware of the need for health and safety with respect to machines, clearing rubbish to avoid trip accidents etc and participate willingly in sorting waste for recycling. So there is no apparent anti-environmental sentiment in the firm, most people join in when appropriate, but it just is not thought to be an important impact of the firm.

1.5 Main conclusions

- Environmental strategies are driven by regulation; the adoption of management systems is driven by customer demand. There is no perception of a need to go beyond the environmental management aspects required by a regulation that is perceived to be very stringent.

- Communication of environmental aspects and management is fulfilled via visits to the plant and face-to-face contact but there is not a great demand from customers and other stakeholders.

- Communication with suppliers for the management of environmental aspects is handled via declarations about the contents of production inputs, not Environmental Management Systems, which focus more on the environmental soundness of production processes.

- Customers do not require EMS certification, and awareness of EMAS and its specific characteristics is non-existent.

CASE STUDY 2

On-site visit in Donaueschingen /Germany

"EMAS in the public administration"

by Walter Kahlenborn and Ines Freier – Adelphi Consult

2.1 Motivation of the case study

In the EVER study the Public sector was one key group of EMAS participants which has been investigated more into depth. The on-site visit in the Municipality of Donaueschingen was conducted in order to deepen the insight into public administration, its organisation, motivations for - and implementation of EMAS. Especially the question of benefits and barriers was a central issue of the interview.

2.2 Municipality of Donaueschingen - Organisation, motivation and implementation of EMAS

2.2.1 Organisation

The Municipality of Donaueschingen is situated in the south-west of Germany, near the Black Forest. The municipality has 21,500 inhabitants and an area of 104 square kilometres.

The city council looks back on a long history of environmental protection, starting in 1992 with a first programme for climate protection, but also an energy management and reporting on energy use, investment planning and a publication of an energy report. In 1998 environmental quality goals for the municipality were constituted, and it became a member of the Alliance for Climate as the Aalborg Charta was signed.

The municipality has a staff of 284, 172 persons of them are employed full-time and other 102 part-time. (attending to the concerns of EMAS).

2.2.2 Motivation for EMAS participation

Asking for the reasons of participating in EMAS, the interview partners mentioned the following two advantages:

1. A general improvement of the image of the city as an attractive place for direct investments together with measures in the area of education and culture derive from EMAS.
2. The systematization of all environmentally relevant activities of the municipality, especially the optimisation of administrative processes.

It should be noted that no other management systems are implemented.

2.2.3 EMAS implementation

The EMAS implementation started in 2000, its validation was in 2003, and the re-validation is planned for 2006. The participation was supported in the framework of an EMAS promotion project financed by the Federal State Baden-Württemberg. The project had a group-based approach. The municipality was member of a group composed only of public bodies.

The EMAS working group within the municipality consists of the head of the administration (a general environmental manager), an energy manager, a manager for nature conservation, a waste manager, a water manager and an H&S manager. The head of the administration ensures that all the measures are implemented; the manager for nature conservation plans and organises the EMAS participation; both the Mayor of the town and the local parliament are informed and support the EMAS implementation.

Concerning the environmental programme, the municipality acts as an organisation with two fields of action, procurement and energy. The municipality can also be seen as a political actor for environmental protection in the fields of action town planning, traffic and water.

The environmental target is mainly to continue existing measures, as well as the revision of administrative procedures. Measures therefore are regular internal audits and the publication of an environmental report.

2.3 Benefits

The benefits of the EMAS participation are manifold. In a nutshell there can be enumerated three mayor points.

1. There are improvements of environmental effects, mainly concerning the management of hazardous materials and the necessary documentation; but also improvements of H&S management e.g. by a working group on H&S are claimed.
2. Organisational improvements are observed such as the better implementation of existing administrative guidelines for environmental protection.
3. The advantage of cost savings by efficiency gains is comparatively marginal, because energy management has been implemented already for 15 years.

2.4 Innovative aspects

2.4.1 Broad scope of EMAS

As a first aspect the interview partners highlighted the broad scope of EMAS. The local actors recognised that the municipality also plays a political role and that the environmental aspects have to be considered, too. This is why EMAS covers a broad range of environmental aspects, but only some of them are selected for continuous improvement, thus no aspects are left out but only significant aspects are improved. Direct and indirect impacts can be distinguished.

2.4.2 Direct aspects

The direct aspects include almost all public buildings such as schools etc., exceptions only arise from the limited scope of the verifier.

2.4.3 Indirect aspects

Regarding the indirect environmental aspects, the interview partners named voluntary measures of the municipality included in EMAS; e.g. the promotion of energy saving housing. Furthermore EMAS is included in planning decisions (e.g. in the planning of a housing area or the nature conservation planning) and it is also linked with energy and facility management. Also the Green procurement (for example recycling paper and lists of building material) is mentioned as an indirect effect.

Moreover Health & Safety issues are also covered.

2.4.4 Soft location factor

A sound local environment qualifies as a soft factor attracting investments. Therefore EMAS is supported by local policy makers.

2.5 Difficulties / Barriers

2.5.1 Employees must feel confident

Referring to possible difficulties and/or barriers, the interview partners mentioned the problem of the conviction of employees for them to see that documentation is necessary.

2.5.2 Broad coverage of EMAS

Also, there is a risk that a narrow scope of the verifier prevents that some organisational entities such as the forest management or the fire guards are covered by the EMS.

2.5.3 Adequate administrative guidelines and time management

Pressure of time can become important: the registration with the local chamber of industry and commerce took a long time because the competent body did not want to accept the definition of sites, (which was needed because all buildings are covered by one adminitrative entity as one site).

2.5.4 Report as a tool?

The interviewees also revealed that it was difficult to use the environmental report as a communication tool with the private sector.

2.6 Conclusions - Lessons for the revision of the scheme –

Taken together we have the following advantages of an EMAS for public institutions:

- The existing structures of the public administration can be used (e.g. for marketing purposes), which makes it easier for public bodies to become acquainted with EMAS;
- The registration with public bodies e.g. the Ministry of the Environment of the Federal State is possible;
- The definition of sites / organisations can be adapted to the needs of the public sector;
- The language can be adopted to the needs of the administration;

- Guidelines for public bodies make sense, for example for the identification of indirect aspects, (because the investigated municipality is an outstanding example how a wide range of aspects is covered, other municipalities are not able to implement such a broad EMS);
- Different structures for the external audit become feasible (e.g. peer-reviews which are less costly than the verifiers and contribute more to capacity building in the administration).

2.7 Sources

The case study is based on personal interviews with the Mayor of the town Donaueschingen (Germany) Mr. Kaiser; the Head of administration Mr. Zimmermann; the Manager for nature conservation Mr. Bronner and the energy manager; 18th of October 2005. The text has been approved by the interviewees.

CASE STUDY 3

Paper industries operating in the industrial district of Lucca, Italy

"A cluster approach for the application of EMAS"

by Fabio Iraldo – IEFE Bocconi, Milano

3.1 Background

The innovations introduced by the new Regulation 761/2001 which were broadly interpreted in Article 11, and later officially incorporated in the Commission Decision of 07/09/2001, identify Emas as a key strategic instrument in implementing local policies intended to improve the environmental performance of cluster and/or "territorial areas" in which similar small companies are concentrated. If we consider the relationship between the companies operating in a given cluster and the environment, we can see that, on the one hand, they can benefit from the possibility of defining environmental policies by focusing on the environmental impact and of enhancing the potential to develop competitively, due to the similar productive activities they carry out.

Before the first revision, the possibility of applying Emas to the Industrial Areas was experimented in few cases both in Italy and in other EU countries. In Italy, we can mention the case of the Bayer Production Pole in Filago where companies with numerous diversified productive activities signed an agreement to appoint an Intercompany Environmental Committee. Another recent case regards the registration of the tourism area of Bibione. Cases in the EU include, for example, the Gendorf Chemical Pole in Bayern, where the firms worked closely together for Emas implementation. All these experiences, though, were based on a broad interpretation of the concept of "industrial site" taken to mean an "extended site" (comprising the total number of industrial sites located in the area), and therefore are not applicable as such to a wider cluster.

Article 11 of Emas explicitly refers to the need to encourage SMEs to adhere to the scheme, including those enterprises concentrated in well-defined geographical areas. It also refers to the role that local actors, outside the single organisation that adheres to Emas, can play in identifying and evaluating the environmental aspects linked to a certain environmental context. The Emas Regulation recommends local authorities work together with the other private actors in order to share the results of the analysis made on the environmental aspects of the area. Finally, it is pointed out that SMEs can use the information provided by the local authorities or intermediate institutions to define their environmental programme and set the objectives and targets of their Emas management system. This last concept is taken up again and explained in the Annex I B to the Regulation, which points out that organisations can base their actions on local, regional and national environmental programmes, and in this way explicitly gives enterprises the opportunity to rely on actions of a collective nature. Following the regulation guidelines, a Commission Decision was issued in September 2001 and listed the criteria to identify the entity to be registered. At point 7, it

provides the basis for identifying the suppositions for initiating the phases required to promote Emas in a cluster.
In Italy, some important initiatives were undertaken at the institutional level to develop such an approach. In addition to some experimental activities, such as the one described in the present case-study, the two most relevant initiatives are the methodology proposed and officially adopted by the Regione Toscana (Tuscany region) for the adoption of Emas in industrial districts and the official position of the Comitato Ecolabel – Ecoaudit, Sez. Emas Italia (the Emas Competent Body) on the "Ambiti Produttivi Omogenei" (homogeneous productive areas).

3.2 Case study profile

According to these suggestions and indications, in the Lucca paper-producing territorial cluster (located in the Tuscany region in Italy), an innovative approach for co-operative environmental management has been recently proposed. In particular, within the scope of a LIFE-funded project (PIONEER – Paper Industry Operating in Network: an Experiment for Emas Revision), a number of industrial and non-industrial organisations (local authorities, service providers) have implemented an environmental management system in compliance with Emas by relying on some co-operative and collective actions (such as common procedures, shared resources, collaborative training initiatives, etc.). This enabled all the local "actors" that meet difficulties in participating in Emas (the SMEs and the organisations operating in sectors where Emas is not diffused, such as the local authorities and the service providers) to overcome the barriers in adopting an EMS and, simultaneously, to improve their capability to co-operate in a better co-ordinated and integrated management for local sustainability. These results have been achieved by means of a sort of "Emas for Cluster" approach (a relevant innovation based on the abovementioned suggestions of the Commission Decision), on which each individual EMS of a single organisation can rely. In this way, the project is fostering the interaction and co-operation between all the different local actors interested in the integrated management of the environmental problems (industry, private service sector, public utilities, local authorities and institutions, universities, research centres, etc.).

This on-site visit focused on some companies operating in the territorial area of the paper-producing industrial cluster of Lucca, in the Tuscany region. This area is extended on a geographical surface of 750 square kilometers, including the territories governed by 12 Municipalities. More than 130 paper producing or processing firms (most of which SMEs) are located in the area, with a high level of aggregation, a considerable density per km^2 and with an occupational capability of more than 5.800 workers employed in the paper sector. In this area, that concentrates more than 80% of the national production of tissue paper, the industrial activities are deeply rooted in the social and institutional local context, and the production sites are mixed and integrated with many other civil, commercial, logistic, administrative and services activities. This is the typical structure of a particular cluster: as it is called in the United Kingdom and in Italy, an "industrial district". The industrial systems of many EU countries are characterised by this territorial forms of production aggregation.

In the case of the Lucca, the clustering of paper producers was due to the considerable local availability of water (a necessary input for this sector). The concentration of a large number of firms operating in the same sector causes relevant environmental impacts and, simultaneously, offers some opportunities of co-operation for improving the same impacts. This holds true for all the

territorial areas that possess the characteristics of a cluster, even if it is not located in a given and well-defined territorial area (e.g.: a supply chain).

3.3 Motivations and objectives

The experience of the Lucca cluster aimed at experimenting a potentially effective "Emas approach for Clusters", which could be reproduced in every other similar cluster (composed of many organisations that operate in the same context: a territory, a supply chain, etc.).

The premises of the analysed experience are a number of synergies that can be obtained at the management and technological level to promote the inclusion and diffusion of innovative elements based on the partnership between the different firms operating within a cluster. It is a question of exploiting the "co-opetition" attitude (co-operation between firms which also compete) and the collaboration between the enterprises and the other economic and institutional actors. A characteristics that favours this approach is the tendency of promoting the spread of information and sharing knowledge and technical resources.

Since the firms are similar and have to tackle the same environmental problems, it is then possible to rely on other synergies already existing at the cluster level. For example, at the management level, it is possible to exploit the advantages connected to the identification of shared environmental "targets", the environmental relevance of the same aspects and the existence of the same social and institutional "fabric" with which to interact. Moreover, the enterprises belonging to a cluster must comply with the same regulations, interact with the same supply chain and face the same environmental emergency situations. In this connection, there are opportunities for different entities to co-ordinate environmental management, and this could promote improved performance, lower costs and outlays linked to the environmental management of each organisation.

In addition, there are environmental scale-economies, that would result from a joint environmental management of the equipment and services shared by the enterprises in the cluster, the positive effects resulting from interacting with the citizens (due to the almost total coincidence of the companies personnel with the local community of the cluster) and the multiplying factor represented by the supply-chain integrated management, in terms of the "pull effect" larger firms can exert on the smaller and less structured ones.

This approach encompasses the implementation of the different steps foreseen by the Emas regulation *at the cluster level*, so to create a common basis for all the individual organisations that intend to use collective resources and a co-operative approach to achieve an individual Emas Registration. For this purpose, the PIONEER project provides a territorial initial environmental review, a local policy, a programme for the sustainable development of the cluster, a sort of "Cluster Environmental Management System" (made of different resources or procedures that are available for the individual organisations, e.g.: training, auditing, monitoring and communicating activities) and, finally, a Cluster "environmental statement". These elements were used by the involved organisations to facilitate their adoption of Emas on an individual basis.

A sample of organisations were selected in the cluster, in order to verify the usefulness and the effectiveness of the co-operative approach. More than 40 organisations were identified among those more motivated to achieve Emas registration and were involved in the experimental activities of the

project. The approach already enabled 2 organisations to achieve Emas registration by relying on the cluster approach, another 10 organisations already submitted their environmental statement to an Emas accredited verifier (most of them have already been validated), and many others will follow soon (the objective of the project was to achieve 18 Emas registrations).

3.4 Description of the EMAS implementation process

As an initial step was the set up of a Emas Promotion Committee for the whole Cluster. This Committee is composed both of public (e.g.: *Provincia di Lucca*) and private (e.g.: *Associazione degli Industriali di Lucca*) actors and is in charge of defining the strategic guidelines for the cluster environmental policies and of implementing all the abovementioned "common resources", in order to guarantee a co-ordinated and integrated management of environmental issues within the Cluster. The task of this Committee is that of designing and implementing a sort of common support framework ("Emas for the cluster"), in order to guide and lead the local organisations towards Registration and make them share common resources and procedures. The role of the Committee is to co-ordinate the environmental management initiatives of the different local actors, to originate the actions for environmental improvement and to favour the possible synergies between the individual management systems of the local organisations.

The Promotion Committee meets periodically and its activities are aimed at pursuing the diffusion of the Emas registrations in the territory by means of the following steps.

The second step has been the Initial Environmental Review referred to the whole Cluster. This review enabled to identify the most relevant and critical environmental (direct and indirect) aspects for the cluster. The aim of the Environmental Review of the Cluster was to support the involved organisations to identify and assess their own environmental aspects, according to Emas. This was done, for example, by:

- identifying the most relevant impacts on the local environment and assessing the "state of the environment" that is interested by the cluster activities
- identifying the significant environmental pressures exerted by the most diffused typologies of production processes and technologies adopted by the organisations belonging to the cluster
- identifying the indirect (product-related) environmental aspects trough a Life Cycle Assessment
- identifying the environmental issues that the local communities (and other stakeholders) are perceiving as most urgent and important, by means of a "in-field" survey

As a third step, the Promotion Committee defined and shared a Cluster environmental Policy that became a reference for the Emas policies of all the organisations involved in the cluster. The policy is linked to the territorial context of the cluster and expresses the commitment of all the main actors towards the continual improvement of the environmental performances within the cluster. Such a Policy meets the requirements of Emas Regulation 761/2001 for an environmental Policy of a single organisation, and therefore can be simply adopted by any actor operating in the cluster.

From the Cluster Policy some collective and co-operative programmes stemmed, pursuing the principle of continuous improvement. These can easily be taken as a reference by all the most

representative local actors in order to define their own individual Emas programmes, so to contribute to the more general Cluster programme. The Cluster Programme contains the concrete and measurable commitments for carrying out strategic and high-priority actions and measures for the whole cluster. The Cluster Programme is based on a voluntary agreement between all the most representative actors of the Emas Promotion Committee and is enacted by the same Committee with the co-operation of individual actors. In fact, all the organisations operating in the cluster can easily participate in a collective and co-operative action, undertaking it as an Emas individual programme.

By means of a sort of "Cluster Environmental Management System", the Promotion Committee also provides the involved organisations with many resources and procedures that can be shared and collectively exploited at the cluster level: training initiatives, auditing activities for the smaller organisations, local supply chain management, etc. All these actions are aimed at supporting the development of Emas on individual bases by the interested organisations of the cluster.

This action encompasses, for example, the drafting of some "model" procedures for the operational control and surveillance of the relevant activities by the organisations in the cluster. Another example relates to the many initiatives for the environmental training of the local actors that have been carried out (addressed to private and public actors). Some of the training initiatives targeted specific roles in the Cluster (corporate managers, environmental managers, public officers dealing with permits, technical and operational personnel). In addition to these initiatives, a special attention was devoted to the training of a local team of auditors. The Cluster EMS also foresees some procedures for favouring stable communication flows and exchange of information among the local actors. For example, the Promotion Committee created a website that responds to all the requests of information, complaints and suggestions regarding the environmental issues within the cluster, by any interested actor.

A last example refers to the audit system: the Promotion Committee planned the auditing activities for different purposes: to assess the compliance of the individual organisations with legal compliance, of their EMS with the Emas requirements, etc. For the interested local actors it was then possible to rely on the services of a qualified team of "territorial" auditors. This enabled especially SMEs operating in the cluster to overcome the barriers they face in terms of lack of human and economic resources.

The cluster environmental statement represents a last step that was taken in the Lucca cluster, useful to support the involved organisations and to communicate on environmental issues to the most relevant stakeholders of the cluster.

The cluster Environmental Statement is set up in two parts:

- a general section including a characterization of the territory, the most relevant environmental aspects, the Cluster Environmental Policy, the Environmental Programme and the description of the so-called "Cluster Environmental Management System" common elements and resources available
- a special "add-on" section containing all the specific information about single organizations that individually participate in Emas and a guideline on how to draft this part of the statement

3.5 Direct and indirect benefits

Most of the benefits emerging from the adoption of a cluster approach are related to resource savings and to the possibility of relying on a shared set of tools and competences for the application of Emas. The following are just few examples on how the companies involved in the PIONEER approach (that are currently achieving Emas registration) benefited from cluster-based common resources, made available by the Promotion Committee:

- *Kartocell*, a tissue-paper producer, found it very useful to perform an assessment of its most significant environmental aspects by strongly relying on the "cluster" environmental initial review, carried out during the project. This company used the results of the cluster initial review to identify the most relevant direct aspects, and defined an assessment methodology based on the relevance that each aspect had for the whole cluster, the capability of influencing the local environment (indicators provided by the cluster review) and the level of importance of each aspect according to the local communities sensitiveness (information provided by the same cluster review, basing on the "in-field" survey). These were adopted as assessment criteria by *Kartocell*.
- *Delicarta*, another tissue-paper producer, carried out the review and assessment of its environmental indirect aspects relying on the LCA that has been carried out on the locally manufactured products. This LCA was performed with a "streamlined" approach by the Promotion Committee within the PIONEER project, on both tissue paper and corrugated board (which are the two most important products of the cluster). The data and information deriving from the LCA were included in the cluster environmental review, in such a way to be easily adopted by any interested producer to identify and assess its product-related indirect aspects.
- *Cartiera Lucchese*, the first company to obtain the EU Ecolabel in Italy and now pursuing Emas registration, also relied on the cluster approach to identify and assess its environmental indirect aspects. In this case, the most useful tool has been a scheme for identifying and measuring indicators relating to the most relevant indirect aspects for the tissue-paper local industry. This tool has been prepared by the Promotion Committee and diffused to the interested companies.
- *SCA Packaging*, a corrugated board producer, particularly relied on another cluster-based tool, that was made available to the local producers: a common audit team. This activity was judged as very effective by the company, especially because it provided a relevant opportunity to rely on external competence and to compare its experience in environmental management with other approaches.
- Not only paper producers were able to take advantage of the cluster approach: two interesting examples refer to a connected supplier-sector: the manufacturing of paper-producing machinery. *Fosber* strongly relied on the environmental training initiatives carried out at the cluster level, in order to replace the training activities that the companies should have carried out on their own. Among many other involved companies, *Fosber* took part in some courses that were organized and managed by the Promotion Committee on: environmental management, external communication, environmental auditing, etc. A second example is that of *Toscotec*, another machinery producer, that strongly relied on an effective managerial tool that was diffused to all the organizations involved in the project. The *Toscotec* environmental management system, in fact, was build on the basis of some "model" and easy-to-adapt procedures referring to the main Emas elements: identification and assessment of environmental aspects, Non Compliances and Corrective and Preventive actions, Audit, Management Review, Training and Information of personnel, etc.
- Finally, it has to be emphasized that even organizations operating in non-industrial sectors can benefit from this approach, if they belong to the same cluster. A first interesting example is that of *Fabbriche di Vallico*, a very small municipality that is achieving Emas registration and, for this purpose, initially mostly relied on the "cluster environmental review", especially for that

part identifying and assessing the pressures that the local paper industry is exerting on its territorial area. A last example refers to the *Museo della Carta*, an educational institution that aims at diffusing the history and culture of the paper production. In pursuing Emas registration, this organization is strongly relying on the cluster approach. Particularly, an interesting choice that the *Museo* is making for empowering its role of "educator" in the environmental field is to use the "cluster environmental statement" as a supporting tool for all the training and communication initiatives addressed to students, companies and other stakeholders.

It has to be noted that, besides the abovementioned "direct" benefits for the organizations operating in the cluster (and interested in Emas registration), some "indirect" benefits are produced for the whole institutional and social contexts of the interested territorial area, such as:

- a higher level of knowledge sharing and networking between the Emas organizations operating in the cluster
- a significant "multiplier" effect on all the other organizations of the cluster (higher sensitiveness, involvement in improvement actions, stakeholder pressure on the laggards, etc.)
- a wide availability of common resources and tools for environmental management, that can be made available to any interested organization
- a strong partnership between public and private actors of the cluster and a relevant capability of negotiating and agreeing upon the most effective environmental policies for the interested area
- a better informed policy making by the local institutions, targeted at the specific characteristics and environmental priorities for the local industrial system
- a higher stakeholder involvement, with particular reference to the increase of environmental awareness in local communities and citizens

3.6 Difficulties and barriers

The most relevant barriers in the implementation of the cluster approach have been the following:

- It is difficult to identify an actor within the cluster that is motivated enough to be the "first mover" in taking (and maintaining) the responsibility of developing, promoting and diffusing common resources and tools for Emas application. In the case of the Lucca cluster, the first mover was an ad-hoc created Committee, composed of different local actors. In other cases, a public institution or a large company can be motivated enough to take the initiative.
- In the cases, like the Lucca cluster, in which a Committee is created, difficulties may arise in the governance of this newly instituted body and in the negotiation process that is aimed at defining the environmental policies and strategy for the whole cluster.
- A relevant difficulty is also linked to the economic resources that are needed to support the activity of the Promotion Committee and to provide the common tools, competence and other resources to the whole cluster. In this case, a crucial support was given by the LIFE funding.
- Another barrier can be represented by the high number of organisation operating in a cluster (sometimes belonging to many different sectors and branches) and to the their heterogeneity, that can prevent the possibility of creating and diffusing common resources, knowledge and tools.
- A last barrier can be represented by a "free riding" problem. Even if many companies in the cluster will be interested in approaching Emas and, therefore, in using the cluster-based resources and tools, it might well be that some companies will still be not motivated enough and, therefore, will not benefit from this approach.

3.7 Conclusions

The main lessons learned for the revision of Emas are the following:

- The cluster approach proves to be effective in stimulating and supporting the adoption of Emas and, more in general, a better environmental management by the interested companies.
- In order to start up and maintain this particular networking approach, there needs to be a strong motivation by one or more actors in the cluster that are able to take the initiative and make shared resources and common tools available for the involved organisations. This motivation could be an Emas-related recognition for the "first movers" (e.g.: in the Lucca case, for the Promotion Committee).
- In addition to that, accredited verifiers must be fully involved in the application of this kind of approaches, in order to make it possible and promote the use of shared resources and common tools by all the organisations of a cluster. This can be done, for example, by training and accrediting verifiers in such a way to enable the validation of the cluster-based resources and tools and make them available for all the organisations involved, with no need of further verification and validation.

3.8 Sources

The information for this on-site visit is based on interviews with the Promotion Committee and with many representatives of the Lucca cluster (belonging to all the above mentioned institutions and companies), as well as on the data and material available on the website of the LIFE – PIONEER project (www.life-pioneer.net).

CASE STUDY 4

National Procurement Ltd.

"Use of the Eco-label in Public Green Procurement"

by Birgitte Nielsen – Valor & Tinge

4.1 Motivation of case-study

In the EVER study several interviewees have mentioned Public Green Procurement and the Public sector as frontrunners as the factor, which could give more companies an incentive to get an Eco-label license. This case illustrates the possibilities and the barriers of using the EU Ecolabel in public procurement.

4.2 National Procurement Ltd. Denmark

National Procurement Ltd. Denmark is a commercial company owned by The Danish Ministry of Finance and The National Association of Local Authorities in Denmark and established in July 1994. The core service of National Procurement Ltd. is a subscription arrangement offering public organisations advantageous purchasing terms and conditions among an assortment of specially selected products and services. In return, the suppliers get an attractive possibility to sell their products and services to the public sector on a contractual basis.

National Procurement Ltd. Denmark ensures the public sector an adequate purchasing practice resulting in financial savings, safe, well-considered product selections and rationalised working processes. The primary aim is to make public procurement more efficient so that the sector as a whole obtains purchasing savings and the suppliers are offered an attractive possibility to sell goods and services.

The customers of National Procurement Ltd. are institutions in state, county and municipality and environment and energy issues have priority in their purchasing decisions, because of regulation and voluntary agreement. The National Procurement plays an important part in providing the subscribers with framework agreements, which include environment and energy issues. Environment and energy aspects are included in all the framework agreements wherever possible and relevant. This is possible, mainly because of the volume of the purchase.

National Procurement Ltd. Denmark has a staff of 40. National Procurement has 45 framework agreements covering a purchase of expected almost 1 billion Euros in 2005. Half of the purchase is related to IT, data and telecommunication – the rest is mainly energy (ex. fuel and electricity), food

and beverage, furnitures and official journeys. More than 8500 public organizations are customers (subscribers) and 250 suppliers are part of the framework agreements.

4.3 We support the EU Ecolabel because it gives us some advantages

We support the EU Ecolabel for five reasons:

1. The criteria are based on life cycle assessments – a analyzing task we would never be able to undertake ourselves
2. The criteria are credible being set by an impartial group of experts – and we do not have to create criteria ourselves
3. License holders are controlled by 3. party – a controlling task we do not have the resources to undertake
4. The Ecolabel is easy to communicate to our customers – in our product catalogue products with the EU Ecolabel are marked with the logo.
5. The EU Ecolabel is the only way forward – only one European label – all European labels should be joined or harmonized.

4.4 We integrate Ecolabel criteria in our tenders and framework agreements

Wherever relevant our tenders include environmental requirement and if possible the requirement will refer to either one, several or all Ecolabel criteria for the product group with reference to the criteria document.

The problem emerges when we ask for documentation for meeting the requirements. On one recent tender on IT products we got 800 pages of documentation showing that the suppliers meet the Ecolabel criteria, because they do not have the Ecolabel.

How can anyone find time to go through 800 pages of documentation? It is not a feasible situation, but we need the documentation since we do not trust all suppliers. It is understandable if some organisations are tempted to not ask for documentation.

4.5 Lack of political commitment is a barrier for Public Green Procurement

We think that Public Green Procurement needs strong political backing to give the public administrators the authority to put it into practice.

A new survey on green public procurement in Denmark (which will be released in a few weeks) shows that the number of governmental agencies and institutions that have a green procurement policy has decreased over the last 4 years. In that same period the central government have had less (or no) focus on green procurement.

The EU Commission has recommended the Member States to produce a Green procurement action plan, but stronger requests are necessary if we expect to see some action.

4.6 The knowledge of the Ecolabel should be much higher

It would be much better for us if many more suppliers had the EU Ecolabel – it should be much better known and used. The Member states' competent bodies or others in charge should make a much better effort to remove focus from products (ecolabel criteria) to customers and suppliers – go out and talk to the producers, so they face the opportunities. The people in charge of the Ecolabel should look at the label as a product they should market and sell and they should employ marketing people, who knows how to brand and market a product. For the time being we do not need more or different criteria – we need more licenses.

4.7 Economic incentives should support the label

At the moment we have a campaign on A++ refrigerators and deep freezers in Denmark, where the consumer gets a discount of 140 Euros if they buy an A++ white goods. This is an eye-opener for consumers on the A-G labelling and the campaign is promoting the "best in class". We have never seen anything similar and as efficient for the Ecolabel and the license holders are not promoted. In fact economic incentives in having the Ecolabel would create a bigger demand for the label.

4.8 The force of habits is strong

We often see that see environmentally sound products are bought in smaller quantities, which makes it difficult to negotiate a good price and the distribution becomes very expensive. Often price is the argument for not buying environmentally sound, but if the purchase could be organised differently better prices could be gained especially if forces could be joined.

4.9 Sources

The case study is based on an interview with Environmental Consultant Rikke Dreyer, National Procurement Ltd. – Denmark. 1st of November 2005. The text has been approved by the interviewee.

CASE STUDY 5

Whasing Machine producers in Germany

"German situation of the EU Flower for washing machines"

by Frieder Rubik and Dirk Sheer – IOEW, Office Heidelberg

5.1 Background

Employing an aggregate workforce of over 810,000, Germany's electrical and electronics firms manufacture more than 100,000 different products and systems, including micro-electronic components as well as systems to generate, distribute and transform electrical power, electrical household appliances, automation systems, lamps and luminaires, electrical and electronic medical equipment and consumer electronics, computers, automotive electronics or traffic control systems.

In the subgroup of washing machines, important actors are the producers and importers which sale washing machines on the German market. The important producers/importers are the ones with a larger market share, namely Miele, Bosch and Siemens Hausgeräte (BSH), AEG which is owned by Electrolux and Whirlpool. Beside the producers, mail order business is an important primary actor because they buy products form the producers and sell a part of them on own risk with an own brand name. Important German mail order companies are Neckermann, Otto, Quelle.

The companies are represented by the 'ZVEI- Zentralverband Elektrotechnik- und Elektronikindustrie e.V.', the German Electrical and Electronic Manufacturers' Association. It provides specific information about the economic, technical and regulatory framework conditions of the electrical industry in Germany.

5.2 Description of the Ecolabel implementation process

The European eco-label scheme has elaborated washing machine requirements for an eco-label as one of the first examined product groups already in 1993. The original requirements have been updated some years later in 1999 and have replaced the former ones. In March 2003, a decision has been made to prolong the validity of the criteria without change until 30 November 2005.

This key element of the revision was to make the criterion on energy use more selective, as now only machines that are 10% better than the energy label class A can qualify (i.e. A+). This is challenging for manufacturers, but also gives them an opportunity to distinguish their products from other class A machines now on the market. In addition other criteria have been introduced (spin drying efficiency, noise, flame retardants, free take back, life-time extension) or made stricter (water consumption, washing performance), giving a comprehensive and balanced set of criteria that guarantee that an eco-labelled washing machine meets the highest possible environmental standards.

5.3 Current state

The performance of the EU-Flower for washing machines is disappointing. Actually, manufacturers do not apply for the EU-Flower, in the past the British company Hoover applied for the Flower with two washing machines, but their license run out.

The German Blue Angel elaborated requirement end of nineties, but due to their non-acceptance on the market, they have been cancelled recently. In Scandinavia, the Scandinavian company Asko Cylinda AB[1] uses the Nordic Svan for three models. In the past, the German producer Miele applied also the Svan for two washing machines, but decided not to prolongate their licenses.

In general it is told, that a lot of washing machines sold on the market could fulfil the requirements, but they do not apply for the Flower.

5.4 Direct and indirect benefits

Due to the fact that there are nearly no eco-labelled washing machines both on European and member state level, no *direct* benefits can be reported. Manufacturers having used an eco-label in the past do not report on any increase of sales.

Indirect benefits might arise. Manufacturers will be informed on the environmental priorities of stakeholders like environmental NGOs, their requests, priorities and strategies. The eco-label could also be used as "door opener" to improve market entry.

5.5 Difficulties and barriers

In the following we will focus on several difficulties which hinder eco-labelling of washing machines, we cluster them into several categories:

5.5.1 Business strategies and supply side structure as barrier

The *marketing strategies* of German washing machine producers have a clear preference for their own and self-controlled marketing tools which are embedded in a coherent concept to perceive their products as brand. The application of an eco-label like the Flower could have some undesired effects, namely:

- Reduction of unique selling position of a company because the products of several companies could apply the same label;
- Discrimination of products for which the producer has not applied for an eco-label of the same product group.

Another influencing factor is the *market structure*: The German and also the European markets for white goods are highly concentrated, “change agents”, who are willing to change existing routines and markets, i.e. who are willing to change the settled structures (e.g. new competitors, new retailers, new networks among producers/retailers) are missing. Also the recent new Asian and Turkish competitors focus on the low-price segment and do not try to apply eco-labels as positive differentiation argument on the market.

The *internationalisation* and (at least) European dimension of trade is supported by the so-called

[1] Asko belongs to the Italian Antonio Merloni Group.

"Platform strategy", i.e. a production strategy which allows producing washing machines all over Europe for different markets and target groups. Producers indicate that this strategy has the consequence that the real target country is not clear and that any assessment of the compatibility with eco-label requirements would be impossible.

5.5.2 Demand side "poor" knowledge as barrier

Producers argue that the first *priority of consumers* is the brand name: "Only the brand counts". Their perception of consumers is that they prefer to stick to the brand and not to environmental characteristics. Innovators on the markets would try to position themselves by price policy and not by environmental features because this is not requested by the demand side. Producers miss intensive marketing efforts and campaigns to increase the knowledge on eco-labels and especially the Flower.

Another, related point is that *consumers* do neither *care for the eco-label nor ask for the criteria* they are based upon. The dominant criteria is either the price at the lower price segment or the brand at the higher price segment.

5.5.3 Missing integrated policy approach

Producers fear that the requirements of the eco-label scheme are perceived as an *unintended agenda setting for environmental policy* and its perception of this product group. They would stimulate policy and environmental stakeholders to consider these criteria as environmental "hot spots". As a consequence, environmental policy tools could be applied. The consequence of an application of the EU-Flower for washing machines could be that they are regarded as an environmentally dangerous product.

In general producers prefer the *energy label*; their experience is that the label is informative to support consumers in their decision-making processes. The preference for the energy label (and also the application of positive test reports of, for instance, the German Stiftung Warentest) is a clear and important barrier for eco-labels: It is perceived that eco-labels inform on similar aspects and do not offer any additional information. Another argument against eco-labels is that they do not consider quality aspects of products whereas the test reports and notes of the Stiftung Warentest consider them.

Beside the energy label, different other labels are applied for washing machines, among them environmental ones, which increase the information overload of consumers. The new framework Directive on *Energy using products* (EuP, Directive 2005/32) will be implemented in the next years and also washing machines are foreseen as a "candidate". In this case, the fulfilment of the requirements – documented by an appropriate sign like "CE" – will "contain" environmental aspects and stimulate additional environmental improvements. It is believed that the right of an eco-label like the Flower to exist will further negatively influenced.

Another influencing factor explaining the present failure of the ISO-type I eco-labels is *insufficient integration* between criteria and environmental targets and the lack of integration of different tools of the toolkit of an Integrated Product Policy. Although the criteria are updated periodically, they do not explicitly refer to national and/or European targets. The European energy label might be interpreted as an exception because the reduction of energy consumption is one important European target. The energy label with its focus on the increase of the energy efficiency corresponds to this.

5.5.4 Characteristics of the Flower as barrier

The *elaborated requirements for the EU-Flower* consider several environmental issues. According to the opinion of the manufacturers they are too widespread and do not concentrate on the most important environmental issues. Some requirements, especially the design and recycling ones, are regarded as unworldly because they prescribe a specific waste policy which is not possible to be realised. The plethora of requirements does not deal with possible trade-offs among the criteria themselves.

Producers hint to the recent *dynamisation of the market* which is characterised by short(er) innovation cycles. Such an innovation/re-design period is short (12 – 18 months) whereas the eco-label requirements are fixed for several years. That means that the requirements are not compatible with the market dynamics. However, often the innovation is more a type of a re-design strategy. That means that the outfit of washing machines is updated, but that the “interior” remains more or less the same. But we think that the domestic appliance industry prefers to prevent any impression of insufficient dynamics.

Costs are another influencing factor for the application of a label. The costs of voluntary eco-label schemes encompass fees for using the label (connected to turnover), testing and verifying costs and also business-internal costs (e.g. staff, brochures). They are regarded by producers as a bottleneck. Some companies refer to the fees, whereas other mention the verifying costs and the necessity to update these things after new models come on the market. In contrast to these costs are the benefits: Producers do not see any economic advantage in using an eco-label. as far as public standing and increase in product sales are concerned.

Another influencing factors is the *format* of the label. The present format of the Flower is considered as a real barrier against their adoption. It is strict and does not inform on the background, i.e. the requirements and the importance of the use phase. In contrast to the Flower, the energy label format is a combination of quantitative, qualitative and ranking information, containing several detailed aspects. Moreover, the energy label focuses on the use phase, i.e. the most critical life cycle phase of household appliances. It is clearly stated that the energy label is an effective product information tool and that this is one major reason for its “success”.

5.5.5 The role of stakeholders

A further influencing factor is the *role of stakeholders*. Although NGOs are oriented towards a reduction in energy consumption, specific activities pushing producers to improve their washing machines have not been taken in recent years. If they consider the “washing system” at all, then they concentrate on the textiles and the detergents.

5.6 Conclusions

The main conclusion is that the often claimed "better regulation" need to be applied also for this – "small" – example in a double sense: On the one hand, it is necessary to take care for European consistent requirements, especially on this market of washing machines, that means to harmonise the requirements of the Flower scheme with other national eco-label schemes. On the other hand, the role of the Flower in an integrative policy approach should be reflected.

5.7 Sources

The information on this on-site visit are based on interviews with business representatives and on a former report carried out in this area, namely Rubik, Frieder & Frankl, Paolo (2005): The future of eco-labelling. London: Greenleaf (chapter 5 on washing machines).

EVER Study

INTERIM REPORT

INTRODUCTION

The present report has three parts: the first is focused on EMAS, the second on the EU Ecolabel and the third on the possibilities to integrate the two schemes, among them and with other systems (in particular, the EPD system).
Each of the three parts presents some early findings of the literature review carried out by the partners and the preliminary findings emerging from the first interviews carried out within the in-field activities of the study.

The **desk research** carried out so far has focused only on a part of the literature. It has to be noted, for instance, that the literature analysed with respect to EMAS mostly refers to the application of the first Regulation (n. 1836/93), therefore the analysed findings can suffer from some time-related bias.

The approach adopted by the EVER partners in order to collect the first and preliminary evidence from the **in-field research**, to support the present interim report, has been the following:

- each partner has analysed in a qualitative way the outcome of the interviews carried out so far
- no statistical elaboration has been possible, due to the scarce representativeness of the part of the sample interviewed so far
- the findings of the interviews have been classified in different typologies of evidence: answers provided by most of the interviewees, questions on which there is a clear "controversial attitude" (e.g.: 50% in favour and 50% contrary) and answers that are still uncertain or not clear
- the preliminary findings have been confronted and discussed between the partners, in order to understand if and how the collected evidence reflected a common indication emerging from each Member State and category of interviewee (participant, non participant and stakeholder)
- the findings have been elaborated and presented as general indications relating to the interviewed carried out so far (and, where appropriate, to the different categories of interviewees)

Therefore, the results of the study presented in this report are to be considered preliminary and subject to possible relevant revisions, insofar as they are based on a partial review of the literature (that will be completed in the future course of the study), as well as on a limited number of interviews.

The sample on which the present interim report is based is the following:

	Participant	*Non-participant*	*Stakeholders*	*Total*
EMAS	**29**	**11**	**17**	**57**
	Of which public administrations: **2**	Of which drop-outs: **4**		
EU Ecolabel	**17**	**8**	**16**	**41**

A separate and conclusive part of the report presents an updated description of the different options for the revision of the two schemes. This revised version of the options is based on the mid-January preliminary report, drafted by the consultants and already submitted to the Commission.

PART A: EMAS

A1. Performance

The preliminary findings are based on a review of the literature about effects of EMAS registration on companies' environmental performance. Inside the category 'environmental performance' we include:

1. Eco-efficiency and pollutant emission rates.
2. Companies' performance as reported in surveys and interviews.
3. Regulatory compliance.
4. Procedural aspects of environmental management
5. Introduction of environmental innovations

The literature review includes a number of studies on companies certified with ISO 14001 as well as company-specific EMSs. This strategy has been adopted in order to obtain a broader overview of the effects of EMS certification on companies' environmental performance. In the following description of effects we signal those studies that consider only EMAS certified companies with a star (*)

Before presenting a summary of the preliminary indications emerging from our literature review, we mention some methodological limitations of the considered analyses that make it necessary to be cautious when interpreting their results:

a) There is not enough data to perform quantitative analyses of the life-cycle effects of EMS certification.
b) The data obtained through interviews and surveys can be unreliable, given the potential presence of self-assessment biases in the respondents' answers.
c) The data obtained from documents such as environmental statements can be unreliable given their use as public relations tools by some companies.

A1.1 Effects of EMS certification on Eco-efficiency and pollutant emission rates

The first way to analyse the potential contribution of EMAS to the improvement of environmental performance is considering the effects of the registration (and, more in general, of EMS certification) as measured by the data relating to eco-efficiency (use of resources) and pollutant emission rates.

The analysis of the effects of EMS certification on these aspects is not conclusive: although there seems to be a improvement in resource use and emission levels (Ammemnerg and Hielm, 2002), differences between EMS certified and non-certified companies are not statistically significant (Hertin et al., 2004).

EMS certification brings companies environmental performance up to a minimum standard, that is, the effects of EMS certification are especially noticeable on companies that had low initial environmental performances (Anton et al, 2004).

The analysed literature does not distinguish specific effects linked to EMAS registration, as different from other forms of EMS certification.

A1.2 Effects of EMS certification in companies environmental performance as reported in surveys and interviews

Another way of assessing how EMAS registration (and, more in general, EMS certification) can contribute to environmental performance is to analyse companies' perception as reported by surveys and interviews.

EMS certification and, in particular, EMAS registration is perceived to bring improvements to on-site environmental performance (especially in what refers to waste management and resource consumption) (UNI/ASU, 1997, Schucht, 2000*).

EMS certification, as a whole (including EMAS registration), is perceived as a driver of improved environmental performance, but there are stronger drivers such as regulatory, technologic and competitive factors (Hamschmidt, 2000, Morrow and Rondinelly, 2002).

A1.3 Effects of EMS certification on regulatory compliance

The improvement of environmental performance can also be interpreted as EMAS capability to enable the registered companies to achieve a full regulatory compliance (or to increase their level of compliance).

The relevant literature shows that, although EMAS registration brings improvements to companies' regulatory compliance, these are small and statistically not very significant (FEU, 1998*).

EMS certification is not a guarantee of absolute regulatory compliance (Dahlstrom et al, 2003). EMS certified companies (including EMAS) still suffer non-compliance incidents.

A1.4 Effects of EMS certification on procedural aspects of environmental management

EMS certification, in general, brings significant improvements to procedural aspects of environmental management such as recording and use of environmental data and information and plant maintenance (Dahlstrom et al, 2003).

A1.5 Effects of EMS certification on introduction of environmental innovations

EMAS registration, in particular, seems to have positive effects on the introduction rate of environmental innovations on companies (both technological and product) (Rennings et al, 2003*, Rennings et al, 2004*).

But still it is not perceived as a strong driver of environmental innovation when compared with financial and technological factors, and with other Integrated Product Policy tools, such as waste disposal and take-back systems of products (Rennings et al., 2004*)

>>> Preliminary findings emerging from the interviews

- EMAS is capable of generating an improvement in environmental performance, but its influence can hardly be separated from other measures and, especially, from other EMS
- The improvement is only in few cases strictly continuous (year on year) for each significant environmental aspect
- Some stakeholder identify a problem in the fact that continuous improvement has limits and it might be difficult to pursue
- Contrary to what can be expected, environmental performance are not sufficiently measured by all interviewees in all (or most) areas of the organisations
- EMAS is an important factor in stimulating and supporting environmental performance improvement, but others are more relevant (e.g.: regulation, technical progress).
- EMAS requirements relating to audit and legal compliance seem to be the two most important factors for performance improvement.

A2. Indirect effects

A2.1 Effects connected with less-formal EMS

The literature review is signalling an upspring of less formal approaches for environmental management in several EU countries. An objective of the EVER study is to assess if EMAS is capable of generating indirect positive effects on those approaches, by playing the role of a "model" for the development and adoption of the so called "less-formal" EMS. At the same time, the study aims at evaluating the consequences of their development on EMAS (i.e.: the possibility that these approaches help or damage the diffusion of EMAS, especially among SMEs).

Little research has been carried out in this field. Within the scope of the EVER study the consultant will have the opportunity of analysing and integrating the results of two German research projects, the ISO SME report and the BEST study. This analysis will be performed at a later stage of the project, in order to acquire the final results of these projects.

Some preliminary indications emerging from the first analysis of the available research show that EMAS is used as "reference model" for some environmental management approaches (e.g.: the so called "staged approaches", such as Green Dragon or E+5).
The use of EMAS as a reference model can produce some positive indirect effects, such as: the companies adopting less formal EMS consider EMAS requirements as a benchmark and, therefore, take them as guidelines for improvement (e.g.: some of them develop a simplified audit internal system, based on the indications provided by EMAS).

Recent studies also show that many small companies operating in territorial clusters, even when they apply a simplified version of EMSs, they tend to consider many EMAS requirements as a

reference model and as a guide for their activities. In some industrial districts in Italy, for example, it is shown how groups of SMEs use the EC Rec. 532/2003 on environmental indicators for EMAS as a source of inspiration for standard indicators to be adopted for their environmental management (Regione Toscana, Iefe Bocconi, 2004).

In some cases, it emerges from the analysed literature (Rennings et al., 2004) that even the environmental statement is considered a benchmark for improvement. It is frequent that the environmental statement of other EMAS registered companies is taken as a reference to develop parts of the environmental management systems or to introduce environmental innovation at the managerial and organisational level.

>>> Preliminary findings emerging from the interviews

- An interesting indication derives from the interviews with companies participating in EMAS: today this scheme cannot really be distinguished from ISO 14001 in the perception of the "user" (especially not in Eastern Europe, where EMAS is little not known). The two schemes are considered as the same "instrument" and, more or less, offering the same "opportunity". Therefore, competition between ISO 14001 and EMAS is strong.

- More in general, especially from the interviews with the stakeholder, it emerges that there is less competition between EMAS and other approaches, because target groups are different. However, this holds true only partly: some participants in less formal approaches, for example, clearly asserted his company certainly could have participated in EMAS.

- Some of the interviewees declare they are applying a simplified form of EMAS thanks to the support they get from the other actors of the "cluster" in which they operate.

A2.2 Effects linked to the permanence of environmental management in EMAS drop-outs

The objective of the EVER study is to understand if EMAS is able to indirectly produce beneficial and longlasting effects on those organisations that leave the scheme.
Significant numbers of drop-outs exist, especially in Germany and Austria. However, there are no publicly available lists of drop-outs and the competent bodies only rarely investigate on the reasons for leaving EMAS.

This prevented us from analysing relevant literature on this issue at present. In the prosecution of the study, the review will then consider mainly statistics of the German Chamber of Industry and Commerce "Niederrhein", Northrhine-Westfalia, which are not considered in this report yet.

>>> Preliminary findings emerging from the interviews

- The first interviews clearly identify the tendency of the drop-out companies to fully maintain the EMS when they switch to ISO 14001 or, at least, maintain relevant parts of the EMS when they abandon EMAS without shifting to any other formal EMS certification.

- The most common reason to maintain (parts of) the EMS is that it is considered useful, even if relevant efforts are needed to keep on implementing it. The interviewees stated they abandoned the scheme owing to the lack of benefits and advantages perceived (especially

with respect to the expected recognition by the market and by the external stakeholders) as compared to the additional costs implied by participation.

A2.3 Indirect effects of EMAS promotion projects providing funding and technical assistance to companies

The existing literature emphasises that the EMAS uptake in the Member States has been, in the past, directly linked to the level of information and funding available at the national level. As we have already emphasised, actually, the examined literature refers mainly to the first EMAS Regulation (n. 1836/93) and dates back to the end of the 90s or the beginning of the new century (therefore it is very difficult to obtain empirical evidence relating to the application of the current EMAS Regulation n. 761/01).
In any case, considering the mentioned temporal limits, it is remarkable that some studies on pilot-projects funded by the formerly DG XI (Environment) showed how the number of pilot projects funded in the different countries was, at an early stage, proportional to the number of EMAS registrations (IEFE, 1996).
Today, no figure about the total number of EMAS promotion projects is available, because of the wide range of promotion projects that are financed by different EU funds (LIFE, EFRE,…), national or regional funds of the member states and even at the local and municipality level. What emerges from literature, though, is an undeniable important of promotion projects in supporting the diffusion of EMAS and other forms of EMS certification, especially for some countries and regions. In Italy, for example, roughly 30% of the companies with an EMS certification operating in the Tuscany region benefited from a promotion project (Regione Toscana, 2005).

The EVER study is interested in EMAS promotion projects, insofar as they might be able to produce positive "side effects" that are not directly visible just as an increase in the number of registered organisations. In particular, our study focuses on the fact that, being EMAS a scheme that is widely "funded" by the EC and the member states, many companies are taking advantage of the funds and of the available support to improve their environmental management and performance, even though they do no necessarily achieve EMAS registration.
Studies about the indirect effects of EMAS in companies participating in promotion projects are available in the member states, showing the usefulness of this approach under different points of view. The most relevant of which is, naturally, the support that participating companies receive in the application of EMAS requirements. This support allows for a wider diffusion and for an "upgrading" of environmental management, especially in SMEs (IEFE, 1996).

Other studies also emphasise the positive "side-effects" in term of co-operation and networking among the companies involved in the promotion projects, enabling resource sharing and knowledge exchange (Hillary, 1995).
Less indications are traceable in the literature about the effectiveness regarding the number of EMAS registrations resulting from the promotion projects and, even more important, the positive fallouts on the environmental management and performance of those companies participating in the promotion projects, but not achieving EMAS registration.
Some early evidence arises from the already mentioned study on the coordination of DG XI pilot projects (IEFE, 1996), which emphasised how most companies found it useful and supportive to take part in the promotion project, because this enabled them to develop tools of an EMS. Nothing is said about the maintenance of these tools after the end of the pilot project.

>>> Preliminary findings emerging from the interviews

- Many interviewed companies received EMAS registration by participating in promotion projects (this is especially true with reference to some Member States, such as Italy, Spain, Germany and Austria).

- Some non-participant companies participated in promotion projects but did not register under EMAS (in a couple of cases, they shifted to ISO 14001). We can also say that, in some cases, the funding of EMAS-oriented promotion projects produced the non-intentional effect of supporting the diffusion of ISO 14001 (since some of the participating companies in the end chose to adopt the EMS certification, rather than to achieve registration).

- Some of the companies that took part in a promotion project (together with others) benefited from a better co-operation of different companies in an industrial park and in networks.

A3. Drivers and Barriers

A3.1 Drivers

The relevant literature sows that the main drivers spurring companies towards EMAS registration are mainly economic and strategic, while "environmental" aims such as the reduction of environmental impacts lag behind.
Most firms participate in EMAS in order to achieve competitive improvement, to gain savings in terms of both energy and resources consumption or to improve their image and legal compliance (BMU/UBA 1999). Results of other studies are similar: the need to comply with increasing legal requirements, the willingness to obtain competitive advantage and the need to satisfy requests by customers were indicated as the most effective drives, in decreasing order of relevance, by another research (Biondi et al., 2000).

As one may notice, the drivers identified by previous studies are mainly of an "external" nature, whilst few companies are thought to join the scheme in order to obtain organisational or managerial efficiency. We should point out, however, that the situation varies significantly from State to State: for example, in Sweden companies seems very oriented to market-related reasons (Iris, 2000), whereas firms operating in other countries and regions seems more motivated by other drivers (see, for example, the relevance of legislation compliance as a driving factor in some Mediterranean countries, Biondi et al., 2000).

Another powerful "potential" driver is represented by regulatory and monetary incentives, but to date the de-regulation backing registered companies is still limited, as well as monetary and tax relief. However, it is no surprise that the success of EMAS is greater in those contexts (e.g: Germany) where incentives have been more relevant (Hillary et al., 1999).

As concerns a particular typology of organisations participating in EMAS, the local authorities, the literature shows that they tend to join the scheme in order to increase their economic efficiency, hence to obtain relevant cost savings (e.g.: from water and energy use rationalisation). Moreover, many Public administrations have been motivated by the Local Agenda 21 process, and considered joining EMAS as a step of the above mentioned process (Kollamthodi et al., 2005).

>>> Preliminary findings emerging from the interviews

- Contrary to the literature findings, the first interviews indicate that the motivations behind the registration seem to regard more the "internal sphere" (better management and organisation of activities) rather than competition-linked issues, such as keeping up with competitors. This data can suffer from a bias linked to the dimension of the interviewed companies.

- The interviews, instead, fully confirm another finding of the literature: legal compliance is a powerful driver for most of the interviewed companies.

- Organisations also adhere to EMAS in order to improve their relationships with stakeholders and local communities.

A3.2 Barriers

The literature conventionally distinguishes between "internal" and "external" barriers; the first being caused by lack of resources, difficulties in the understanding and perception of the scheme, drawbacks in the implementation process or by the company's attitude or culture; the second being related to the lack of support and guidance, to economic factors, to the verification and registration process and to the institutional framework (and the lack of incentives that should be created within that framework).

The first findings of the literature review confirm that the cost of implementation (although varying significantly from State to State) represents a strong external barrier to the adoption of EMAS, especially for SMEs, where the lack of resources is stronger. The external consulting and the verification costs are considered to be among the most expensive cost categories linked to the EMAS implementation process (BMU/UBA 1999, Biondi et al., 2000).
But the most relevant external barriers identified by many studies mostly refer to the lack of customer interest (e.g.: Kvistgaard, 2001) and to the lack of recognition and positive rewards by public institutions (e.g.: Regione Toscana, 2005).

As to internal barriers, the identification of significant environmental aspects play a role in preventing companies from joining EMAS, or hindering its correct implementation (Iris 2000), as many firms fail to identify some significant environmental aspects. Other studies focus on the difficulties linked to the understanding and implementation of the requirements relating to the Initial Environmental Review, but also to the EMS (Hillary et al., 1999; Regione Toscana, 2005). Some studies (e.g. Kvistgaard, 2001, Biondi et al., 2000) suggest that another relevant internal barrier is represented by the lack of time and resources, both financial and human, within companies.

The barriers can change significantly due to both the national context companies operate in, and the size of organisations themselves. For instance, the "weight" of some barriers such as lack of human resources, costs of implementation and lack of knowledge about EMSs and their potential benefits is much higher for small and medium enterprises (Hillary et al., 1999), although affecting larger organisations as well.

For Public Administrations, motivation of staff seems to be one of the hardest barriers to overcome within such organisations, as employees might fear some extra-work with no "personal" reward.

The motivation towards EMAS is hindered, also, by the fact that there are many indirect aspects, that are out of control of the organisation and might be difficult to assess and to manage (Kollamthodi et al., 2005).

>>> Preliminary findings emerging from the interviews

The first interviews are providing an interesting picture of the perceived barriers, not completely in line with the literature findings:

- The most important barrier is the lack of regulatory relief and reward by national, regional and local environmental authorities. Besides regulatory relief (largely the most important), among the possible rewards, the following are mentioned: fiscal incentives, access to public or private funding, GPP.

- Especially stakeholders emphasise that the very limited diffusion of normative benefits and rewards from public authorities makes some organisations abandon the scheme

- Also the lack of purely competitive rewards is among the main barriers organisations face in maintaining registration in the scheme: actually, the extent to which the market rewards EMAS seems to be still scarce (while sometimes, as we will see, internal economic efficiency is able to payback the EMAS costs). This indication emerges from the majority of the interviews carried out with EMAS participants and stakeholders.

- Another external barrier is related to the verification process: demanding requests and costs of environmental verifiers are indicated as the most perceived difficulties along the vaidation and registration process

- The costs connected to EMAS implementation are still a relevant barrier, both in achieving registration for the first time and in maintaining it (yearly validation of environmental statement is seen as too costly, the cost of the accredited verifier is considered to be still high)

- Internal barriers are faced in obtaining the commitment of managerial staff and involving and motivating all the personnel within the EMAS framework

- Far less important (with respect to literature) are the internal barriers caused by the understanding and the application of EMAS requirements, which are still valid mostly for SMEs

A3.3 Benefits and incentives

The first part of the literature review pointed out that most of the benefits deriving from EMAS implementation by organisations are of an "internal" nature.
Hillary et al. (1999) found that participating SMEs perceived positive outcomes mostly in terms of assured legal compliance and energy and material efficiencies (this can be defined as "economic efficiency"). As regards the cost savings, they are often obtained in the fields of waste management, energy and raw materials (Iris 2000). Approximately the same result has been obtained by other studies (Biondi e al., 2000; Politecnico di Milano, 2001), that also emphasised the relevance of another "internal" benefit: motivation and participation of personnel and, more in general, a high

performance of the company as to the organisational and managerial aspects (definition of roles and responsibilities, planning of the organisation activities and process, etc.). This can be defined as "organisational and managerial efficiency", to distinguish this kind of benefits from those obtained by means of cost-savings and resource optimisation ("economic efficiency").

Some studies (Bradford et al, 2000) suggest that the adoption of EMAS has consequences in terms of innovation capabilities and skills. The development of environmental skills led to a better knowledge of production processes and, as a consequence, of improvement options. So far, the changes have been primarily organisational or low-tech, but more radical innovations should be observed in the medium long term, in the wake of a better cooperation and communication with the product chain and following the investment cycle of high value machinery (Hitchens et al, 2002).
Some studies (Rennings et al, 2003) suggest that most of the innovations spurred by the EMAS registration are organisational (environmental projects, set up of innovation teams), which are to fuel, as a consequence, other innovations regarding dimensions such as the product rather than the production process. Moreover, many companies exploit the environmental report of other organisations in order to discover innovations that might apply to their specific situation.

The most significant "external" benefit, indicated by most studies, is an improvement of what is generically called "corporate image". This benefit is a lot weaker than the "internal" ones and it cannot be measured. It is mostly perceived in the interactions and relations with the stakeholders (local government, local communities, NGOs, etc.).
Hillary et al., 1999, for instance, acknowledged that SMEs found image was enhanced and dialogue and relationships with stakeholders improved thanks to EMAS registration.

Although the benefits in terms of pure "market results" will be dealt with in the next paragraph, we can anticipate here that virtually the whole analysed literature agrees on the fact that, at present, there is no measurable reward from the market (e.g.: in terms of increased market share and/or turnover).

>>> Preliminary findings emerging from the interviews

- The main benefits obtained thanks to the registration are strategic and organisational (e.g.: work standardisation, greater motivation and participation of employees, etc.).

- The interviews confirm that there are fewer benefits from the "relationships with public institutions and stakeholders" point of view.

- No benefit is perceived on the financial, credit and insurance level even if most interviewees identify this field as one of the most potentially rewarding for EMAS organisations

- The large majority of the interviewed participant organisations state that, on the basis of the perceived benefits, they are going to maintain EMAS registration

Some of the incentives suggested for the overcoming of the above mentioned barriers are:

- a streamlining of the validation and registration process,
- regulatory relief,
- an easier access to public funding and GPP,
- more fiscal incentives

- possibility of operating through "clusters", in order to promote and simplify EMAS implementation and registration process (mentioned by some interviewees in a specific country: Italy)
- use of the environmental statement in official communication and authorisation procedures with the public administration

A4. Competitiveness

This part of the EVER studies focuses on the capability of EMAS to make the registered organisations really competitive on the market, that is enabling them to gain positive results with respect to the final customer or the intermediate client, in terms of some variables conventionally measuring "competition", such as market shares, increase of sale and turnover, etc.

As regards the impact of EMS certification (in general) on the results of companies on the market, some studies suggest that there is a positive influence of the registration, even if the strength and relevance of such impacts is not certain. For instance, many companies believe that EMS certification is profitable insofar as it strengthens their market position and increases their revenue. Literature emphasises that sometimes the increased revenue provides a payback in a relative short period of time (a year and a half – two years) (Hamschmidt, Dyllick, 2001; Cesqua, Sincert, 2002), but in other occasions they fail to payback the high costs of implementation (and this is the very case of SMEs) (Hillary et al., 1999).

Other studies, however, are more critical on the response given by the market specifically to EMAS companies (Kvistgaard, for instance, insists on the lack of market pull).
According to the literature, hence, it is not possible to provide a universally accepted assessment of the cost-benefit relationship of EMAS participation. For instance, some studies suggest a prevalence of companies considering such relationship as "negative" (UBA 1999), while others (HMUEJFG 1998) see the slight prevalence of "positive" responses.

A last point of view from which EMAS effect on competitiveness can be assessed is that of the contribution to the "corporate value" or to its financial performance. Unfortunately, there is no direct evidence relating to the performance of the EMAS registered companies on the financial market. More general studies (Ergle and Fratantuono) suggest that "green" firms achieve better results in terms of ROI, ROE and other financial indicators. Moreover, (pro)active environmental policies (as obtaining EMAS registration) have a positive impact on stock exchange prices, due to the ever-increasing appreciation expressed by investors (NEPI/NIST Lean & clean manufacturing symposium, 2000).

>>> Preliminary findings emerging from the interviews

- So far, EMAS does not seem to contribute to the competitiveness of companies, if this is measured according to "conventional variables", such as: market shares, revenues, increases in sales and turnover

- The only perceived benefits, from the competitiveness point of view, are "immaterial" and non-measurable or quantifiable assets, related to an improved image (see the previous section), a recognition as leader and benchmark experience and, at a lower level, a higher customer satisfaction

- To improve the competitive capabilities of EMAS on the market, interviewees suggest to use the logo on products and to render the environmental statement a more easy-to-use tool for communication and marketing purposes

- they also suggest a broadening of EMAS scope outside the EU, that would make registration a more effective competitive tool for many exporting and internationalised companies

- making EMAS a favourable condition for insurance and credit (involvement of financial institutions) would favour the development of strategic and competitive initiatives by EMAS registered organisations, producing an indirect competitive advantages and contributing directly to increase the "corporate value"

- many interviewees, finally, ask for an intervention of the Commission in order to make it mandatory for the member states to promote and market EMAS and to include it in GPP (in order to obtain an increase in the peculiar market of public purchase)

A5. Sustainable Development

This part of the literature review focuses on the potential integration between EMAS and the different elements of Corporate Social Responsibility (CSR). The preliminary findings described in this interim report concern a specific aspect of what is generally intended as CSR: the workers' health and safety. Other issues relating to CSR will be explored in the forthcoming months, within the second part of the literature review.

The evidence emerging from different studies carried out in different EU countries: Italy, Denmark, France, Spain (EFIWLC, 2000; Frey et al., 1999) can be summarized as follows:

- To date, the integration of health and safety issues within environmental management systems is still limited
- However, the trend of the last years seems to be that of a steady increase

Of course, the situation varies significantly from one industrial sector to the other, and according to the size of companies, as well. Specifically, large organisations seem to be more prone and ready towards the adoption of an integrated approach, due to larger organisational and financial possibilities and to the available economic resources. Some studies, though, show that even SMEs are keen to integrate health and safety aspects with the management of environmental aspects. In particular, a study carried out on Italian SMEs (Frey et al., 1999) show that 65% of the sample (100 SMEs) that was investigated are interested and are experiencing some form of integration between environmental and safety issues. Moreover, the study specifies that the tendency to integrate is not limited to "front-runner" SMEs, as most companies showing greater interest for an "integrated approach" lag behind from the point of view of environmental or safety management (i.e.: they are not even implementing a certified EMS or health and safety management system).

It has been previously mentioned how different industrial sectors might diverge in terms of tendency towards integration between environmental and health & safety aspects. Some studies show that companies in some industrial sectors are more "willing" to implement such integration, as for instance those operating in the chemical branch and in waste management.
A study carried out in 1998 tried to estimate how many EMAS registered companies already implemented an EMS to some extent "integrated" with health and safety issues. The study (Gorla et

al., 1998) was carried out on 150 companies registered in EMAS in the EU15 member countries. The results of the study were controversial.
On one hand, many of the companies were already effectively integrating policy, targets and programmes: for example, 25% had an environmental policy integrated with occupational health and safety issues, and 34% had an environmental policy integrated with "process" safety issues (i.e.: related to the Seveso Bis directive). The percentages in case of chemical industries rose to 46% and 50%, respectively.
On the other hand, only 3-4% of the companies fully integrated health and safety issues in their EMS (for both workers and process safety). Once again, in the chemical sector the percentage was higher, rising to about 11%. The above mentioned data show how the degree of firms' sensitiveness towards integration between environmental and health & safety issues varies significantly from one industrial sector to the other.

Some studies investigated how companies should be spurred into adopting an integrated management (e.g.: EFIWLC, 2000). The evidence suggests that some of the ways of stimulating companies in the above mentioned direction might be those summarised as follows:

- Integration of health & safety and environmental issues also at the normative and regulatory level, with a better coordination of control authorities
- Economic instruments such as subsidies and co-funding actions, or an insurance fee system focusing on environmental, health and safety performance by companies
- Broader co-operation between employee and employer federations on the field of integration between environmental and health & safety issues

>>> *Preliminary findings emerging from the interviews*

- Most of the interviewees, especially among large companies, rate as important the possible integration with health and safety management.
- Some of them are already integrating health and safety within the EMS
- As to other action already undertaken in the CSR field, it has to be noted that some interviewed companies are already publishing a sustainability report
- Large companies and stakeholders see a link between EMAS and other CSR aspects as potentially fruitful, even though they are not implementing such an integration
- Integrated management systems have a lot of advantages, especially with reference to health and safety issues
- Combination with CSR would be fruitful, but an integrated management system with ethics and social issues could be "overdimensioned" for many small and medium companies, this will cause difficulties and hinder the diffusion of the scheme
- A first attempt of integration between the two management areas is carried out with reference to communication strategies (i.e.: within a sustainability reporting tool)

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PART B: ECOLABEL

B1 & B2: Performance

The analysis of direct and indirect effects of eco-labels is crucial element of the EVER-project based methodologically on both a comprehensive literature review and questionnaire-based interviews. This paragraph delivers the first step of analyzing direct (B1 direct effects) and indirect (B2 indirect effects) eco-labelling effects based namely on the literature review and a first rough questionnaire assessment. Altogether, we concentrate on the European level with the EU Flower as anchor point, but nevertheless and due to the limited scientific efforts linked to the Flower, we will present some more general observations which might refer to some national schemes, especially the German Blue Angel and the Nordic White Swan.

B1 Direct effects

B1.1. Effects on market shares

Even if there has been considerable research on eco-labels from the introduction of the first national eco-label scheme in Germany (1978) onwards, there is clearly a lack of assessing systematically the direct effects. For the time being, there is no coherent model on direct effects of eco-labelling with a wide range of indicators. The most important success indicator of market penetration is the market share of eco-labelled products in relation to all other products sold belonging to the same group (Rubik & Frankl 2005). However, the OECD concludes that "in practice, data concerning the market impact of eco-labelled products is very difficult to obtain". There is no statistical data in general to show the market power an eco-label may confer on a product. "Data on market shares are often confidential commercial information in the hands of industry" (OECD 1997: 5). Rubik & Frankl conclude, that "in general (…) currently, systematic assessments of the market impact of eco-labelled products are not available" (Rubik & Frankl 2005). In short: research on market shifts is rare (Frey et al. 1998: 19).
Instead of quantitative data on market shares, secondary indicators are used to assess direct eco-label effects (Taylors Nelson – Sofres Consulting 2001; Rubik & Frankl 2005). Secondary indicators focus on available data (quantity of eco-labelled products; quantity of product groups) concerning the eco-labelling performance. The aim is to describe the level of concentration within eco-label schemes identifying the quantity of product groups responsible for the lion's share of awarded products.

Data on the market diffusion of eco-labelled products exist for one or the other product group and eco-labelling scheme.

The most positive results emerge from an assessment for the Nordic White Swan as reported by Rubik & Frankl (2005: 86-7) estimated the market shares of the following product groups:

- For printing paper, it was estimated that the share is about 70% in all Nordic countries (except for Iceland).
- Regarding printed matter, the shares of eco-labelled products are higher in Sweden (about 70%), being 40–70% in Denmark and 10% for Norway and Finland.

For other product groups, the estimates relating to the market shares are lower:

- For laundry detergents, for example, while we have high market shares of eco-labelled products

in Sweden (70%), Norway (40–70%) and Finland (10–40%), they are less than 10% in Denmark and Iceland.

- For all-purpose cleaners, the shares are up to 40% only in Sweden and Norway, whereas in the other Nordic countries they range between 10% and 40%.

A comparative analysis of several national and supranational eco-labels reports both market success and failures (Summary literature study label 'Sustainable Development': 23): "Green Seal labelled products have only been moderately successful with the individual consumer. In Japan, a wide variety of environmentally preferable products are available. However, their sales have been negligible, with exception of recycled printing and copy paper". The French national scheme (*NF-Environnement* Mark) as a relatively new program, lacks of studies to determine overall trade and market effects.

Finally, considering the EU-Flower, two parameters that can be used relate: to the number of licenses for the use of the European Ecolabel and to the number of applicants.

- With respect to licences, we have to note that they have been granted for several hundred products (238).

- As concerns the number of applicants, whilst in some categories (textile, tissue papers, soil improvers, paints and varnishes and growing media) there is some relative success (if measured with respect to other EU Eco-label product categories), 50% of the product categories still show low applicant levels, i.e. between 0 and 3 applicants.

- It is clear that the global EU market share, although not estimated, is still relatively small. "This is far from the 5-10% or even 20 –25% market share 'objective' being discussed in the EU Eco-label policy management scenario documents, and certainly far from the 30% potential identified in the EU Eco-label work plan".

B1.2. Effects on consumer awareness

In the field of eco-labelling research most reliable data exists on consumer awareness of eco-labels. For both national and supranational schemes several surveys on consumer awareness have been carried out.

According to survey as a result of a website questionnaire conducted by BEUC (2002) 38% know the EU EL and 74% did not know where to find EU-EL products – although the results could not really be considered as representative due to the online character of the survey.

Bates (2004) found out among **French** consumer that the EU-Flower is the most known eco-label with 18% being aware without support and 40% with support. Another survey quoted in Rousseau (2004: 12) states that only 11% of French population knows the EU EL while 73% of these French think that the information on eco-products is not sufficient.

Considering the **Belgium** consumers Rousseau (2004: 15) found out that 28% of Belgium population knows the EU EL and that (once more) 28% of them possess a correct perception of its role.

Leitner (2004: 7) estimates the awareness of the EU-Flower among **Austrian** consumer as of 13%.

A periodical survey carried out in **Italy** (Astra Demoskopea, 1999, 2001 and 2003) shows that only 2,5 % of the interviewees know the EU Ecolabel and, among them, only 40% is aware of its role and of the guarantees that it provides.

Within the **Nordic countries** Leire et al. (2004: 22) identified a negative attitude among many consumers in Nordic countries against EU-EL. In contrary, Cadman & Dooly (2004: 65) found a positive attitude at least among Danish consumers with 43% of Danish consumers being aware of EU EL when aided by prompts (e.g. visual aids). In a study on behalf of Danish EPA (Jensen et al. 2003: 31-2)) a quantitative survey among 701 Danish consumers has been carried out. The results show that 43% know the EU-Flower while 57% not. This indicates to a high level of consumer awareness of the Flower as compared to previous figures.

But the surveys **are not comparable**, since some test for qualified awareness, i.e. consumer must identify the lables as an eco-label without aid.
Compared to research done a few years ago concluding eco-labels have had only been moderately successful with the individual consumer (OECD 1997: 6), current survey result seem to be more promising.

However, in a **comparative** representative four-country survey Rubik & Frankl (2005: 110) disappointing figures (without support) for the EU flower: Germany 1%; Norway 1.7%, Italy 0.4% and Spain 1.2%. The survey showed that national eco-labels still most well-known among consumer with 56.6% for the Blue Angel in Germany and 70% for the White Swan in Norway.

Consumers' awareness is one side of the coin, the other one is trust and confidence in labels themselves. *Knowledge, search for environmental information, and attitudes towards the reliability of this information* are crucial factors for the market performance of eco-labels and eco-labelled products. To some degree this point of departure is supported by recent studies.
Rousseau (2004: 15) reported that only half of the Belgium consumers who know and interpret the EU-label have confidence in the Flower that means that at the end only 2% of Belgium consumers know, interpret correctly and have confidences in the EU EL. Other studies on the confidence and trust in the EU-flower are not known to us.

Rubik & Frankl (2005) report in their four-country comparison among trust in different types of administrations and institutions behind an eco-label scheme. They point out that environmental organisations (with consumer organisations) are ranked at the top, and that all four countries seem to agree upon the relatively low percentages and low ranking for producers and retailers (or business and industry in the first question).

In February 2001, the Danish Environmental Protection Agency (Miljøstyrelsen) launched a major campaign aiming for increasing the recognition and knowledge about the two official eco-labels, the Swan and the EU-Flower, and increasing the sales of eco-labelled washing powder and textiles. An evaluation of the effects reports that the recognition of the Swan increased from 56% to 68%, and for the EU-Flower from 16% to 36% for the EU-Flower after the campaign. The knowledge about their actual meaning also increased, from 26% to 41% for the Swan, and from 4% to 16% for the EU-Flower. The trust of the labels remained high throughout the campaign. The evaluation could not directly register any increased sales of labelled products, but based on supplementary data it was concluded that the actual sales of eco-labelled washing powders increased significantly whereas eco-labelled textiles remained stable (Miljøstyrelsen, 2001, quoted according to Leire et al. 2004: 25f).

B1.3. Effects in terms of environmental performance

Several studies state a general lack of empirical data on the environmental effectiveness of eco-labelling (OECD 1997: 8; EPA 1994: 19). Just recently the forecasting via scenario methodologies has become an issue in the eco-label literature. Cadman & Dooley (2004) base their study on potentials of the EU-Flower with setting three different scenarios. They assume a 5%, 20% and 50% market penetration of eco-labelled-products and substitution of "average" products. Empirical data shows smaller footprint of EL-products than average products. Scenarios are applied for all 21 product groups of the EU-Ecolabel. The results are calculated according to the most important criteria (p.7-50). Anyway, the study does not encompass any dynamic component, i.e. how to reach the potentials.

As a consequence of lacking quantified data, Locret & de Roo (2004) checked if the EU-Ecolabel is ahead-inline or behind current (environmental & health) legislation in order to estimate the environmental effectiveness. According to them, most often the EU-Flower is ahead of legislation; this result is of course not very astonishing if we are aware that eco-label should signal environmental leadership of a certain share of products offered on the markets.

It is clearly difficult to distinguish the effects of an eco-label from the effects of other measures, which is why studies often conclude that several instruments have jointly contributed to an observed change. Schiesser & Shinn (2004: 26) conclude against the background of lacking data and methodologies that "overall the direct environmental improvements (or reduced environmental impacts) was judged to be poor to mediocre in 77.5 % of cases[1]. This was due to a lack of data on sales volumes or market share and of information on average impact reduction/unit of product.
The only option, as we have seen in par. B1.1, was to use the number of applicants as a proxy.

>>> Preliminary findings emerging from the interviews

The following first general indications assessing direct effects induced by the Ecolabel emerged from the interviews:

- . For most companies that have the label, improving the overall environmental performance is an important aim in the decision to apply for the Ecolabel.
- For some of the interviewed companies, the products already complied with all the Ecolabel criteria, and therefore improvement of the performance was not an issue.
- In any case, very few were able to rate the effect of the Ecolabel on environmental performance improvement along the products life cycles.
- Few interviewed companies set specific targets for the environmental improvement of their products, considering a priority the compliance with the Ecolabel criteria
- With regards to criteria, some requirements are judged as appropriate, especially by the interviewed stakeholders, and some weak (without market application).
- There is a clear preference among stakeholder to award the Ecolabel only to top-runners in the market.

[1] This 77.5% refer to the judgements of experts interviewed during the project.

B2 Indirect effects

The mentioning of indirect effects of eco-labelling is a relatively new area; explicitly Reinhard et al. (2001) stressed this point as one of the most important. A (more) systematic examination was carried out by Cadman & Dooley (2004) on behalf of DG Environment. So far, there is no unitary definition of indirect effects of eco-labelling. However, in our understanding indirect environmental benefits and effects respectively means environmentally positive impact induced by eco-labelling schemes on its surroundings in policy, business and society (e.g. criteria as informal 'standard', eco-labelling multi-stakeholder approach as initiator for co-operative action, etc.). Within this paragraph, we present the findings of the relatively new research area of identifying the indirect effects of eco-labelling analyzed in the literature review and the questionnaire survey.

B2.1. Policy related effects

A first kind of indirect effect relates to the possibility of using the EU Ecolabel as an effective and helpful instrument for the implementation of other policies. There are several efforts to integrate the product focus by means of eco-label consideration at different policy levels:

- Integration in economic instruments, that is using the Ecolabel as an opportunity to reduce value-added tax (VAT) for eco-friendly products, as proposed in the IPP Green Paper (EU Commission 2001). However, due to strong industry opposition, the Commission will not develop initiatives to apply reduced VAT rates to products bearing the EU eco-label for the time being (EU Commission 2003),
- Integration in green public procurement policies, that is using eco-labelling criteria as technical specification (EU Commission 2001a).
- Integration of product information requirements in waste policy regulation, that is for instance on the European level the old vehicle directive, the WEEE directive and RoHS directive.

A relevant part of the literature considers the EU Ecolabel as capable of indirectly producing positive effects. Landmann (1999: 47) considers eco-labels the basis for policy instruments such as e.g. standards or limit values. Cadman & Dooley (2004: 66) regard eco-labels to be used as a basis for establishing fiscal measures (e.g. by rebate scheme) to promote green products, and to be used in the "new approach" as a basis for establishing whether companies have complied with "essential requirements" (e.g. EuP) (p. 64f.).

According to Cadman & Dooley (2004: 56ff) eco-label criteria could also be used in private procurements call; they support procurers and their green procurement with the indirect effect of less information search. Some examples are provided by recent literature on how the EU Ecolabel is used in private procurement, with positive indirect effects (Toroc, 2003). Cadman & Dooley (2004: 56ff) calculate an indirect benefit € 204 Mio (private) and €27.5 Mio (public) and several environmental benefits.

The Ecolabel can also be used to inform rating companies and investment funds already integrating ethical and environmental criteria about the product environmental performance, e.g. in the financial sector (Taylor Nelson – Sofres Consulting 2001: 14). Recent literature shows how this approach today is not very diffused yet, due to the scarce sensitivity of the rating companies and the credit sector to the product-related environmental aspects (Iraldo, 2002).

Similar to the debate on integrating eco-labels within other policy instruments, there is a vision to elaborate an integrated information flow throughout the product life-cycle with several information tools entwined with each other. Cadman & Dooley (2004: 61), for instance, calculated the application of the EU-Flower for the elaboration of ISO type II labels (green claims) and as support

for the elaboration for so-called Environmental Product Declaration (EPDs) and presented some figures for cost reductions (potentials); they also hinted to an international co-operation because the European label has been studied intensively by non-European countries, e.g. New Zealand, USA. As an important benefit they regard the application of EU-requirements by national schemes of Member States of the EU-25, e.g. Austria, Swan, new Member States).

The literature review, finally, revealed some shortcomings preventing the possible indirect effects relating to the promotion of multi-stakeholder dialogue, involvement and co-operation. On one hand, unequal financial distribution between supranational and national bodies has been observed. Lohse & Schnabel (2000: 36), for instance, state that "a typical barrier towards a more proactive propagation of the EU Eco-Label by Competent Bodies is the fact that, not only in Germany and Austria but also in other EU Member States, there appear to exist no financial resources or incentives which are dedicated or qualified for the promotion of the EU Eco-Label.
When it comes to division of work among the EU-Competent Body and the national executors, several inefficiencies has been stated. In Spain, for instance, Novotec (2002: 7) pointed out that "potentially there should be 17 organisations with competence in relation to the European Eco-label, plus the Ministry of the Environment itself as the organisation in charge of coordination and the balancing of criteria. The actual situation in Spain at present is that of the 17 possible, only 5 of the Autonomous Communities: Madrid, Catalonia, Murcia, Cantabria and Valencia, are exercising their competence in relation to the European Ecolabel".
From an environmental non-governmental organisation's perspective the multi-stakeholder participation process also reveals inequalities. Schiesser & Shinn (2004: 7) observe strong influence of business actors in the eco-labelling process as "one of the most striking early cases concerned detergents for washing machines (the first version of criteria – February 1995). The group depended heavily on the industry expert, who played down all proposals. In the end, the strictest criteria related to packaging, to which the EEB attached little importance, whereas phosphates were regarded as less of a problem. The list of ingredients was hardly restricted at all. After the criteria were published, the detergent industry stated (in a verbal communication) that none of the producers would apply as any producer could easily meet the criteria. In other words, the producers did not consider that the criteria set a benchmark of excellence. Their watering-down techniques were successful".

B2.2. Market related effects

B2.2.1 Indirect effects on non-labelled products and on product development

Many studies assume indirect effects on the whole product portfolio of companies through eco-labelling. However, these assumptions are in general without empirical evidence. Landmann (1999: 47) estimates that eco-labels could force indirectly producers to produce/offer eco-labelled products.
Nadai (1999) assumes that negotiation of eco-label criteria improves the environmental performance of whole market sector. Cadmann & Dooley (2004: 59f) suppose that eco-labels could by used by companies as benchmark for their own products or a target to improve their environmental performance. "Declaring a given product's compliance with EU ecolabel criteria, implies that those companies employ someone whose job includes keeping a watchful eye on ecolabel developments and making use of ecolabel information" (Cadmann & Dooley 2004: 74). As a consequence they assume that eco-label criteria could generate minimum environmental requirements applicable to all products of a product category on the market.
Schiesser & Shinn (2004: 11) give some empirical evidence based on case assessment as they state that "other mechanisms are more indirect, such as the creation of a product benchmark that puts pressure on non-licensed manufacturers to evolve (mimicking all or some of the Eco-label criteria),

or simply guides them as to what is expected of them, even though they may not apply for the Flower. For example, in the case of washing machines, the Eco-label has certainly resulted in creation of standard, although it is difficult to establish how much this is due to the Eco-label and how much it is also thanks to the EU energy label".
There are also counter-effects, though, according to the analysed literature. Dosi and Moretto (2001: 124), for instance, suggest that "if a firm's green activities and associated eco-labels are expected to project a positive image on the whole firm (including any polluting activities), then the firm may choose to expand its stock of polluting capital before applying for a label. These unanticipated negative effects are more likely to operate at the commencement of an eco-labelling scheme, but schemes can be designed to minimise such negative outcomes".

B2.2.2 Eco-labelling biasing effects on world trade

Eco-labelling has ever since been an issue in world trade discussion, namely the GATT and WTO discourse. "[F]ears and concerns have been voiced as to potential effects. If the product group chosen by the eco-label is a product which is largely imported from foreign countries and if it contains production and process related criteria, the eco-label may constitute a barrier to competing in the market place for foreign products which do not conform to the eco-label criteria. The same may apply when retailers wish to carry a majority of eco-labelled products. The *de facto* barriers to market entry for non-labelled products may be created if eco-labels or similar criteria become a requirement in government procurement or institutional purchasing (which may also have direct economic effects)" (Summary literature study label 'Sustainable Development': 26).

B2.2.3. Retailers
Rubik & Weskamp (1995) undertook the effort to systematize indirect effects towards the retail sector. They identified as benefit indicator competitive advantages, avoidance of information costs, simplification of assortment of goods policy, improvement of image, and training of employees.
A comprehensive study carried out in Italy (9 retail-chains were investigated, covering more than 80% of the retailing sector) shows that the large majority of the interviewed companies use the Ecolabel as an effective and useful assessment tool for their suppliers, in order to select them for their vendor-list. Most of them consider the Ecolabel as an effective competitive and marketing tool (IEFE-Bocconi, 2003).

B2.2.4 Professional purchasers
There is some evidence that eco-labelling schemes have "greater impact when eco-labels become a requirement imposed by retailers and/or when they are used as tools to identify green products for government procurement and institutional purchasing". (Summary literature study label 'Sustainable Development' – based on OECD 1996). Cadman & Dooley (2004: 56f.) described that eco-label criteria could be used in private and public procurements call and would support procurers and their green procurement (reduction of information search because EL criteria could be used). The (calculated) indirect benefit is estimated € 204 Mio (private) and €27.5 Mio (public) and several environmental benefits (p. 56f.).

B2.2.5 Civil society association
Lohse & Schnabel (2000) and Frey et al. (1998) examined the opportunities to encourage partnerships between companies willing to apply for the Eco-label and consumer and environmental NGOs, in order to enlarge the support for pioneer enterprises, and promote additional benefits of product labelling with the European Eco-Label. Anyway, industry and NGO perspective resulted in making multi-stakeholder cooperation a low priority. Where cooperation between NGO's and industry does already exist, it has developed in an "evolutionary" way out of long lasting processes which have had their roots in the "campaign" structures of an NGO.

>>> *Preliminary findings emerging from the interviews*

The following first general indications assessing indirect effects induced by the Ecolabel emerged from the interviews:

- Only for those companies that set the targets on products, the Ecolabel has contributed to set these targets to improve the performance.
- The Ecolabel has influenced the demands on suppliers in most companies' procurement.
- The Ecolabel has also influenced information exchange with commercial customers, but the companies get very little feedback on the information.
- The Ecolabel does not yet influence the communication with consumers, since the awareness of the label is very low (even if it is used in the product marketing campaigns).
- The Ecolabel does not at all influence the communication with NGOs. In general one can state that the EU-Flower is not important with regard to B2B & B2C-communication (with the exception of the communication towards the retailing sectors in some countries, e.g. Italy).
- A lot of other products meet the requirements of the EU-Flower, in particular the technical ones.
- The EU-Flower would be preferred and more used as a benchmark, if a "strong" Flower would be created (similar to UK Energy Saving Trust Label).

B3. Ecolabel and national labels

The main findings of the literature analysis emphasise that national labels are better known and preferred. National ecolabels are able to guarantee a high competitive potential to producers in many Member States. This makes it hard for the EU Ecolabel to enter the markets as the consumers find it difficult to differentiate between the labels.
In Germany and Austria, for instance, previous studies show that the Blue Angel is far better known than the EU Ecolabel. In the Netherlands, the national label Milieukeur is preferred by companies and in France the NF Environnement is more diffused. There is the same tendency in Denmark and Sweden, where market research shows that the consumer awareness of the Nordic Swan is much higher than the EU Ecolabel.

>>> *Preliminary findings emerging from the interviews*

- The most well-known and frequently mentioned existing national eco-labelling schemes are: the Nordic Swan, the German Blue Engel, the French NF Environnement and the Dutch Milieukeur
- In general the national labels are perceived to be more successful than the EU Ecolabel. Preference of schemes depends on which market the companies operates in
- The degree of competition between EU Ecolabel and national schemes depend on product groups and on which market the companies operates in
- Harmonisation is the main suggestion for avoiding competition

- Main advantages in keeping national labels are that they covers product groups that are not covered by the EU Ecolabel

- The most important harmonisation issue is the possibility to have identical performance criteria, test and documentation and the main advantage of harmonisation is that it will be easier for companies to apply for the different labels

- The main barrier to harmonisation is the lack of national political support

- On the opposite side, the main advantage of the abolition of national schemes is that only one label in Europe will make it easier to communicate to customers and consumers

- Main barriers to abolishing national schemes is perceived to be, again, the lack of national political support and that holders of national licenses will loose their license (if it can't be immediately converted to a EU Ecolabel)

B4. Drivers and Barriers

B.4.1 Drivers to implement the EU Ecolabel

The literature analysis reports the following categories of drivers:

a) Request or demand from large customers. The empirical evidence analysed by the existing literature shows how, in many cases, the company that has the labels are relevantly motivated by large companies buying their products and, in particular, by the requests coming from the retailing sector. Many Danish textile companies have applied for the ecolabel because the two largest retail chains asked for it in connection with the Danish ecolabel campaign in 2001. The same empirical evidence can be extracted from the literature concerning the Italian and the Benelux situations (Frey, Iraldo, 1999; Frey et al. 1998).

b) Public information campaigns. Experiences form the Flower Week project show that the promising and expectations of large campaigns will attract companies to the scheme. The number of companies awarded the EU Ecolabel increased by 80 pct. since the project started in 2002 – during the project period the number of companies awarded the Flower grew from 124 to 227. But some of the existing license holders will not proceed to label any more products until there has been made a thorough marketing effort for the label to increase consumer awareness and interest.

c) Co-marketing. In the Flower Week project, the key to success was the involvement of important actors like license holders, retailers, NGOs and public organisations in the campaign. Partnerships with license holders and manufacturers, who perform own product marketing activities, and ambassadors among NGOs and public organisations, who conduct local information activities are very important. The relevance of a "network approach" has been emphasised by some of the marketing studies promoted by the European Commission for the launch of the EU Ecolabel in the Member States. The first marketing study, in particular, defined and implemented an approach based on co-operation in adopting the Ecolabel and marketing and communicating it to the different stakeholders (Frey et al., 1998).

d) Reactive decision-making. Many companies are basing their decision of getting an ecolabel upon the action of their competitors. In other words they would only consider getting the EU Ecolabel if their competitors did. The literature emphasises how this happens especially in the industrial sectors in which a relevant number of small and medium enterprises operates (textile, paper, etc.). The diffusion of the EU Ecolabel in some Member States relied on this competition mechanism (see Frey, Iraldo, 1999). The same drivers applied also in the newly created product groups (see, for instance, the recent case of tourist accommodations). The literature underlines, with this respect, the great importance of the strategic behaviour of the so-called potential "first movers" (Frey et al., 1998).

>>> *Preliminary findings emerging from the interviews*

- The most important driver for all companies is to satisfy a specific request by customers and to improve competitive capabilities
- In general, the main motivation for applying the Ecolabel is based on market demand (consumers, suppliers). Since there is clearly a lack of demand pressure for the Ecolabel, the companies willingness to apply is low, and the motivation is sometimes to "stimulate" the market and the customers rather than to respond to their demand.
- For some companies recognition as leader is also important, regardless of the immediate feedback of the market
- Most companies expect to improve the access to public procurement (in the future)
- Few companies expect to improve environmental performance and to increase innovation capabilities, so these have to be considered as weak drivers
- Financial incentives for certified products is a promising answer to make the Ecolabel more attractive among supply side actors.

B.4.2 Experienced benefits from the EU Ecolabel

The benefits of eco-label often rely on assumptions which lack of empirical evidence. Vermeire & Le Roy (2003: 19), for instance state, "that eco-labels add an extra quality assurance to products/services, as they guarantee their environmentally friendly nature and as such helps to boost the image of brands. The labels allow consumers to distinguish between the products in a cost-effective manner".

In a laboratory test carried out with undergraduate test persons it became clear that third-party verification seems to be the most promising answer to seller reputation. In this study, Cason & Gangadharan (1999: 20) concluded the following: "Allowing for seller reputations (only) increases the number of high-quality goods delivered relative to the no-reputation baseline. Outcomes in this treatment remain inefficient, however, particularly in the experienced session. Cheap talk signalling does not increase efficiency or the number of high-quality units, except when subjects are experienced. Thus, unverified claims are not sufficient to improve market outcomes. Although certification is costly, sellers usually opt to certify; consequently, the number of high-quality units, increases, even though efficiency does not significantly increase. Certification, therefore, appears sufficient to overcome the moral hazard problem studied here".

Existing literature also emphasises that Eco-labels could also stimulate suppliers in their product development process and influence the range of products offered on the markets. Such a process needs a dynamic component in research; we have not found any empirical study dealing with the

subject of *changing* manufacturers' strategies to adopt to newly elaborated eco-labels, this statement is valid both for national schemes and the EU one.
Rehfeld et al. (2004) carried out a survey among German companies asking them for product innovations and their environmental orientation; they examined also the influences of different instruments, among them eco-labels in general. It turns out that eco-labelling is only used very little both by environmental product innovators and non-environmental product innovators.

Other sources (e.g.: Iraldo, 1998) finally emphasise some benefits deriving from the interaction and co-operation between the company that has the label and its network of business partners.

>>> *Preliminary findings emerging from the interviews*

- Most companies are still waiting for benefits, and very few are perceiving relevant advantages of any kind
- Some interviewed company that has the labels are benefiting from being among the "first movers", but mostly in terms of improved pubic image
- No interviewee, up to now, experienced a benefit deriving from green public procurement
- After initial difficulties and barriers, some company that has the labels are now perceiving benefits in terms of better selection of raw materials and components and better capability to manage the supply chain (even if this is still perceive also as a relevant barrier)

B.4.3 Barriers in implementing the EU Ecolabel

a) High costs to obtain the label. Some companies find it to expensive to test and apply for the label. Also the turnover fee puts an economic burden on the license holders, that some see as the reason for not getting the label (Frey et al., 1999).
Assessing barriers for effective eco-labelling most studies identify on supply-side high costs for certification at several levels (initial cost for application, internal preparatory effort and costs, costs of testing, costs for marketing) (Lohse & Schnabel, 2000). Schrader (2003) recommends as a supply side success factor to make the Ecolabel a low cost issue.

b) Difficult to involve and (to get documentation from) suppliers. There have been some cases, documented by the EU-funded marketing studies, of potential company that has the label that gave up the process of implementation due to the relevant difficulties that they face in involving their suppliers and to obtain from them the guarantees concerning the compliance with the criteria (Iraldo, 1998). That is true especially for suppliers from the Fareast (e.g.: in the textile sector).

c) Short product lifecycles makes labelling difficult. For the product groups with short product cycles, fashion changes and frequent variations in the supply chain, the fulfilment of the Ecolabel criteria can be time-consuming and difficult. Again, the case histories of some Italian, Belgian and Dutch companies (reported in Frey et al., 1998) are particularly significant: the need for changing some basic features of the product according to the fashion season or to the upgrading of the technological options on the market, prevented the companies to rely on the EU Ecolabel as an effective marketing tool.

>>> *Preliminary findings emerging from the interviews*

- The main implementation barrier seems to be the necessity of involving the suppliers and getting product- and process- related documentation and guarantees from them

- Some interviewees find the application procedure slow and bureaucratic

- The criteria and the related requirements are not found particularly difficult to implement

B.4.4 Barriers in using the label in product marketing

The existing literature emphasises the following barriers:
a) Low awareness of the Ecolabel, both amongst consumers, customers and professional purchasers prevents the use of the Flower as a marketing tool. Moreover, there are relevant differences in the degree of knowledge about the Ecolabel in the different countries.

b) The environmental standard of the ecolabelled products is difficult to understand. It is difficult to make the Ecolabel criteria, and thereby the products' environmental benefits, understandable for the consumers. On the other hand, the literature reports the effectiveness of a logo (Flower) as compared with information sheets or profiles containing environmental data and indicators, especially with respect to the final consumer (Iraldo, 1998).

c) Lack of availability and visibility of eco-labelled products in the stores. Many studies identify a relevant barrier in the fact itself that the Ecolabel is not so visible "on the shelf". An effective approach for marketing should be that for stimulating the consumer to buy eco-labelled products, these should be easily found in the points of sale. It has to be also emphasised that, on the other hand, sellers and retailers would like to have a wide range of labelled products in the store before they will proceed to an active promotion of the Ecolabel.

d) Product quality and function prior to environment. Even if they are buying an eco-labelled product, for the large majority of the consumers the environmental aspect does not come first. The parameters that mainly influence people's choices are quality, function and design. This implies that the Ecolabel product should provide a good quality performance and have an attractive design.

e) Priority of the aspects relating to "health" in the use phase, and low awareness of the environmental impacts in the other phases of the lifecycle. There is relevant evidence in the literature of the so-called "proximity" factor: the consumer tends to valorise and appreciate benefits relating to his/her health and, in general, producing their impacts "in the hand" of the consumer. On the opposite, there is a scarce awareness of the environmental impacts of the lifecycle, on which the EU Ecolabel focuses (IPA, 1992).

f) Distrust in the Ecolabel, especially in the verification procedure. The consumer doubts about the reliability of the regulation and control of the labelled products.

g) The eco-labelled products are often premium priced. The consequence is that consumers should be willing to offer an additional amount for the environmental product qualities, and those who are not willing or do not have the buying power to do so, will not purchase the labelled products. The problem is that a fairly large amount of the population is not willing to pay extra for the environmental benefits. On the other hand, many producers sees a price premium as a main benefit of obtaining the label, because it is the best option for getting a decent return on their investment.

h) Some companies (especially large players) feel that the ecolabel is in conflict with their own branding. They look upon the eco-label as "noise" in their branding strategy. This works especially for those producers that already hold a "strong" position on the market and, even more, that are already well known on the market as environmental friendly producers. In this cases, the producer sees the adoption of the EU Ecolabel as a "step back" or, even worse, an opportunity given to the competitors to fill the gap in terms of environmental positive image (by easily obtaining the Ecolabel immediately after the market leader). Relevant examples can be found in: Frey et al., 1998.

>>> *Preliminary findings emerging from the interviews*

- The main marketing barrier emerging from the first interviews is, with no doubt, the lack of knowledge of the label by the different potential market actors and by the institutions, and thereby the very low level of competitive rewards that are perceived

- Some interviewees also find it difficult to explain to the consumers what the Ecolabel stand for and what kind of guarantees it offers

B5 Competitiveness

In the words of the OECD (1997: 5) "some scattered anecdotal evidence shows that sales have increased when an eco-label has been obtained". But these patchwork data do not allow to make some general conclusions for a positive or negative eco-label assessment. To give some examples, Jordan (2003) reports a market share of paints with the EU Ecolabel about 0.1%.
Even if we focus on other labels, the situation doe not significantly improve. Concerning data on the actual market share of the German *Blue Angel*-labelled products, for example, very little information is available.

The effects of the Ecolabel in terms of competitiveness can be measured (or estimated) mostly by considering the shift in the ecolabelled product market shares (and not just their absolute value, as in paragraph B1). The following gives an indication for certain specific product categories according to the study mentioned above: "For recycled paper products, an increase in market share of eco-labelled products was observed as follows: in 1993, 2/3 for sanitary paper products compared to 1/3 in 1986; and respectively 1/4 for administrative paper products compared to 13 %. An OECD (1997) study of the market share for the German Blue-Angel concerning eco-labelled paints reported an increase in market share from 1% in 1981 to 60% in the do-it-yourself (DIY) sector and 20% in the handicraft sector in 1995.

The most relevant indicator found in literature to assess the competitive capability of the Ecolabel is the extent to which it is able to increase the sales by the company that has the label company. Very poor empirical evidence can be found in previous studies and research on this issue. A survey carried out in Italy by IEFE Bocconi (IEFE, 2003) reckons that slightly more than 50% of the EU Ecolabel company that has the labels experienced an increase in their turnover thanks to higher sales of eco-labelled products. No company that has the label stated that there was a decrease in sales and turnover. An interesting aspect of the survey is that the more "satisfied" producers, under the competitiveness point of view, were those holding the Ecolabel for a longer period: this means that effects on competition are perceived after a certain length of time (when the marketing campaigns start to be effective).

A last way in which the literature deals with the topic of competitiveness is to try and understand if the Ecolabel is able to affect the purchase decisions (and not just the awareness, as we have seen in paragraph B1) by the consumers. The impacts of different environmental product information schemes on purchase decisions have been tested in a research project (Grankvist et al. 2004) under test laboratory conditions. The researchers found out – as predicted – "that information about environmental outcomes provided by eco-labels did influence product preference. Furthermore, participants who attached high importance to the purchase criterion 'environmental consequences' were more affected by the labels than participants who valued environmental consequences less" (p. 224). In consequence of these results, the researchers shed light on positive and negative labels summarizing that "it takes a strong environmental concern to choose products with positive eco-labels may partially explain the weak correlations between environmental attitudes and purchase behaviour.

>>> Preliminary findings emerging from the interviews

- Very few interviewees seems to obtain new orders because of the Ecolabel
- No interviewee had access to public procurement thanks to the Ecolabel
- Some of the interviewed company that has the labels perceived a competitive advantage, or benefits, because they were "first mover", in terms of a better image with respect to the direct competitors
- In some cases, especially when the main customer was a large retailer, the interviewee benefited from a higher customer satisfaction after having obtained the EU Ecolabel
- More and heavy information and co-marketing campaigns are felt as necessary to improve the competitive capabilities of the Ecolabel
- Another relevant improvement is to allow public procurement to refer explicitly to the EU Ecolabel
- The interviewees also ask for more products groups available
- The opinions differs on upgrading Ecolabel to an internationally recognised scheme, in order to make it more competitive and recognisable at the global level
- Nobody wants to minimising the number or the level of criteria, because this will decrease the credibility and, consequently, the competitive potential of the Ecolabel
- The same seems to emerge for the issue of extending Ecolabel to services: "the credibility will decrease because it is to difficult for consumers to understand the level of environmental performance"
- The graded label is not seen as a potential improvement

B6. Sustainable Development

The relations and the contributions of the EU Ecolabel to the other pillars of sustainable development (economic and social) is very scarcely dealt with by existing literature. Some interesting indications emerge as concerns especially the aspects relating to a particular aspects, very close to the environmental one, which is consumer health and safety.

With respect to this particular issue, the relevant literature shows that when an eco-label also deals with aspects that are really close to the individual sphere of the consumer, they have more chance to succeed on the market (see also the "proximity" effects, above).
A relevant success is achieved, for example, by eco-labels dealing with organic food. Reasons for the eco-label's impact on (food-) purchase decisions has been provided by Velt (quoted in Summary

literature study label 'Sustainable Development'). The main results were: bio-labels are not very well known. Most consumers trust the statement 'bio' or 'organic'; about 50% of consumers buy products from organic farming (to lesser or greater extent); the main reason for buying products from organic farming is that they are considered healthier. Taste, quality, environmental and animal welfare considerations are less important.
As concerns the effects on safety, the BEUC - The European Consumers' Organisation – has recently released a study which shows that products carrying the EU Eco-label meet higher safety standards than are legally required. The study compares the rules for chemical content in Eco-label products against the requirement of legislation on chemicals (BEUC, 2001).

The literature analysed in the EVER study (at the present moment) does not encompass specific research regarding the possible effects or contributions of the EU Ecolabel on other pillars of sustainable development. Nevertheless, we have to notice that the possibility to integrate environmental with social aspects raised the interest of some researchers. With this respect, it is interesting to report the content of a recent study on "social labels" suggesting that the market shows an interest for an eventual "social label": even if, to date, only few consumers (1 to 3 %) actually buy products with a third party certified label , 60% of the consumers affirm to be interested in the presence of a sustainability label in supermarkets (willing to be better informed on product and product manufacturing's environmental and social impacts.
The study focuses on how promotion is essential for the label to be successful, given the fact that unfortunately to date sustainability labels are scarcely recognised by consumers. An important part of the promotion campaign could be an engagement by the government to give priority to products with a sustainability label in public purchasing.
Industrial actors' participation in social labels, however, seems to be hindered by the fear of wasting time and financial resources with no assurance of getting all these efforts paid back.
However, if the label is successful the payback period can be relatively short and some sectors such as food, textile or construction are even more interested in an integrated label than in an eco-label disregarding social issues.
Costs represent the main barrier to the adoption of the scheme. Hence, companies ask governments to provide incentives such as baring the costs (at least at first stages) of the administration and monitoring. In that case, much more companies would be interested in participating in the scheme, with positive effects on consumers, as well, since eventual price increases would be limited.
"Social issues" are a broad concept, therefore the study identifies some relevant social impact categories associated with production processes, that we can mention as follows: freedom of association and protection of the right to organise, forced labour, discrimination, equal remuneration, child labour, wages, working hours, health and safety, social security and contracts.

>>> Preliminary findings emerging from the interviews

- Many interviewee declare they invested in the past in product innovation regarding the health and safety aspects (they often did this to comply with applicable legislation)
- Very few are using other labels concerning consumer health and safety (when they do, it is a private or self certified label)
- The connection with "fair trade" seems, at present, rather weak
- It seems to be crucial to make a more obvious link to all three pillars of sustainable development
- But the opinions differ on the opportunity of extending the EU Ecolabel to a sustainability scheme – "It would be possible to signal responsibility with only one label, but it will hinder participation"

B7. Relevant literature

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PART C: INTEGRATION

One of the main aim of the EVER study is to analyse and assess the possible synergy and potential for integration between EMAS and the EU Ecolabel and other policy instruments and tools at the EU and national level.
The development and implementation of tools such as EMAS and the Eco-label has typically taken place based on separate legislations without much reuse or attempts of synergy. Each arrangement has its own unique character, organization and decision flow. But from the users point of view many environmental policies and tools (especially if promulgated by the European Commission) having similar objectives and based on similar data should be integrated to facilitate re-use of data, easy management and co-ordinated verification.

The first part of the EVER study has focused on the integration of the EMAS and Eco-label, and between them and an EPD (Environmental Product Declaration) system. The following part of the literature review will also take into consideration and assess the integration of EMAS and Ecolabel with other environmental policies (such as, for example, the IPPC directive).

Only very few reports, survey and other literature has investigated and reported experiences on these issues such as synergies and possibilities of integrating EMAS, Ecolabel and the EPD system. So far three studies have been identified:

1: Possible interaction and synergy between environmental management systems and Eco-labels. Valør & Tinge, 2002
The aim of the study was to identify existing and possible synergy and interaction (or lack of) between EMAS and ecolabels through interviews with organisations having both EMAS and a type 1 ecolabel.

2: Integrated Supply Chain Information. Danish Toxicology Centre and Valør & Tinge, Final draft, April 2005 (to be published soon)
This report is analysing the possible synergies between five of information tools and schemes namely EMAS, Eco-label, EPD, Safety data sheets (SDS) and IPPC. Apart from EPD, all these tools have been applied by the EU.

3: Integrated product policy at the company level: how to create synergy between the product dimension and the environmental management system (published only in Italian). Carnimeo G., Frey M. & Iraldo, F., 2002, FrancoAngeli, Milan.

The findings, conclusion and recommendations of these studies has already been considered in the development of the options below.
Many other studies recommend to link eco-labelling with Environmental Management Systems – and in particular with EMAS (e.g. Lohse & Schnabel 2000, Nielsen 2002)

An example often found in the literature review refers to *Integration in company-related process-oriented environmental policy*, that is linking environmental management systems (e.g. EMAS) with eco-labels (Nielsen 2002). On the Member state level, the Netherlands have been a frontrunner experimenting already at the beginning of the 1990s with so-called POEMS (Product-Oriented Environmental Management Systems).

>>> Preliminary findings emerging from the interviews relating to the integration between EMAS and Ecolabel

Possible synergy between EMAS and the Eco-label at operational level are perceived by companies and stakeholders – knowing both schemes, such as:

- Review of similar environmental aspects and impacts
- Use of Eco-label criteria for determining significant aspects in EMAS
- Use of Eco-label criteria as target in EMAS
- If EMAS companies have given priority to products (products as an significant environmental aspects) there will or might be synergies to Eco-label

Companies and stakeholders – not knowing both schemes – do not see any synergies at all – they do not see any links between a management system and a product label

Possible synergy between EMAS and the Eco-label at marketing level:

- Common marketing could be an option, but not an important as long as the two schemes are not very well know and used as individual schemes,
- Some interviewees are in favour of the EMAS logo on the product – some are not

Possible synergy between EMAS and the Eco-label at the institutional level:

- There seems to be very little support for merging the two schemes neither by participant nor stakeholders – they are seen as two different schemes with different aims
- A merge of the two schemes would confuse the consumers
- Verifiers could be the same for the two schemes, in such a way that it should be possible to do the verification of both EMAS and Eco-label compliance at the same time
- Some are in favour of common Competent bodies at national level – some are not

Barriers to the exploitation of synergies:

- EMAS should not be a mandatory requirement to obtain the Eco-label
- Eco-label criteria should not be a performance requirement in EMAS
- Some institutions do not prefer co-operation
- Some institutions do not see the overlap and possible synergies
- Stakeholders lack of knowledge of the experiences among participating companies and their understanding of synergies

>>> Preliminary findings emerging from the interviews relating to the integration between EMAS / Ecolabel and the EPD system

As a general indication:

- Many interviewees see the EPD as complementary to the Ecolabel
- Less interviewees see the EPD as complementary to EMAS
- Very few interviewee see the EPD as complementary to both the schemes

Possible synergy at the operational level:

- common data collection between EMAS initial review and monitoring of environmental aspects and, on the other hand, the data and indicators for the EPD is seen as a potential synergy by all those interviewees that know the EPD system
- EPD can also support EMAS with LCA data for a product-oriented EMAS, this is the opinion of some interviewee
- EPD as an additional EMAS requirement (if the company wants to use the logo on the products, for instance) is seen as an interesting but rather complex and not so feasible objective, that risks to make it too complex for SMEs to obtain the chance to use the logo

- Many respondents answered that EPD can support the Eco-label criteria definition with LCA data
- And, if adopted by a supplier, can provide guarantee on Ecolabel supply chain criteria

Possible synergy at the marketing level:

- A relevant share of the interviewees see the EPD as an opportunity to enrich the EMAS statement with product related data (communicating more in depth on an indirect aspect, such as the product environmental performance), but they would not want this as a mandatory requirement
- A useful role for the EPD is seen by some interviewees in B2B marketing

Possible synergy at the institutional level:

- Many uncertain answers were collected up to now, because most of the interviewees are not aware and informed on how the EPD system works

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, xxxx 2008
SEC(2008) XXX final

COMMISSION STAFF WORKING DOCUMENT

Accompanying document to the

Revision of Regulation (EC) No 1980/2000 of the European Parliament and of the Council of 17 July 2000 on a revised Community eco-label award scheme

IMPACT ASSESSMENT

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EXECUTIVE SUMMARY

According to Article 20 of the Ecolabel Regulation[1], the EU Ecolabel scheme, which has been in place since 1992, has to be reviewed and the Commission must then propose any appropriate amendments to the Regulation.

The overall objectives of the scheme are to encourage the sustainable production and consumption of products, and the sustainable provision and use of services, by setting benchmarks for good environmental performance. By guiding consumers towards them, the Ecolabel should promote those products and services that have met these benchmarks compared to others in the same category. The Ecolabel scheme also needs to be usable as an integral and effective part of the wider Sustainable Consumption and Production policy framework of the European Commission, linking well with other instruments, such as Green Public Procurement (GPP), the Eco-Management and Audit Scheme (EMAS), the Eco-design directive and the Environmental Technologies Action Plan (ETAP), etc.

The Ecolabel review and impact assessment process began in February 2002, with the launch of a large-scale evaluation study on Ecolabel[2] In addition to the review, a number of stakeholder consultations have taken place, culminating in a public internet consultation at the beginning of 2006, the results of which indicated strongly the need for significant changes to be made to the Ecolabel Regulation. The impact assessment shows that the current scheme is unable to achieve its objectives as it suffers from low awareness of the label and low uptake by industry resulting amongst others from excessively bureaucratic processes and management.

Three main or macro-options are considered in this impact assessment: continuing with the present approach; phasing out the scheme; or making modifications to the scheme. Within the last option a number of micro-options are analysed and then considered as a package of measures representing the best modifications of the scheme. Following the analysis of impacts this last option has been chosen. The following package of measures is therefore proposed for the modification and simplification of the scheme:

- Design Regulation to better fit into the other sustainable production and consumption actions of the Commission;
- Open up the scope of the label;
- Introduce measures to encourage harmonisation with other eco-labelling schemes: EU Ecolabel criteria as a standard for other eco-labels; fast track procedure to adopt criteria developed by national ecolabel schemes;
- More product groups / quicker criteria development;
- Introduce a template for criteria documents to ensure they are more user friendly;
- Incorporate guidance for Green Public Purchasing into criteria development;
- Simplification of the assessment and verification procedures and abolition of the annual fee;

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[1] Regulation (EC) No 1980/2000 of the European Parliament and of the Council of 17 July 2000 on a revised Community eco-label award scheme (http://ec.europa.eu/environment/ecolabel/pdf/regulation/001980_en.pdf)

[2] http://ec.europa.eu/environment/ecolabel/revision_en.htm

- Peer review for Competent Bodies;
- Boost marketing.

It can be expected that this modification and simplification of the scheme will lead, on the one hand to a considerable increase in companies using the label, therefore also to an increase in Ecolabelled products on the market and, on the other hand, to an increase in the number of consumers that know about, and are prepared to buy, Ecolabelled products as well as to an increase in the use of EU Ecolabel criteria in public procurement. The Ecolabel will be better tailored to policy makers, particularly within the framework of the Sustainable Consumption and Production Action Plan, and will be a useful benchmark and information tool on the environmental performance of products and services.

The economic and environmental impacts of the scheme will depend on the Ecolabel's success and this will in turn depend, amongst other factors, on how well it co-ordinates with other policy instruments aiming at promoting innovation in the life-cycle environmental performance of products. Forthcoming Commission actions on Sustainable Consumption and Production will examine ways to use a range of product policy instruments in a coherent and co-ordinated way to maximise their effect as a whole in driving both innovation and sales of better performing products. As the Ecolabel would be a part of such a package of instruments, its impact will need to be judged as part of that package.

This impact assessment concludes that, as a voluntary instrument, a modified Ecolabel can have net economic benefits for the EU economy, and increase both competition and competitiveness. The Ecolabel therefore works with the market and – with its simplified approach – is a model "better regulation" policy instrument.

SECTION 1: PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES

1.1. Organisation and Timing

Work Programme reference: 2007/ENV/011

General chronology of the Impact Assessment:

The impact assessment process began in February 2002, when the Ecolabel Policy Management Group first met and was given the task to *"continue to develop and adapt the long-term policy and strategy of the scheme, as well as the integration of the Ecolabel in the various policies being developed in relation to sustainable consumption"*. A sub-task of this multi-stakeholder group, set up by the European Union Ecolabelling Board according to their roles defined by Commission Decision 200/730/EC[3], was to prepare for the revision of the scheme. The official evaluation study (named the 'EVER' study – see below) was launched in 2005. This study was accompanied by a Commission inter-service group that met on two occasions.

Task	**Deadline**	**Status**
External evaluation	Dec 04 - Dec 05	Completed
Selected stakeholder consultation	Jan 06 – Dec 06	Completed
Draft main direction revision	May 06 – June 06	Completed
Internal agreement main direction	June 06 – Nov 06	Completed
Draft text Regulation	Nov 06 – Aug 07	Completed
Impact assessment (incl. stakeholders consultation)	Dec 06 - Apr 07	Completed
Internal agreement draft text	May 07 - July 07	Completed
Revise draft text I Stage delayed due to integration into SCP Action Plan	Aug 07 - Feb 08	Completed
Inter-service consultation	Mar 08 - Apr 08	Underway
Revise draft text II	Apr 08 – May 08	To be completed
Commission adoption new Regulation	June 08	To be completed
EP – Council co-decision	Sep 2008 - End 2009	To be completed
Adoption new Legislation	Beg 2009 – End 2010	To be completed

[3] Commission Decision of 10 November 2000 establishing the European Union Ecolabelling Board and its rules of procedure (OJ L 293 p24-30)

1.2. Consultation and expertise

External expertise used:

External expertise was used to conduct the evaluation study of the existing EMAS and Ecolabel Regulations. A large-scale evaluation study on the EMAS and Ecolabel instruments was carried out by a consortium of consultants led by Bocconi University, known as the 'EVER' study.[4] This study included, as well as a major literature review, two stakeholder workshops and in depth interviews with participants and non-participants in the schemes as well as other interested parties. The Policy Management Group also provided input and was made up of representatives of Member States, consumer and environmental NGOs and industry. This group met on twelve occasions and produced four reports on the future of the Ecolabel scheme. A second important source was the study carried out for the Commission by AEA Technology "The Direct and Indirect Benefits of the European Ecolabel"[5].

In addition this impact assessment makes use of the findings of the Working Group on Product Information Needs[6] (one of the EU Integrated Product Policy working groups consisting of experts from government, industry and NGOs).

Stakeholder consultation:

Significant consultation has taken place with members of the multi stakeholder EU Ecolabelling Board (EUEB) based on informal discussion documents prepared by DG Environment (including six days of documented workshops spread over the last two years at EUEB meetings in Brussels and EUEB Presidential meetings in the Member States). These discussions have generated detailed written responses from key stakeholders (i.e. from Member States, environmental, consumer and industry representatives) that have guided the Commission in the early stages of developing options for the revision of the scheme. The above mentioned evaluation study (EVER) is partly built on detailed interviews with different stakeholders.

Finally, as part of the Impact Assessment, a public stakeholder consultation using the integrated policy making (IPM) internet consultation tool was organised in January and February 2007. This on-line questionnaire enabled all types of stakeholders to input their opinion on options proposed for the Ecolabel revision. The results of the 185 responses have been analysed and a report has been prepared in line with Commission guidelines.[7] These results support the main directions of the revision options proposed, although in general they would favour a more radical change to the running of the Ecolabel (away from Commission Decision) and more radical rules on the influence of the criteria, such as them being used for reduced taxation or as the minimum standards for green claims.

Commission's minimum standards:

The Commission's minimum standards on consultation have been met.[8] The time allowed for stakeholders to reply to the internet stakeholder consultation was more than 8 weeks, the minimum standard for the Commission. Additionally, as outlined above, extensive

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4 http://ec.europa.eu/environment/ecolabel/revision_en.htm

5 http://ec.europa.eu/environment/ecolabel/pdf/market_study/benefitsfinalreport_1104.pdf

6 http://ec.europa.eu/environment/ipp/pdf/20070115_report.pdf

7 http://ec.europa.eu/environment/ecolabel/pdf/revision/revision_report2007.pdf

8 COM (2002) 704 final, Communication from the Commission: Towards a reinforced culture of consultation and dialogue - General principles and minimum standards for consultation of interested parties by the Commission

stakeholder consultation has been on-going with all types of stakeholder and interested parties beginning in 2005 and continuing during the course of 2006 and 2007.

Main results of the consultation:

The main conclusion from the consultation exercise is that, while the Ecolabel scheme has significant potential, a number of changes would be necessary for a more successful implementation:

- There is a strong need to integrate different instruments for environmental product policy. The EU Ecolabel scheme therefore has to be revised in such a way as to best fit within the mix of other environmental and sustainable product policy instruments. The Ecolabel cannot be a stand-alone instrument, but part of a well organised Sustainable Consumption and Production policy[9], where outputs such as Ecolabel criteria, Green Public Procurement criteria, ETAP performance targets and Eco-design criteria etc. are linked closely together.
- The management of the scheme needs to be improved. In other words, who does what needs to be more clearly defined and the bureaucratic processes imbedded in the scheme need to be rationalised, allowing it to be run in a more business-like way.
- The bureaucracy linked to criteria development for product groups and to application procedures needs to be reduced whilst at the same time keeping the ambition level high.
- Criteria documents have to be much more user friendly with a standardised format.
- The assessment and verification procedures for the scheme have to be simplified to improve access to the scheme and to align it with other Commission product labelling schemes.
- The number of product groups as well as of licence holders has to be substantially increased, targeting those areas of highest environmental impact and where the possibility of improvement is highest.
- A more successful Ecolabel will, above all, depend on a substantially increased marketing budget.
- There is a clear need to better co-operate and co-ordinate with established national and regional ecolabel schemes.

1.3. Impact Assessment Board

A previous version of this IA was sent to the Commission's Impact Assessment Board which delivered its opinion on 30 May 2007. This has led to a number of changes to the text including the following:

- Extending Section 3: Problem Definition, especially with regard to the justification for having a third-party-verified ecolabel at EU level.
- Re-arrangements of the micro-options in Section 5: Policy Options.

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[9] The June 2006 **European Council conclusions**[9] on the EU SDS established SCP as a new key priority policy area for action alongside climate change, clean energy, sustainable transport, natural resources and public health. It called for the Commission to put forward an Action Plan by 2007 to *"help to identify and overcome barriers for SCP, ensure better coherence between the different related policy areas, and raise awareness among citizens and change unsustainable consumption habits".*

- Deepening the analysis of impacts in Section 6, amongst others concerning Ecolabel as a driver for innovation, social impacts and macro-options 1 and 2 (business as usual and phasing out the scheme).
- Adding more substance to the description of administrative costs in Section 8.

SECTION 2: POLICY BACKGROUND

To understand the possible need for a revision of the Ecolabel Regulation we first need to develop an understanding of how the current scheme works. The following gives an overview of the structure, procedures and bodies of the EU Ecolabel under the current Regulation:

European Union Ecolabel scheme – an overview

THE MAIN ELEMENTS OF THE SCHEME

Being a voluntary, market-based instrument, the primary function of the EU Ecolabel is to stimulate both the supply and demand of products that have a lower environmental impact compared to others in the same category. On the demand side, the scheme gives European consumers the means to make informed environmental choices when purchasing products. With respect to supply, the EU Eco-label has the clear objective of encouraging businesses to market greener, officially licensed, products. The "Flower" is the assurance that a product which is marketed as "green", really belongs to the high end of the environmental market.

The Europe-wide coverage of the scheme means that companies do not have to make applications in every country where they wish to market their products, and thus avoids time-consuming and costly procedures. The same logo is used regardless of the product group in question, thereby reducing consumer confusion due to the numerous self claims and green logos in existence.

The label is awarded only to those products and services that meet the selective criteria developed and decided in a transparent process with representatives from industry, commerce, environmental and consumer organisations. Ecolabel criteria are based on studies which analyse the impact of the product or service on the environment throughout its environmental life-cycle, starting from raw material extraction in the pre-production stage, through production, distribution and disposal.

It is for the producer, retailer or service provider to decide whether or not to apply, once the criteria are published in the Official Journal. The voluntary nature of the scheme means that it does not create barriers to trade. Foreign and Community producers may apply for the logo if they meet the criteria and want to market their products in the EU/EEA.

THE ACTORS

The Commission

The Commission is responsible for the overall management and coordination of the scheme. It has the power of "proposal" on every legal document for the implementation of the scheme (criteria documents, fee structure, rules of procedures of the different groups, standard contract are all published as Commission Decisions in the Official Journal), as is the case with all legal acts coming from the EU. These proposals, agreed via inter-service consultation, are then submitted to a "Regulatory Committee", i.e. a vote by Member States. Together with the Member States the Commission is responsible for marketing the Ecolabel. It gives financial support to NGOs to ensure a balanced stakeholder participation.

Competent Bodies

The Ecolabel Regulation requires each Member State to designate a Competent Body (CB) which is responsible for implementing the Ecolabel scheme at MS level. The CBs have to contribute to criteria development, they have to consult stakeholders at MS level, market the scheme (shared responsibility with the Commission), receive applications from companies and they award the label after verification as to whether all the criteria have been met.

The Consultative Forum

The Consultative Forum is the stakeholder forum and is composed of representatives from industry, trade unions, SMEs and consumer and environmental NGOs.

The EU Ecolabelling Board (EUEB)

Composed of representatives of the CBs and the members of the Consultative Forum, the EUEB meets 3 to 5 times a year and discusses draft criteria documents as well as any other issue relevant for the implementation of the scheme. The EUEB has several sub-groups: the so-called Management Groups (currently for Marketing and Co-operation and Co-ordination) and the ad-hoc working groups which discuss draft criteria for product groups at expert level. The Commission acts as the Secretariat for the EUEB.

The Competent Body Forum

In this forum, CBs discuss implementation issues related to the criteria documents in order to ensure a harmonised approach across the EU.

The Regulatory Committee

Representing the MS governments, this Committee votes on draft criteria documents tabled by the Commission (after they have been prepared and discussed by ad-hoc working groups and the EUEB). The voting rights are the same as in Council, and a qualified majority is needed.

THE PROCEDURES

Award criteria development

The initiative for selecting a product group[10] is taken either by the Commission or by the EUEB. Once a product group is selected for the development of new criteria, the Commission gives a mandate (Commission Decision) to the EUEB to proceed with the work. After the completion of official tender procedures, one of the Competent Bodies is awarded a contract to take the lead for this product group.

The EUEB procedures foresee a certain amount of preparatory work led by this lead Competent Body to determine whether the product group falls within the scope of the scheme, notably representing a significant volume of sales, involving a significant environmental impact and equivalent potential for improvement and a significant sales volume.

A feasibility and market study is carried out to collate data on the following aspects: the market structure and the various types of product groups on the EU market, the opinions of all interested parties, the key environmental impacts and key elements relating to the product's fitness for use, an inventory of eco-labels, standards, test methods and studies. Consumer perception, functional differences between types of products and the need for identifying sub-

[10] The Ecolabel regulation defines a product group as "any goods or services which serve similar purposes and are equivalent in terms of use and consumer perception."

groups will be assessed. Generally the interests of the main parties and SMEs concerned and the overall impact are key elements for the selection of a product group and the development of the scheme.

An ad-hoc working group is organised by the lead Competent Body. Composed of experts from the Member States and representatives of all interested parties concerned, the group evaluates the preparatory phase and discusses possible criteria. On the basis of these results and consultations (usually 3 or 4 meetings per product group), the lead Competent Body drafts a criteria document which is then presented to and discussed by the EUEB (usually also 3 to 4 times). Once the draft criteria are sufficiently negotiated in the EUEB, the document goes into an inter-service consultation process within the Commission where all relevant Commission services either give their agreement or require changes to the presented draft. After a consensus has been reached within the Commission, the draft document goes to a Regulatory Committee (Member States delegates) where it needs to achieve a qualified majority for adoption (Comitology).

After a positive vote, the document is translated into all the official EU languages before it is published in the Official Journal as a Commission Decision. This whole process can take up to four years and sometimes criteria may be outdated by the time they enter into force. Even small changes that may turn out to be necessary as a result of the first applications (see below) for these new product groups can take up to two years before entering into force.

Applications and award of the label

Companies which want to use the Ecolabel have to apply to the Competent Body in the MS where the product is manufactured (if it is manufactured in several MS the company can choose one of these MS's Competent Bodies to apply). For imported products, the application has to be filed with one of the CBs where the product is imported. After a positive verification of the application, the CB concludes a contract with the company which entitles the applicant the use the Ecolabel for marketing purposes for the remaining period of validity of the ecological criteria. The Competent Body charges a harmonised fee for the application and the annual use of the Flower logo.

The award of the Ecolabel means that successful applicants are permitted to use the official Flower logo on their approved product in a market of almost 500 million consumers. Thus a consumer in a supermarket who is faced with a line of different brands of laundry detergents for instance, will be able to pick out, by checking the Ecolabel logo, the ones which achieve a high standard of environmental performance compared with the rest of the field.

Following the request in the Ecolabel Regulation to review the scheme after a certain time, the Commission launched an evaluation study which, in short, showed that after 15 years of existence the EU Ecolabel has not reached its potential.

SECTION 3: PROBLEM DEFINITION

In the context of the revision of the EU Ecolabel we have to start our analysis with two fundamental questions:

1. Why an EU Ecolabel?

2. Why is there a need for revising the Ecolabel Regulation?

1. Why an EU Ecolabel?

As highlighted in different reports published by the European Environment Agency and others, the state of the environment gives raise to increasing concerns. Global warming is just one – and currently the most prominent – key word in this context but many others would need to be mentioned as well – such as bio-diversity, air and water pollution or ozone depletion.

There is a clear need to reduce the negative impacts of production and consumption patterns on the environment, health and natural resources. Currently, the Commission is preparing a Green Paper on an Action Plan on Sustainable Consumption and Production (SCP) which will constitute the framework for an integrated implementation of a mix of instruments aiming at reducing exactly this negative impact of modern life on the environment, health and natural resources.

A multi-criteria, third party verified Ecolabel based on life-cycle thinking could constitute a very important element of such a mix of SCP policy instruments and the importance of such an Ecolabel scheme has already been emphasised in earlier policy documents such as the Commission's Communication on Integrated Product Policy[11] and the 6th Environmental Action Programme[12] Eco-labelling also has some unique benefits over other possible policy instruments such as taxes and direct regulation – for example the direct empowerment of consumers themselves to drive environmental change. In this way, eco-labels can provide information to consumers about what the key environmental issues are in relation to a product and what the differences between products are. Additionally, other instruments may make use of the EU Ecolabel scheme in the future in terms of criteria development and stakeholder involvement. Examples might be lower taxes for Ecolabel products or direct regulation concerning non-Ecolabel products.

Within a single market a single set of guidelines benchmarking the environmental credibility of products is the logical way forward, as opposed to having different benchmarks in each Member State. An EU-wide scheme makes it easier for businesses wishing to market more "environmentally friendly" products within the EU and it means consumers can purchase so-called "greener" products wherever they are, safe in the knowledge that these products share common environmental credentials. The EU Ecolabel is the only such label for the entire internal market - existing national or regional eco-label schemes cover it only in part.

If consumers, as well as private and public purchasers are to take environmental criteria into consideration when they choose their products and services in the market, it is important that they can find easily understandable and credible guidance to enable them to distinguish the truly "green" products from their competitors. Eco-labels can play a very important role in any package of measures aiming at promoting development and sales of greener products;

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11 (IPP) (COM (2003) 302 final)

12 (Decision No 1600/2002/EC)

they set a clear benchmark for the market and, for example, eco-label criteria can also be included in calls for tender in green public procurement.

The EU Ecolabel also provides a useful benchmark of environmental performance in other ways:

- The EVER study confirms that the EU Ecolabel criteria are used even by non-participating companies, with more than half of such companies interviewed declaring that they use the Ecolabel to benchmark their environmental performance, even when they do not apply for the label.
- Under the Eco-design Directive for energy-using products[13], any product which has been awarded the Ecolabel is automatically considered as compliant with the implementing measures.
- EU Ecolabel criteria have also been used in some cases by other eco-label schemes like the Austrian Ecolabel or the Nordic Swan. Both have chosen to directly adopt the EU criteria word-for-word for some of their own product groups.

As a voluntary instrument, an eco-label can have net economic benefits for the EU economy, potentially increasing both competition and competitiveness. The Ecolabel will reward innovation with increased profits, providing market incentives for greater innovation in the EU economy.

The obligatory life-cycle approach ensures the consideration of relevant impacts across the different environmental problems and from cradle to grave therefore avoiding the mere shift of burdens.

2. Why is there a need to revise the Ecolabel Regulation?

The main problems identified with the current scheme are:

Low awareness

The EVER study mentions low awareness as the most significant barrier in using the Ecolabel for marketing purposes. According to a recent Eurobarometer Survey[14], 48% of Europeans do not know what the logo means while only 11% correctly said that it is a label for ecological products and services. In comparison, 80% of Germans know the Blue Angel and 67% of people in the Nordic countries understand the Swan.[15] The Eurobarometer also finds that, apart from being widely unknown, the logo is also confusing to consumers. Many respondents think either it stands for organic food or just for high energy efficiency.

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13 See http://ec.europa.eu/enterprise/eco_design/dir2005-32.htm

14 http://ec.europa.eu/environment/ecolabel/pdf/studies/eurobarometer_survey.pdf

15 Source: http://www.svanen.nu

Low uptake by industry

Over the 15 years of its existence the EU Ecolabel has attracted some 470 companies (many of which are SMEs). Beginning of 2007, the Blue Angel had 560 companies[16] and the Nordic Swan 680 (These being the biggest two national ecolabelling schemes).

While those using the scheme point out the positive environmental benefits they have brought, and while the scheme continues to grow steadily with around € 800 million of sales of eco-labelled products, it still commands a very small EU market share in relative terms.

What are the underlying drivers of these problems?

a) Regulation too restrictive

A general lack of flexibility of the scheme due to the restrictive way in which the Regulation is written is also seen as a problem. The EU Ecolabel is unable to respond to new environmental challenges for this reason. Some examples of this are:

– It is difficult to develop Ecolabel criteria alongside criteria for other Commission instruments – both existing, eg. Eco-design of Energy using Products Directive, ETAP Performance Targets or future eg. possible proposals coming from the SCP Action Plan

– All food products and medical devices are currently excluded from the scope of the EU Ecolabel. However, food production has been highlighted as having one of the greatest environmental impacts[17] in terms of production and consumption. A number of new schemes are being developed in the EU looking at the "carbon footprint" of food products, but the current EU Ecolabel is unable to offer its expertise in this field.

– Calls for an EU Ecolabel for sustainable fisheries are also impossible to respond to by the scheme.

b) Insufficient co-operation and harmonisation with other ecolabel schemes at national and regional level

This issue has been discussed at length during the last revision of the Ecolabel Regulation and subsequently in the EUEB and its Co-operation and Co-ordination Management Group. It has always been seen by all as being of crucial importance to give the Ecolabel real "added value", however up to now only occasional measures have been implemented on a voluntary cooperation basis. In a few cases other schemes have adopted EU criteria documents which gives companies the opportunity to get both labels through one application and also save money on fees, but most of the time criteria development in the different schemes is quite independent of what happening at EU level. This makes it necessary for companies willing to market their products with an eco-label to adjust to different requirements and to apply for different labels separately (given the still low level of awareness of the EU label, companies still have an interest in also using the well-known labels in some countries – see above "level of awareness").

c) The Ecolabel faces strong competition from green self-claims

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16 Source: www.blauer-engel.de

17 See EIPRO study, Environmental Impacts of Products – Analysis of the life cycle environmental impacts related to the final consumption of the EU-25 (http://www.jrc.es/publications/pub.cfm?id=1429)

The consumer is confronted with numerous green claims on products without knowing on what criteria development process these claims are based. The number of these self-claims by industry suggests that the current legal framework seems inadequate and the consumer is often left in confusion or uncertainty.

d) Insufficient stakeholder involvement in product group criteria development

The evaluation study on the Ecolabel highlighted the fact that many stakeholders, such as industry, do not feel fully involved in the scheme because, while they can contribute to the working groups on the development of the criteria documents, their comments are often not responded to.

e) Procedural and organisational problems – i.e. excessive bureaucracy

The evaluation study highlights the complexity of the Ecolabel structures and procedures as a barrier for the development of the scheme. Within the current organisational framework of the EU Ecolabel it is possible to develop one or possibly two new product groups a year. However, as the total number of product groups increases there are an increasing number of product group criteria that need to be revised leading to a subsequent reduction in the resources available for the development of new products groups. Simple revisions of criteria take years to complete and the final decision-making process on criteria is long and political. For fast-changing products such as electronic devices it is crucial to have a framework which allows a frequent and quick up-date otherwise criteria would, in a short space of time, be unable to keep up with market developments.

f) Low number of product group categories

At the beginning of 2007, 23 product groups were in force[18]. A rather modest number compared to 80 in the German Blue Angel system and the 60 in the Nordic Swan.

g) Problems in using the Ecolabel in green public purchasing activity

Currently, there are two problems: Firstly, criteria documents are not easily usable for public procurement purposes because they are often long and complicated which makes it difficult to extract the relevant parts for calls for tender. Secondly, the procurement directives do not allow those involved in the process to directly ask for Ecolabelled products but only to use Ecolabel criteria for the technical specifications.

h) Fees and cost of getting the label

The annual fee is currently a % of sales of the Ecolabelled product, this can scare off potential applicants, because the more they sell the higher the fee will be. This seems to go against the idea of the polluter pays principle, with those companies making the effort to produce more environmentally sound products, paying for the label. It also requires a bureaucratic process at the end of each year. On top of the fees, companies have to bear costs for testing and verification which, for some product groups, can be considerable – in certain cases more than €10,000. The criteria themselves are often complex and difficult to work though, so the application process can take some time.

i) Lack of funding for marketing and running the scheme

The EU Ecolabel budget for marketing in the whole of the EU directly from the Commission is around €460K per year with 5 dedicated staff helping to run the scheme. (with around €150K per annum on product group development and revision) Member States spending on

[18] See list of product groups in Annex.

marketing of the Ecolabel varies year on year around an average figure of approximately €1.5m. Within the Member States there is a total of 36 staff, with an annual running cost of about €2.3m. Income from fees was around €260K in 2004. This is clearly insufficient to make a brand – and from a marketing perspective the Ecolabel can be seen as a brand – well known in the market.

As a comparison, the Nordic Swan's current annual budget in Norway, Sweden, Denmark and Finland is about €7.5m and the scheme is run by around 70 employees. Additionally they have a budget of €3m for marketing, information and sales in 4 countries comprising about 25 million people altogether.

According to the EVER study "95% of the companies participating in the EU scheme use the Ecolabel in their marketing campaigns (TV and press advertising, promotion initiatives on the point-of-sale, etc.)". However, as long as the total number of companies is low, the impact of their individual marketing activities is limited. There is a clear need for money for an initial period to boost knowledge of the label to a point where companies can clearly see benefits from using it.

j) Lack of transparency with regards to implementation of the regulation in MS

Competent Bodies are responsible for the assessment and verification of the applications they get from companies wanting to use the label. Currently, there is no systematic information on the consistency in which the Regulation is applied by the different Competent Bodies. Usually three times a year there is a CB meeting in order to discuss issues of implementation, but only a limited number of CBs participate in these meetings and, in general, it is unclear if the Regulation is implemented in a consistent and harmonised way across the EU.

k) The harmful environmental impacts over the life-cycle some products can be much greater than other products on the market which serve the same function, yet there are often no reasons for manufacturers to improve the environmental performance of their products.

As the market price does not reflect the environmental damage caused during the life-cycle, more harmful products compete at an advantage against similar products with improved environmental performance – with two potential results: a) there is 'unfair' price competition to the disadvantage of products which are more expensive because they have improved environmental performance, which limits the commercial rewards for manufacturers who improve their product's performance – and this acts as a break to innovation; and b) consumers unknowingly purchase products whose additional environmental harm to society outweighs the cost savings to the consumer.

Manufacturers of products with worse life-cycle impacts have few or no reasons to try to improve those products performance, which therefore may slow improvements in the product group as a whole. This is likely to limit the effectiveness of Ecolabel as an instrument promoting gradual improvement of product environmental performance.

The EuP Directive is designed to tackle these problems, but has a scope limited to products which use energy. The possibility of introducing implementing measures for removing the worst performing products from the market in terms of their environmental performance could also be desirable and the Ecolabel scheme could act as a benchmarking tool for any such policy. Any of the current range of Ecolabel product groups could be used as an example such as using the Ecolabel criteria to recommend standards on the environmental impact of cleaning products on the market, helping to reduce the levels of toxic compounds found in such products.

Who is affected, in what ways, and to what extent?

The Ecolabel has failed to provide the intended service to a number of stakeholders who could have benefited from using it:

- Consumers who would like to have clear guidance on which products are more environmentally friendly hardly find the EU Ecolabel on products. In many countries, they will also not find any other third-party label available.
- Companies wanting to use the Ecolabel as a benchmark for product development can only do so for a limited number of product groups.
- Those companies wanting to use the label as a credible marketing tool for promoting their green products are restricted to the same small number of product groups and have little added value from the label due to the fact that it is only known to about 10 % of the European population.
- Public purchasers are also affected. They are looking for simple criteria which they can put into their calls for tender, but either the Ecolabel criteria do not exist or they are over-complicated. Instead there are very different rules and guidelines, in different stages of development in different Member States.
- Policy makers, wishing to find understandable life-cycle information on products and looking to find out what the key environmental impacts are for linking to other policies (for example for setting mandatory minimum criteria under the Energy-Using Products directive) often have to start from the beginning because they cannot use the Ecolabel as a source of such information.

How would the problem evolve, all things being equal?

Basically, the above mentioned problems would persist and be aggravated. There would be no coherent EU-wide policy setting environmental benchmarks for products. The different Member States would continue to develop their own very different labelling and green public procurement systems and this would mean additional confusion for consumers and additional bureaucracy for companies. In the end it would lead to less progress in terms of sustainable production and consumption that would, in turn, mean less economic growth. See also, Policy Option: "Leave the scheme as it is".

Does the EU have the right to act - Treaty base, "necessity test" (subsidiarity) and fundamental rights limits?

Yes. Most of the issues described in this section are fundamental problems that lie within the Ecolabel Regulation itself. To tackle these problems requires changes to the Regulation that cannot be dealt with by Member States themselves. Indeed, the right to act is already mentioned in Article 20 of the current Regulation, where it states: "*the Commission shall review the Scheme in light of the experience gained during it operation…and propose any appropriate amendments to this Regulation"*.

SECTION 4: OBJECTIVES

The overall objectives of the revision of the scheme are:

1. To encourage the sustainable production and consumption of products, and the sustainable provision and use of services, by setting benchmarks for good environmental performance. By guiding consumers towards them, the Ecolabel should promote those products and services that have met these benchmarks compared to others in the same category.
2. The revised Ecolabel scheme needs to be designed in a way to ensure that is usable as an integral and effective part of the wider Sustainable Consumption and Production policy framework of the European Commission. The new Regulation needs flexibility to link easily with other instruments, such as GPP, EMAS, Eco-design, ETAP, etc.
3. A much more influential Ecolabel in terms of supporting other SCP policies and setting benchmarks for good environmental performance for policy makers, for companies or for educating the public.

Operational objectives are:

- High awareness, understanding and respect in the EU-27 and around the world. The medium-term benchmark for success should be that the Ecolabel is recognised by consumers and by companies throughout the EU at a similar level to the recognition of the Blue Angel or Nordic Swan in their respective countries of operation.

Indicators: % of population that know the Ecolabel and its meaning within ten years % of companies that know the Ecolabel within ten years

- Building up trust in the label and maintaining its credibility is also vital. The label must be a highly respected benchmark of environmental performance.

Indicator: Level of credibility when compared with other environmental labels

- Criteria are needed for all products and services where the Ecolabel can provide benefits, especially product groups with a substantial environmental impact and therefore with high potential for improvement.

Indicators: Number of product groups; number of companies per product group; number of items sold per product group; sales volume per product group.

- Many more Ecolabel products on the shelves for consumers to choose from;

Indicator: Ecolabel sales as a percentage of total retail sales in this product group.

- Criteria documents which can easily be used by public purchasers and policy makers.

Indicator: Use and uptake of Ecolabel criteria by public purchasers monitored by questioning Member States, also hits on GPP website and on Ecolabel criteria documents.

Indicator: Number of policies that can be attributed to having used the Ecolabel product information work.

- An Ecolabel very well harmonised with other labels, globally and nationally.

Indicator: Frequency of national labelling schemes directly taking on the Ecolabel criteria.

- An Ecolabel that can be attained by companies with limited costs and efforts for them while still maintaining a high ambition in order to ensure credibility of the label with consumers and environmental groups.

Indicator: Number of licences

Consistency of objectives with other EU policies

The Commission's Communication on Integrated Product Policy[19] analysed the need for a product dimension to environmental policy and acknowledges the role the EU Ecolabel has to play in a mix of product related instruments.

One of the overall objectives of the Sustainable Development Strategy (SDS)[20] is the promotion of sustainable consumption and production patterns. Being an important tool for improving the environmental performance for products and processes and for encouraging their uptake by business and consumers, a well-designed Ecolabel scheme is directly contributing to this SDS objective. The aim of better serving the needs of green public procurement (GPP) will also contribute to reaching the relevant SDS objective.

The Ecolabel provides a means by which market forces can reward products and services which meet consumer demand in less environmentally damaging ways. This will typically be through innovation either in product design or in the production process. The Ecolabel therefore promotes and supports innovation, whilst at the same time increasing the efficiency of resource use in the economy, both of which are key goals of the "Lisbon" Strategy for Growth and Jobs. The majority of firms taking up ecolabels are typically SMEs, which shows the potential of the Ecolabel to support SME development provided that the issues of implementation of the scheme by SMEs are addressed. Thus a strong and efficient Ecolabel would boost EU industrial policy.

Furthermore, the life-cycle approach followed for the development of Ecolabel award criteria ensures that due account is taken of the impact of certain a product or service on themes which are high up on the political agenda, such as climate. At the same time, this approach avoids that concentration on just one environmental theme leads to solutions which would have a high impact on other environmental themes.

The objective of better integrating the Ecolabel with other environmental product policy instruments also contributes to "better regulation".

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19 (IPP) (COM (2003) 302 final)

20 SDS reference to be included

SECTION 5: POLICY OPTIONS

Possible options for meeting the objectives and tackling the problem.

(Note: The following options have been broken down to two levels: macro-options, such as keeping, dropping or modifying the Ecolabel scheme are presented, and then micro-options, where considerations of individual areas of change to the current scheme are presented. These micro-options are relevant if the macro-option of "modifying the current scheme" is chosen – in this case some the micro-options may be accepted or rejected to make up a package of measures for the modification of the scheme.

Macro-option 1 – Continue with the present approach = Business as usual

Changes required:

None – the current Regulation would remain in force and work would continue as now.

Macro-option 2 – Phase-out the scheme

Changes required:

– Stop Commission funding for development of new product groups and marketing.

– Let the current criteria documents expire.

– Slow down and eventually stop having Ecolabel meetings.

– Stop taking on new Ecolabel customers.

– Finally, withdraw the Regulation.

Macro-option 3 – Modify the scheme

Changes required:

A number of micro-options are available for modifying the scheme in different areas of its operation. Modifications range from the administrative to the political, looking at how the scheme is run and how decisions are made, as well as considering modifying how the Ecolabel criteria are used in relation to other ecolabelling schemes and in relation to other environmental tools. These micro-options are derived from a wide consultation exercise with all stakeholders, from the evaluation study (EVER), and from the attempt to respond to the problems with the current Ecolabel scheme. The impacts of these micro-options need to be considered both individually and in synergy with each other. If macro-option 3 is chosen, then the best *package* of measures suitable for achieving the objectives of the Ecolabel would need to be selected.

The following table gives an overview of the relationships between the micro-options and the problems presented in section 3. (For the sake of simplicity, only the main links are highlighted even if some micro-options are linked to various problems. In order to further readability, at each heading of the detailed description of the mirco-options there is a reference to the problems presented in section 3.)

Micro-options	Problems
Introduce fiscal incentives for the Ecolabelled products and services.	Especially low uptake by industry but also problems in using Ecolabel in green public purchasing activity.
Open up the scope of the label.	Regulation too restrictive
Introduce measures to encourage harmonisation with other eco-labelling schemes.	Insufficient co-operation and harmonisation with other eco-label schemes at national and regional level.
Introduce a new standard for making green claims in Europe.	Insufficient co-operation and harmonisation with other eco-label schemes at national and regional level. The Ecolabel faces strong competition from green self-claims.
More direct stakeholder involvement.	Insufficient stakeholder involvement in decision making on product group criteria.
More product groups; quicker criteria development; better decision making procedures; better criteria documents.	Insufficient stakeholder involvement in decision making on product group criteria; procedural and organisational problems – i.e. excessive bureaucracy; low number of product group categories.
Incorporate guidance for green public purchasing into criteria development.	Problems in using Ecolabel in green public purchasing activity.
Change of rules for public procurement to favour products or services meeting Ecolabel criteria.	Problems in using Ecolabel in green public purchasing activity.
Simplification of the fee structure.	Fees and cost of getting the label.
Abolish third-party verification.	Procedural and organisational problems.
Accredit bodies outside the EU to deal with Ecolabel applications.	Procedural and organisational problems.
Boost marketing.	Lack of funding for marketing.

Peer reviews for Competent Bodies.	Lack of transparency with regards to implementation of the Regulation in MS.
Provision of information by the EUEB on appropriate future minimum environmental standards for products	Often no reasons for manufacturers to improve the environmental performance of their products

Micro-options:

micro-option i.

Introduce fiscal incentives for the Ecolabelled products and services:

(See Section 3.2 –"main problems identified with the current scheme")

This option would see a system put in place to allow the possibility for Value Added Tax breaks to be introduced at the EU level for products bearing the Ecolabel, or that meet some or all of the criteria. These savings could boost the profits of participating companies either through increased sales of lower priced goods or by allowing them to add a premium to the price of the product without this being reflected "on the shelves" when compared with other products.

micro-option ii.

Open up the scope of the label

(See Section 3.2.a)

All food products and medical devices are currently excluded from the scope of the EU Ecolabel. This option will remove the restrictions on scope within the Ecolabel allowing for any product which can meet the aims of the label to have the potential to be labelled.

micro-option iii.

Introduce measures to encourage harmonisation with other eco-labelling schemes

(See Section 3.2.b)

There are a number of other ISO type I (third-party-verified) labelling schemes in different Member States running schemes similar to the EU Ecolabel, but criteria and their development, application procedures and fees are not harmonised. This option sees various possible sub-measures:

a) EU Ecolabel criteria as a standard for other ecolabels:

Specified Ecolabel criteria, agreed by Commission Decision, will have to be adopted by other schemes within a certain time if those schemes wish to cover the product group in question combined with a rule that if a national scheme wishes to develop a new product group that is already covered by the Ecolabel, they must take on the Ecolabel criteria.

b) Accreditation of national/regional ISO type 1 schemes to use the Flower:

By Commission Decision, other European ISO type 1 eco-label schemes can be "accredited", if that scheme can demonstrate fully its ability to meet the aims of the Ecolabel scheme. An accredited scheme then has the right to offer, to companies under its scheme, the use of the EU Flower logo, for any of its product groups not covered by the EU scheme at the time. For example, if the Nordic Swan scheme were to be accredited, then any companies currently

bearing the Swan logo for any product group not covered by the EU Ecolabel, could use the Ecolabel Flower logo for their marketing.

c) Eventually ban national labels from operating when Ecolabel criteria exist

At a fixed time after the adoption of Ecolabel criteria national labels would have to withdraw their product groups altogether, allowing the EU Ecolabel to be the only label available for the product groups it covers.

d) Fast track procedure to adopt criteria developed by national/regional ISO type schemes

In order to increase the number of product groups for the EU Ecolabel, a shortened criteria development process for criteria that have already been developed by another ISO type 1 labelling scheme can be established.

micro-option iv.

Introduce a new standard for making green claims in Europe

(See Section 3.2.b+c)

Companies wishing to write "bio" or "organic" on food in the EU must meet EU standards to do so. No such standard exists for green claims like "environmentally friendly" and "eco". The new Ecolabel Regulation will use selected "core" Ecolabel criteria as a basis for setting minimum standards for general environmental claims on products. Commission Decision will determine the most relevant criteria per product group, that will then have to be met in order for a product to be allowed to make green claims about itself. Member States will be required to ensure, through market surveillance, that companies making general green claims are in line with these criteria, in the same way that they must prevent the use of any other false claims on products.

micro-option v.

More direct stakeholders involvement

(See Section 3.2.d)

This option will see the final decision making on criteria pass from Regulatory Committee to a stakeholder body comprising balanced composition ensuring all the interests are represented in an appropriate way.

micro-option vi.

More product groups / quicker criteria development / better decision making procedures / better criteria documents

(See Section 3.2.d+e+f)

This option will introduce the possibility for criteria development to be managed by any interested stakeholder, (eg. industry or NGO as well as Member States) under specified conditions ensuring full open consultation and appropriate life-cycle considerations. The option will allow for the adoption of criteria from other schemes, if they can be shown to have been well developed.

Specific guidelines for criteria development will be included in the Ecolabel Regulation. These guidelines are a practical manual setting out each procedural step required to develop criteria (e.g. who is to be consulted and when, how the different actors and bodies have to be informed and when), as well as the contents of the background report and the final criteria document. Any new product group criteria submitted to the stakeholder body for a vote is, therefore, accompanied by a standardised report showing how each of the steps had been

completed, answering specific questions and indicating how the criteria were derived. Sections shall include:

- Reasoning for choice of product group / scope of product group[21],
- Standardised market analysis;
- Consideration of any possible trade issues;
- Analysis of criteria of other labels;
- Setting of ambition levels;
- Life-cycle considerations (including results of consultation with EU Platform of Life- Cycle information);
- First draft criteria – reasoning/justification for each criteria;
- Expected environmental/economic/social impacts per criteria;
- Assessment and verification specifications;
- Estimated costs of tests;
- Table: who was consulted, what they said, why their input was accepted / rejected;
- Final criteria;
- User manual.

This option will also introduce a standard template for criteria documents. The template will ensure that the presentation of Ecolabel criteria is standardised across product groups and that criteria are broken down into clear impact categories that are easy to understand for the first time reader.

micro-option vii.

Incorporate guidance for Green Public Purchasing into criteria development

(See Section 3.2.g)

The new Regulation will include new guidelines ensuring criteria documents contain specific simple "cut and paste" guidance and advice for public procurement officers and that key "best GPP criteria" are highlighted in Ecolabel criteria documents.

micro-option viii.

Change of rules for public procurement to favour products or services meeting Ecolabel criteria

(See Section 3.2.g)

This option sees the introduction of new EU-wide rules within the Ecolabel Regulation that state that when public procurement tenders are made, those responding who meet Ecolabel criteria should be favoured, all other factors being equal.

micro-option ix.

Simplification of the fee structure

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[21] The Commissions Integrated Product Policy work on "Identifying products with the greatest potential for environmental improvement" can give guidance for the selection product groups: http://ec.europa.eu/environment/ipp/identifying.htm

(See Section 3.2.h)

The fee for using the Ecolabel is currently a percentage of sales of the eco-labelled product.

Two sub-options are considered:

a) **A simplification of the fee structure.** Under this option, only one fixed annual fee would be required per Ecolabel licence, unlike the current system where the fee is linked to the volume of sales of the eco-labelled product. Three fees would exist: one considerably reduced fee for micro enterprises, one reduced fee for SMEs and one for all other companies.

b) **No annual fees are charged at all**. Companies will be able to use the Ecolabel for free, apart from the need for a small, limited application fee.

micro-option x.

Abolish third-party verification

(See Section 3.2.e)

This option would be a move towards self-declarations for the EU Ecolabel. Once criteria are set, any company that meets those criteria will be able to use the logo with no application process required. The Competent Bodies in Member States would then carry out spot checks on products and companies to ensure that the rules are being adhered to.

micro-option xi.

Accredit bodies outside the EU to deal with Ecolabel applications

(See Section 3.2.e)

Companies from outside the EU can already apply for the label, but must do so via a EU Member State and the process is expensive and long. This option would allow, under strict conditions, for governmental bodies outside the EU to be authorised to deal with applications for the Ecolabel.

micro-option xii.

Boost Marketing

(See Section 3.2.i)

This option would see a big marketing push for the EU Ecolabel in the short-term to increase public and industry awareness of the scheme to levels comparable with the most successful national schemes. The marketing push would be timed in line with the revision of the scheme if other micro-options are chosen. The initial financial input would be in the order of €5 million per year for five years for professional promoting of the Ecolabel brand. During this time periodic assessment of the knowledge of the label would be made. At the end of the period a re-assessment of the need for direct marketing input would be made. This marketing push will be combined with the development of the new or modified logo, designed to be self-explanatory and to thus avoid confusion with other schemes.

micro-option xiii.

Peer review for Member States

(See Section 3.2.j)

In order to make the way the scheme is implemented in Member States more transparent, they should carry out mutual peer review visits and produce follow-up reports and recommendations for any changes that could help with the harmonised implementation of the

scheme. This system would be comparable to the current peer review amongst accreditation bodies under the EMAS Regulation. Representatives from two or three Member States would visit another in order to get an understanding of the way applications by companies are assessed and compliance is monitored by them. Results would be discussed at Member State meetings.

micro-option xiv.

Provision of information by the EUEB on appropriate future minimum environmental standards for products

(See Section 3.2.k)

When considering Eco-label criteria, the EUEB gathers considerable information about products' environmental performance and market trends. Under this option, the EUEB would also use that information to provide recommendations on future mandatory minimum environmental performance requirements, in the same format as core Ecolabel criteria. They would also provide a recommendation on the timetable to which these minimum requirements should be implemented. These recommendations would be public and the Commission would consider these recommendations and make proposals for their implementation within the framework of an appropriate existing legal instrument.

SECTION 6: ANALYSIS OF IMPACTS

The Ecolabel will tend to produce two effects where used for any product group:

a) an increase in sales of products that have better environmental performance (as a proportion of sales of that product group); and

b) provide an incentive to some firms to innovate in their product design or production processes, so that they can gain the Ecolabel award in future for their product, together with the economic benefits that this may bring.

The first of these effects leads directly to environmental benefit. The second, through promoting innovation and dynamic improvement of resource use, brings both economic and environmental benefits. The extent of both effects will depend on the number of products using the Ecolabel and the success of the Ecolabel in increasing either the sales or the price premium of the products it is awarded to.

The extent of these effects is impossible to judge from the Ecolabel policy itself – the Ecolabel is only one of several EU policies that provides incentives for the uptake and design of environmentally better products. Many Member States also have national policies which promote greener products, whilst private policies, for example by large retailers or purchasers, will also have a great effect on the success of the Ecolabel.

The forthcoming Commission's Sustainable Consumption and Production Action Plan will examine how a range of product policy instruments can work together to more effectively provide dynamic incentives for eco-innovation in products and to increase the sales of better environmentally performing products. This Action Plan will look at how arrangements can be put in place to apply the optimum mix of policy instruments to particular product groups – to maximise the complementarity of the instruments as a whole. Just as a hypothetical example, to provide incentives for development of better environmentally performing [shampoos], policy instruments from Ecolabel, Green Public Procurement, a "top runner"/performance standard and fiscal incentives, might all work together effectively. The Ecolabel and the information about product performance and future sales generated to inform development of Ecolabel criteria could be a crucial part of that product package, but it would be difficult to attribute the environmental and economic impacts that resulted to the Ecolabel alone.

The costs of the Ecolabel scheme will also be dependent on the extent of its use and the co-ordination of the scheme's activities with other policy instruments. Enforcement activities in Member States, for example, to check the market for unauthorised eco-labels, are likely to be less expensive if co-ordinated with other market surveillance activities. The costs of the administrative activity, including information gathering, to set the criteria for the Ecolabel might also be shared with co-ordinated information and decision making in relation to the use of other product related policy instruments.

Bearing this in mind, and taking into account the need for proportionality in assessing the impacts of a voluntary instrument, this impact assessment will look mainly at the impacts of options on the potential of the Ecolabel, rather than try to estimate certain effects. For instance, a policy option that reduces administrative procedures may be certain to make application for the Ecolabel more appealing – and therefore will increase the potential of the Ecolabel to perform effectively. This impact assessment examines that effect on potential, but does not try to quantify the possible resulting economic, social or environmental effects for individual options.

However, it is possible to provide information that gives a perspective of the potential benefits of the Ecolabel scheme as a whole, in various situations:

Potential Direct Environmental Benefits

A study commissioned by DG Environment[22] calculated the potential direct benefits that could be expected if the current product groups had a market take-up of 5%, 20% or 50% respectively. The amount saved was calculated as difference between the environmental performance of an eco-label product and that of an average product on the market times the number of products sold in each scenario:

Resource saved /avoided per year	AMOUNT SAVED PER YEAR BY SCENARIO %		
	5% Take-up	*20% Take-up*	*50% Take-up*
Electricity, GWh	14,700	59,000	147,600
CO_2 produced from energy use, tonnes	9,318,000	37,270,000	93,175,000
Water Use[23], Megalitres	12,285,000	49,138,000	122,846,000
Reduced Hazardous Substance Use, tonnes	13,800	55,400	138,400
Material Savings (other than Hazardous Substances), tonnes	530,700	2,122,700	5,306,700
Reduced discharges to water, tonnes COD	30,400	121,700	304,200
Reduced Air Pollution, tonnes	17,500	70,100	175,300

Source: AEAT, "Final Report", November 2004, Report produced for DG Environment

Starting from the fact that criteria are set at levels that promote the labelling of products that have a low environmental impact and that the aim of the Ecolabel is to encourage improvements in the environmental performance of products during the whole life-cycle of the product it is assumed in the study that companies choosing to sign up to the Ecolabel may have to make some adjustments to their production behaviour, resulting in environmental benefits in terms of restrictions on certain polluting chemicals, improvements in recyclability, introduction of waste management systems, limits on chemical emissions, etc.

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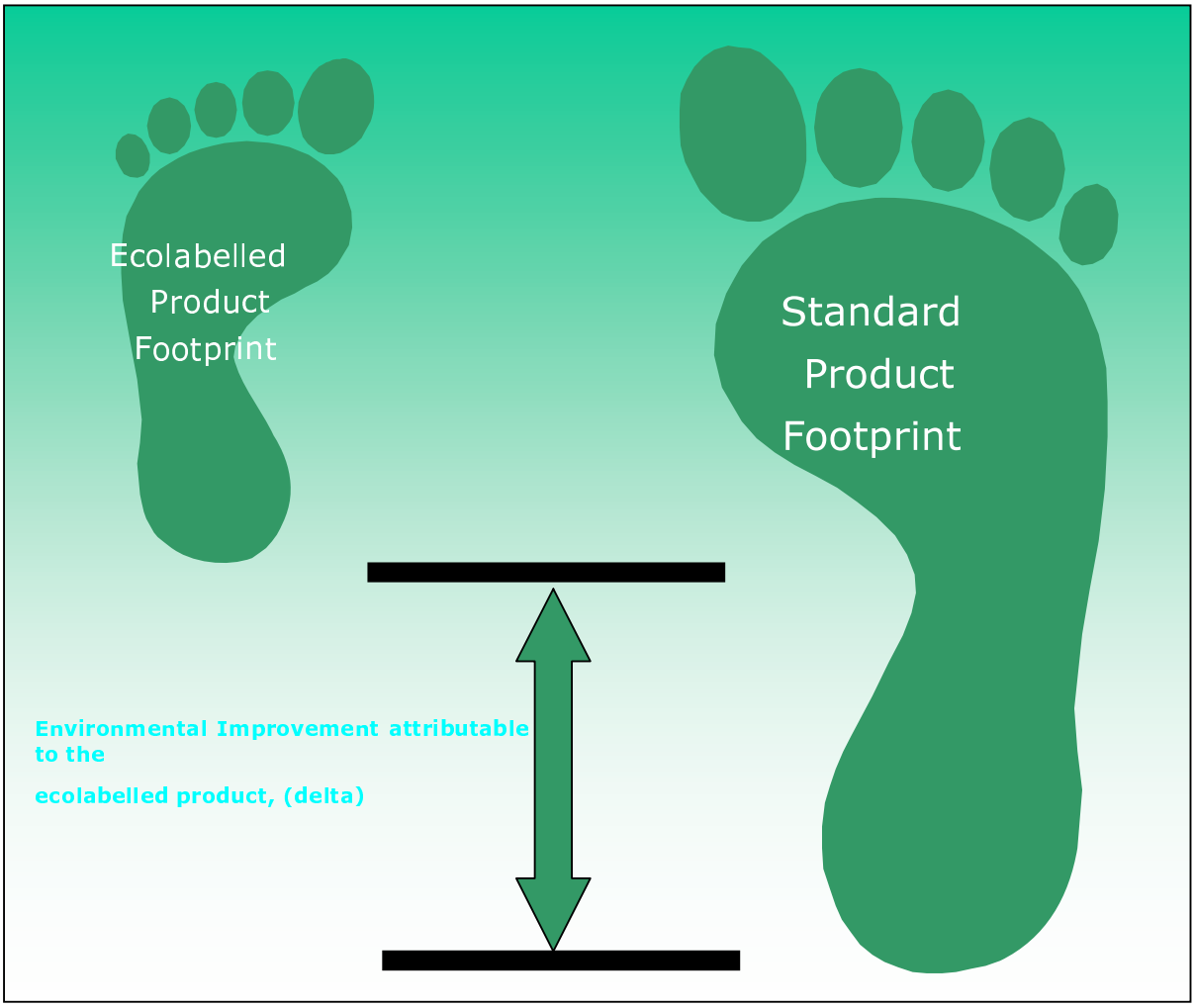
22 AEAT, "The Direct and Indirect Benefits of the European Ecolabel – Final Report", November 2004, A Final Report produced for DG Environment. It should be noted that this study was not peer reviewed.

23 Water Use includes savings due to more efficient appliances and savings due to the reduced CDV value of ecolabelled detergents.



Source AEAT, "The Direct and Indirect Benefits of the European Ecolabel – Final Report", November 2004, A Final Report produced for DG Environment

Potential Indirect Benefits (Environmental and Economic)

On top of these direct environmental benefits the Direct and Indirect Benefits study, based on consultation with EUEB members, identified nine indirect impacts from the Ecolabel, looked at known instances, success stories and calculated their potential impact which could be expected by taking measures which would lead to replication of these examples[24].

1. The use of the Ecolabel criteria by another eco-label scheme. Criteria may be copied directly or used as a reference point before local adaptation.
2. The use of the Ecolabel criteria in public procurement calls for tender.
3. The use of the Ecolabel criteria in private procurement calls for tender.
4. The use of the Ecolabel criteria by companies as a benchmark for their own products or as a target to improve their environmental performance.
5. The use of the Ecolabel criteria to generate Type III labels (environmental product declarations), or recommendations on how to make green claims (Type II).

[24] For more detailed explanations of the assumption and methodology we have to refer to the study itself: http://ec.europa.eu/environment/ecolabel/pdf/market_study/benefitsfinalreport_1104.pdf

6. The use of the Ecolabel criteria and procedures/structures to generate minimum environmental requirements applicable to all products of a product category on the market.

7. The use of the Ecolabel criteria in the "new approach" as a basis for establishing whether companies have complied with "essential requirements".

8. The use of the Ecolabel logo, Ecolabel criteria and related discussion, to raise stakeholder awareness of the environmental impact of products, with stakeholders including manufacturers retailers, consumers, environmental NGOs and public administrations.

9. The use of the Ecolabel and its criteria as a basis for establishing fiscal measures to promote green products, (e.g. criteria for energy rebate schemes)

Indirect Environmental Benefits of the Ecolabel within the EU25

Item	Amount saved per year
Money	€763 million
Energy saved	43 TWh
CO_2 saved	27 million tonnes
Water saved[25]	35 Tera litres
Hazardous substances avoided	39 thousand tonnes
Materials saved	1.5 million tonnes
Reduced discharges to water	85 thousand tonnes COD[26]
Reduced air pollution	49 thousand tonnes

[25] Water Use includes savings due to more efficient appliances and the reduced CDV of ecolabelled detergents.

[26] Chemical Oxygen Demand

Indirect Environmental Benefits of the Ecolabel Outside the EU25[27]

Item	Amount Saved per Year
Energy saved	2.9 TWh
CO2 saved	1.9 million tonnes
Water saved	2.5 Tera litres
Hazardous substances avoided	2.8 thousand tonnes
Materials saved	106 thousand tonnes
Reduced discharges to water	6 thousand tonnes COD[28]
Reduced air pollution	3.5 thousand tonnes

Economic Benefits

The indirect benefits above indicate some of the economic benefits that should result from a successful Ecolabel scheme – improvements in resource use, reductions in economic damage and reductions in damage to health (and therefore productivity and treatment costs) from pollution.

However, the greatest economic benefits are likely to come from the promotion of innovation in both process design and production techniques. Such innovation is very likely to reduce both resource use in production and increase efficiency – and therefore provide both direct and indirect benefits to the EU economy as successful technologies grow in niche markets, then spread more widely. All of this would increase international competitiveness, both of individual firms and the EU economy as a whole. The Ecolabel is often used by SMEs to develop their market share – one of the important breeding grounds for entrepreneurial activity and innovation that is particularly important to encourage. The benefits that may result from a successful Ecolabel are hard to quantify, either beforehand, or afterwards, but would be nevertheless real.

Innovation is likely where market demand will reward that innovation, through greater economic returns for the innovator. Most simply, where there is consumer demand for a product that is "greener" than the others, there is a market there for greener products. It can be seen as a differentiated product market. For producers to get, or retain a share of that product market, they will need to innovate - because the Ecolabel criteria will be revised over time to ensure that only the best products are awarded eco-labels. But if consumers cannot be sure which the greener products are - if they have no reliable information on that, the demand that creates that differentiated market will not arise and there will be no benefits from the eco-innovation.

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[27] Considers the EU Ecolabel to influence the national schemes of Australia, Canada, New Zealand and the United States.

[28] Chemical Oxygen Demand

One good example of how the Ecolabel can drive innovation is that of the MicroPro Computer[29] To quote their own marketing: "MicroPro Computers introduces an environmentally-friendly PC, called Iameco, which is developed as a zero-waste personal computer. The company is striving to become the only PC maker in the world to earn the European Union's prestigious Ecolabel mark, for high-quality consumer products that meet the highest environmental standards".

There are also many examples of innovators seeking to use the Ecolabel as a reward for their innovation. One good example of this in practice is that of Boston Power batteries, who have just been awarded the Nordic Swan eco-label[30]. The Swan was able to rapidly provide a reward for the company's innovative product. The company website says, in relation to the award: "It is an achievement that is well-deserved and also a testimony to their commitment to combine technical knowledge with environmental quality standards". It is by this type of link that the eco-labels can also help drive innovation.

By working with the market, the Ecolabel is designed to be used where it offers net economic benefits to enterprises – and it stands or falls on that criterion: if the scheme is not economically beneficial to a particular enterprise, it will not be taken up. Maximising the total economic benefit from the scheme is therefore one of its goals, and one of the goals of its revision.

As a whole, the Ecolabel is one of the instruments aimed at achieving the goals of the revised Strategy for Jobs and Growth (Lisbon Strategy). The Ecolabel policy contributes to 6 of the 10 Mirco-economic guidelines of the Integrated Guidelines.[31]

(7) To increase and improve investment in R&D, in particular by private business;

(8) To facilitate all forms of innovation;

(10) To strengthen the competitive advantages of its industrial base;

(11) To encourage the sustainable use of resources and strengthen the synergies between environmental protection and growth;

(14) To create a more competitive business environment and encourage private initiative through better regulation;

(15) To promote a more entrepreneurial culture and create a supportive environment for SMEs.

Administrative Costs

The Ecolabel scheme requires some procedures to work effectively and these inevitably involve some administrative activity by both enterprises applying for, or using eco-labels, and for the Commission, national authorities and the organisations involved in decision making on Ecolabel criteria.

For any enterprise applying to the scheme, the administrative costs of the application must be smaller than the economic benefit that enterprise expects to receive from applying for an eco-label. The lower these administrative costs are, the more attractive the scheme becomes for potential applications and the greater its success is likely to be.

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29 http://greentechnolog.com/2006/11/zero_waste_computing.html

30 http://www.boston-power.com/

31 Integrated Guidelines for Growth and Jobs (2005-2008) , European Commission, 2005

Whilst it is not possible, for the reasons stated above to quantify the total administrative costs associated with the voluntary scheme, it is possible to look at the impact of options on the administrative costs of individual procedures.

Social impacts

Given that criteria also include aspects related to human health, this can be considered as a positive social impact, but apart from this, no other relevant social impacts are expected. The positive impact on health is underlined by a BEUC (Bureau Européen des Unions de Consommateurs) study which concludes *: "The Ecolabel was originally conceived to reward products having a reduced environmental impact. Studying what the Ecolabel criteria say about the content of hazardous chemicals in the final products allows an additional important dimension to be included: health."*[32]

Assessment of the Impacts of Options

The better the Ecolabel scheme is designed and implemented the higher the probability that these potential benefits become real and that the policy objectives described in section 4 are achieved. Keeping this in mind, the aim of the following assessment of the different options is to identify the impacts of different macro and micro options on the potential of the Ecolabel scheme.

[32] See: http://ec.europa.eu/environment/ecolabel/pdf/studies/beucstudy2004_en.pdf

Macro-option 1 – Continue with the present approach. i.e. Business as usual

The analysis of the impact of this option can be made by analysing the impact of the current scheme. Fundamentally, if no action is taken then the scheme can be expected to continue to operate as it has done up until now. It would continue to grow steadily but very modestly with some small environmental economic and social benefits, but with a number of barriers to its development.

The EVER study[33] outlines the main plus and minus points about the current scheme, that can be summarised as follows:

On the one hand:

- Low awareness;
- Insufficient product group categories;
- Low up-take by industry;
- Procedural and organisational problems – i.e. bureaucracy;
- Costs for participating companies;
- Lack of perceived public purchasing benefits.

On the other hand:

- Around three quarters of users think that the EU Ecolabel has contributed to setting targets for the improvement of product environmental performance;
- A large majority also say that the Ecolabel influenced the demand on their suppliers concerning the environmental performance;
- Almost all of the companies participating in the EU scheme use the Ecolabel in their marketing campaigns;
- More than half of the non-Ecolabel participants declare they use the Ecolabel criteria as benchmarks to for the environmental performance of their products;
- Neither users nor non-users of the Ecolabel want to see the label abolished;
- National labels are not preferred over the EU Ecolabel.

Continuing with business as usual would mean that the positive effects in environmental, economic and social terms would remain.

The EVER project questioned actual participants of the EU Flower as to their opinion of the label's influence on environmental performance and found that: *" Nearly 2/3 of the participants indicated that the objective to improve environmental performance was very or fairly important for their application for the Flower. (...)About every second interviewee indicated that the Flower had some effect on the environmental performance of the product in the areas of air and water emissions, waster/recycling and water/material use; improvements with regard to accidents/spills were rare and for noise/smell observed by ¼ of interviewees".*

In addition, there is anecdotal evidence from the practice of Ecolabel implementation that companies – maybe not all – actually have to do some effort in improving the environmental

[33] For more details see EVER study see: http://ec.europa.eu/environment/ecolabel/revision_en.htm

performance of their products or services. A statement from Hilton Hotel Malta can serve as an example: *"The accomplishment of this task is by no means an easy exercise. It is, in fact, time consuming but certainly an interesting, interactive learning experience. To start with, we set a target date, and used a textbook approach to deal with the criteria. It is the continued implementation and refinement that is most challenging for the company. Investing in such ongoing actions creates short-term costs in setting up the systems but is rewarded with long–term benefits".*[34]

Apart from improving the product or service itself, there is a second aspect which has to be considered in this respect: the increased sales of eco-labelled products. According to the EVER study, 53% of the interviewed companies experienced an increase in the market share or in the number of new customers thanks to the adoption of the EU Ecolabel[35].

However, with such a low uptake overall of the scheme such environmental benefits are limited mainly because of the persistence of the problems described in section 3: consumers would largely remain unaware of the label, business interest in the label would will remain limited, the number of product groups would grow at a very slow pace, if at all, criteria documents often could not be revised in due time, development of new or revision of existing product groups would continue to take too long (some 3 to 4 years) wasting scarce resources of all the parties involved, the fee would remain complicated and inflexible, stakeholders would not feel to have real ownership of the scheme, purchasing officers would continue to show little interest in the label, the Ecolabel could not be considered for food products, etc.

In terms of the objectives of success outlined in Section 4, we might therefore expect the following results by 2017 if we extrapolate from the last ten years:

- 10-20 % of population that know the Ecolabel and its meaning within ten years.
- 10-20 % of companies that know the Ecolabel within ten years.
- Reasonably rated in terms of credibility when compared with other environmental labels.
- 30 product groups; 600 participating companies; €1.5 annual sales volume of Ecolabelled goods.
- Ecolabel little used by public purchasers monitored.
- Few, if any, policies that can be attributed to having used the Ecolabel product information work.
- Limited number of Ecolabel criteria adopted by other labelling schemes.

Macro-option 2 – Gradually phase out the scheme

Phasing out the scheme could lead to some benefits but would mean losing the positive impacts analysed for the current scheme – see above – and the potential for further developing these benefits. The EVER study highlights the main motivations for shutting down the scheme as the lack of success of the current scheme and the fact that Member States already have their own national schemes. Phasing out the Ecolabel scheme would free up resources associated with the Ecolabel for use on other initiatives.

At the same time the EVER study points out the potential impacts of the shutting down the scheme as a lost opportunity to improve it and to gain the potential benefits that it has to offer.

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34 Source: Flower News, July 2006: http://ec.europa.eu/environment/ecolabel/news/index_en.htm

35 http://ec.europa.eu/environment/ecolabel/revision_en.htm : Report 2, p. 118

The study looks at the views of the industry, both participating in, and not participating in, the Ecolabel scheme, and their views as to the Ecolabel versus national labels[36] – the study states: "*when asked, over 70% of the interviewed stakeholders do not recommend a national rather than a European label. While some believe more in an EU Ecolabel in the long run, others see them as supplementary"*. Overall, the study concludes: *"(...) harmonisation is seen as being the only effective solution to be pursued. There is very little support for the options of abolishing either the EU Eco-label or the national labels".*

Importantly, no Member States have expressed a desire to abolish the Ecolabel, but rather to improve the scheme, which suffers from some very obvious problems. In those Member States where there is no national scheme the potential of the EU Ecolabel is seen as important because, without it, they would have no similar third-party labelling scheme. The UK for example considers the existence of the EU Ecolabel scheme the reason that they have not developed their own scheme. If the EU Ecolabel were phased out, it seems likely, therefore, that in time national labelling schemes would evolve in most Member States. What is clear from looking at the different national schemes currently in place is that the schemes in the different Member States would be very different. So for companies marketing their "green" products throughout the single market they would need to meet the different criteria and different assessment and verification procedures for all schemes. It is for this reason that companies who support the idea of ISO type I labelling schemes, support the idea of harmonised EU criteria.

The only cases of harmonised criteria so far are those cases where national schemes have voluntarily taken on Ecolabel criteria word for word – some examples being those of the Austrian Ecolabel which has taken on criteria for light bulbs and cleaner or that[37] of the Nordic Swan which has taken on the EU criteria for Indoor Paints and Varnishes in their entirety[38]. They then offer applicants a discount:

"Since the criteria are identical to the EU ecolabelling criteria, a producer may, if he so wishes, apply concurrently for both Swan and EU-Flower ecolabels and thus gain permission to use both labels."

"Applications for both the Swan and EU Flower ecolabels for a single product are entitled to a discount. Please contact Nordic Ecolabelling in your country for further information."

The potential to develop these types of synergies between national labelling schemes and give and level playing field for companies operating in Member States with and without national schemes would be lost if the Ecolabel were to be phased out. It is therefore one of the most important features of the EU Ecolabel in comparison to other labels that it is EU-wide. It offers companies the opportunity to have one single label for all of the Internal Market, instead of having to apply in a number of different countries for different labels (with different procedures, different criteria, different logos, etc.).

Equally, for consumers it is much easier in an Internal Market to be able to rely on one major label which is used everywhere. Moreover, there is the potential for considerable cost savings if one scheme is used instead of every country having to develop its own scheme.

On top of this, those companies which have already invested in the Ecolabel would not get any further benefit and would have to consider their investments as wasted to a large extent. There are also a number of product group specific eco-labels developed by industry

[36] http://ec.europa.eu/environment/ecolabel/revision_en.htm - see report on research findings, p.100-104

[37] http://www.umweltzeichen.at/filemanager/list/15672/

[38] http://www.svanen.nu/DocEng/096e.pdf

associations or groups of NGOs. These schemes vary widely, ranging from labels based on environmental management systems (for example the A.I.S.E. Sustainable Cleaning Scheme[39]) to single issue specific labels (like the Forest Stewardship Council label[40]). A balanced participation of different interest groups – crucial for the credibility of a scheme – seems to be difficult to guarantee without clear external rules. No other label currently serves the same purpose as the EU Ecolabel which aims to set the benchmarks across product groups and throughout the life-cycle of those products across the EU. Phasing out of the scheme would mean the potential benchmarking tool, setting out "what makes a good scheme" would be lost. It is likely that, due to increasing consumer demand for information, many more product group specific labels would be developed, often Member State by Member State. Consumer confusion at the basis for the different labels would increase.

The EU Ecolabel is intended to add value, not add "another label" – the potential of the scheme will help achieve this, with better measures on harmonisation and more industry involvement. This is explored in the next Macro-option.

Macro-option 3 – Modify the scheme

A number of micro-options are presented in Section 5, each of which may have its own environmental, economic and social impacts. The impacts of each of these micro-options is considered in turn and then the overall impact of selecting the best package of modifications is considered for the purposes of going on to choose the best macro options in Section 7.

Impacts of the micro-options:

micro-option i.

Introduce fiscal incentives for the eco-labelled products and services:

Pros: Tax breaks (e.g. a reduced VAT rate) would enable producers to lower prices for eco-labelled products, or to increase their profit margins with the price kept constant, or for retailers to apply a larger mark-up whilst keeping the price constant – which is likely to lead them to take steps to increase sales, which would offset the costs involved in getting the label (cost for adjustments of the product, for testing, for fees, etc.). Through such a comparative advantage, the Ecolabel would become more attractive to companies which would lead to more licence holders and labelled products on the market.

Cons: The increased economic advantage from the tax break attaching to the award of eco-labels could also lead to much more difficult negotiations in the criteria development process. Intensified lobbying is to be expected which will slow the process and eventually could cause deadlocks in negotiations. The idea of a tax break for eco-labelled products was already discussed in the framework of the Commission's Communication on Integrated Product Policy[41] in 2003 where most Member States were not in favour.

Option accepted/rejected: **Rejected.** Although enjoying such an impressive support amongst respondents to the internet consultation as well amongst interviewees in the EVER study (in the internet consultation, more than 67 % were in favour of fiscal measures and 76 % of the interviewees in the EVER study considered it fairly or very important), fiscal measures are considered beyond the scope of the Ecolabel Regulation at this time. Nevertheless, the Regulation could encourage Member States to consider fiscal incentives at MS level where

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39 http://www.sustainable-cleaning.com/

40 http://www.fsc.org/en/

41 Communication from the Commission to the Council and the European Parliament, COM (2003) 302 final

appropriate and foresee collection and dissemination of best practice examples in this field. In cases where tax differentials are granted on the basis of environmental considerations this should be clearly communicated to the consumer. Fiscal incentives at Community level will be considered in the wider policy framework of the SCP Action Plan.

micro-option ii.

Open up the scope of the label

Pros: This will allow developing criteria for product groups with the greatest environmental impact (according to the EIPRO study) such as food where "carbon labelling" schemes for food products are now being developed by large retailers and other organisations but there is no mechanism in place to offer any form of EU standardisation. Opening the scope would allow identifying the areas with the greatest environmental foot print and setting criteria in line with the aims of the scheme. The development of an ecolabel for sustainable fisheries is also being considered by the Commission – opening up the scope of the Ecolabel scheme would allow it to perform this role.

Cons: None

Option accepted/rejected: **Accepted**. Making good decisions on which product groups to develop ecolabels can be built into the Regulation without having to specifically rule out certain groups directly in the Regulation

micro-option iii.

Introduce measures to encourage harmonisation with other ecolabelling schemes:

(a) EU Ecolabel criteria as a standard for other ecolabels;

(b) Accreditation of national/regional ISO type 1 schemes to use the Flower;

(c) Eventually ban national labels from operating when Ecolabel criteria exist;

(d) Fast track procedure to adopt criteria developed by national/regional ISO type schemes.

Pros: The Ecolabel will set the standard for environmental product criteria in the EU, while at the same time giving companies a wider choice of product groups for which they could use the EU Ecolabel. With one procedure they can get the EU label and a national label if they wish to do so – without any additional cost. They can use the national label where this is better known than the EU label (home market) and the EU label for exports to markets where the national label is not known.

Cons: Competition between labels can encourage them to increase their environmental stringency to prove they are "the best", which can help keep standards high – this may be lost if the one label becomes the only label setting the standards on the market.

Option accepted/rejected: **(a + d) accepted, (b + c) rejected**. These measures will be better for businesses, who can use the EU Ecolabel for EU marketing and better for consumers, who will find more Ecolabel products on the shelves. The "fast track" adoption of criteria from other schemes will allow other schemes to operate at the national level, while at the same time increasing the number of product groups for the EU label.

Banning other ecolabelling schemes is likely to reduce the total benefits from eco-labelling schemes in Europe. National labelling schemes have, in some cases, been much more successful than the Ecolabel scheme, as they meet the specific needs of the Member States in which they operate. Accreditation of national schemes as a whole to use the Flower would involve assessing the overall credibility of these schemes, an exercise which is likely to be

much more complex and politically sensitive than allowing a fast track adoption of individual criteria documents developed by other schemes.

The accepted options were the most strongly supported by respondents to the internet consultation. On the rejected options serious concerns were raised by representatives of some national labelling schemes.

micro-option iv.

Introduce a new standard for making green claims in Europe

Pros: Consumers will be able to rely on green claims made on products. There will be a level playing field for industry, preventing misleading green claims and offering a clear benchmark for good environmental performance of products. This may avoid unwarranted green claims for products, which would damage the market for greener products as a whole.

Cons: The standard will only be available for product groups for which core criteria have been adopted. This measure could discourage some companies, not wishing to see a standard for green claims from taking part. (Although the opposite may also be true in some cases, as companies want to be involved in the process to give their voice to the resulting criteria.)

Option accepted/rejected: **Rejected**. While this option is strongly supported by internet consultation respondents and would ensure that green claims be made based on sound and stringent environmental criteria which would help the Ecolabel reach its aim of providing the benchmark for the environmental performance of products, and would encourage companies already meeting the core criteria to improve further their performance to apply for the Ecolabel, it is considered beyond the scope of the Ecolabel Regulation as it would considerably change the voluntary nature of this instrument. It is suggested that the issue of green claims be considered in the wider framework of sustainable consumption and production.

micro-option v.

More direct stakeholder involvement

Pros: An option is strongly supported in the internet consultation that would see stakeholders better involved and perhaps more committed to the scheme. The process of decision making will be shortened compared to the current system by up to two years. The system will be able to adapt to change and the Ecolabel 'brand' will be able to operate in a more business-like way leading to increased interest in the scheme, more licences and bigger environmental and economic impacts.

Cons: The challenge will be to find a well balanced composition of the stakeholder body. Additionally there is a risk that some Member States, with reduced direct power over Ecolabel criteria decisions, will lose interest in the scheme and will decrease the resources allocated to it. Furthermore, if the revised Ecolabel does not share the same decision making procedures as other SCP policies under Ecodesign, i.e. Commission Decision, it will be make harmonisation of criteria and test methods for different policies more difficult.

Option accepted/rejected: **Rejected**. Bureaucracy is a problem for the Ecolabel and must be tackled but moving away from Commission Decision, while it might help the 'branding' of the label, would essentially take away the 'EU' aspect of the label, which is a major part of its unique appeal and usefulness. The label needs to be integrated with other policies, and keeping Commission Decision, which is the same decision making procedure for Ecodesign, will allow this to happen more smoothly. Stakeholder involvement should be enhanced by ensuring that the criteria development process openly and transparently takes into account

their views, and that transparency is given as to why any input made has been accepted or rejected during the process. At the same time bureaucracy surrounding the criteria development process should be focused on, along with other aspects of the way the label operates, such as for assessment and verification procedures. These issues then are dealt with in other micro-options.

micro-option vi.

More product groups / quicker criteria development-

Pros: The scheme will be much more efficient and flexible, therefore allowing to adapt easily to changing needs and to adopt changes to criteria which become necessary as a result of the experience in implementing them in practice. Synergies with other instruments as well as relevant work carried out elsewhere can be used. Improved criteria documents following a common structure will be easier to understand and implement for companies. Consumers and policy makers will also find criteria documents easier to digest, thus allowing the Ecolabel to better act as an education and information tool.

Cons: Developing more product groups may bear the risk that some stakeholders or Member States will not have the resources to follow criteria development for every product group, unless they increase their resources.

Option accepted/rejected: **Accepted**. Linked to the previous micro-option, this option is about using common sense to ensure the scheme is run efficiently and to allow interested stakeholders to help with the development of criteria. Quality control of criteria would need to be enshrined in the develop guidelines for them. This option was very strongly supported in the internet consultation.

micro-option vii.

Incorporate guidance for Green Public Purchasing into criteria development

Pros: The Ecolabel scheme will deliver harmonised environmental criteria for public purchasing which can easily be introduced into technical specifications. The Ecolabel will be a reliable instrument for checking a product against specifications. Environmental benefits could be high as companies move to meet the basic GPP criteria. Again, this was strongly supported by respondents to the internet consultation.

Cons: None.

Option accepted/rejected: **Accepted**. This should have been incorporated since the beginning of the operation of the Ecolabel scheme.

micro-option viii.

Change of rules for public procurement to favour the EU Ecolabel

Pros: Making it mandatory to include Ecolabel criteria into calls for tender or simply to request Ecolabelled products would give a strong boost to the Ecolabel and would reward companies with environmentally improved products. The number of Ecolabel licences could be expected to increase strongly, as would the associated environmental benefits as the incentive for going for the Ecolabel would be significantly increased.

Cons: As with tax breaks, this strong incentive changes, to an extent, the nature of the scheme as "voluntary" and the idea of moving away from "command and control" type legislation.

Option accepted/rejected: **Rejected**. The EVER study found that green procurement (both public and private) has been judged as crucial for stimulating eco-labelling performance and more than 61 % of the respondents to the internet consultation agreed or strongly agreed that

it should be mandatory for Member States to use Ecolabel criteria (or equivalent) where possible in calls for tenders. While it is clear that this revision of the Ecolabel Regulation has to ensure that the Ecolabel scheme is attractive for public purchasers and that Ecolabel criteria are as easy to use for this purpose as possible, a change of the public procurement legislation is beyond the scope of the Ecolabel Regulation. The issue of how to foster green public procurement is currently being addressed by the Commission in the framework of the preparation of a communication on green public procurement.

micro-option ix.

Simplification of the fee structure

Sub-option a: Simplified fee structure.

Sub-option b: No fees.

Pros: According to the EVER study, cost is seen as the highest barrier for potential applicants. Therefore, an increase in applications can be expected. Sub-option b – no fees – would also mean reduced bureaucracy as no calculation and administration of fees are necessary.

This sort of financial incentive for the using the Ecolabel is much easier to administer than a reduced VAT rate or any other kind fiscal incentive.

Cons: This would mean a loss of income for competent bodies.

Option accepted/rejected: **Sub-option b accepted**. No annual fee for the Ecolabel will send a clear message that companies meeting the Ecolabel criteria will benefit from doing so and will not be penalised. It will be of biggest benefit to SMEs who find the fee as a significant barrier and will effectively offer a financial incentive for using the Ecolabel. A small fee, to deal with the direct costs of dealing with applications, will be maintained.

micro-option x.

Abolish third-party verification

Pros: Companies would be able to use the Ecolabel immediately after the publication of the criteria with no upfront paperwork or bureaucracy required. Administrative costs would be lower and uptake of the label would increase. This option would also mean that the Ecolabel verification system would be the same as for the Energy label and the planned Eco-design for Energy Using products directive.

Cons: Companies would have to prepare the same documentation in order to prove that their products meet the criteria and they would have to respond to spot checks by Competent Bodies at any moment. Nevertheless, many say that the credibility of the scheme depends on a third-party verification and giving up this crucial element would mean losing support for the scheme by consumer and environmental groups.

Option accepted/rejected: **Partly Accepted**. A radical simplification of the assessment and verification of the scheme is proposed which would move away from full third-party verification, but would maintain the requirement to sign an agreement with a competent body, declaring accordance with the criteria. (As is, in fact, the case for a majority of individual Ecolabel criteria already.) This revised system will be linked to ensuring that the criteria themselves are simpler, more focused, and easier in terms of on the spot verification.

micro-option xi.

Accredit bodies outside the EU to deal with Ecolabel applications

Pros: Companies located outside the EU will have easier access to the Ecolabel which may be particularly interesting for services such as tourist accommodation or campsites. This may lead to an increase in numbers of licences and a better dissemination of the scheme at the global level. The Ecolabel, already covering more countries than any other similar label, will become global.

Cons: Meticulous assessment of the suitability and reliability of external accreditation bodies will be required to ensure the credibility of the Ecolabel is maintained – this will be time consuming and, although some of the costs will have to be met by the body wishing to be accredited, it will still mean the use of administrative resources by the Commission.

Option accepted/rejected: **Rejected.** Ensuring credibility appears to be too resource intensive. Instead of fully accrediting bodies outside the EU, it is suggested that Member States' Competent Bodies can cooperate with bodies outside the EU in order to facilitate applications from third countries.

Micro-option xii.

Boost marketing

Pros: A considerably increased marketing budget would allow for professional promotion of the Ecolabel, thus increasing knowledge of it and what it stands for. In combination with the other measures described above the label will become more attractive for companies, which will lead to more Ecolabelled products on the market, which, in turn, will lead to a higher demand from consumers due to the increased knowledge. The more money that is invested, the higher the value of the brand for companies will become, as consumer knowledge increases – this will in turn lead to more applications and greater environmental benefits coming from the scheme.

Cons: Marketing investment is a risk. If the scheme is not successful, then the money will have been wasted.

Option accepted/rejected: **Accepted**. Without marketing investment the scheme will never take off. The key will be to monitor the indicators of success to ensure that any investment is achieving the required results. If it is not then the money should be withdrawn.

micro-option xiii.

Peer review for Member States

Pros: The way the Regulation is implemented in MS, especially concerning assessment of applications and monitoring of compliance, would become more transparent and harmonised in order to ensure a level playing field for companies across the EU.

Cons: The system will require periodic missions between Member States to review the operations of others and this will require resources.

Option accepted/rejected: **Accepted**. Ensuring a level playing field is in the overall interest of the Internal Market and of the credibility of the scheme. The micro-option will also allow different member States to share best practices, learning from each other to improve their operations – this will mean the scheme is better implemented and run overall.

micro-option xiv.

Provision of information by the EUEB on appropriate future minimum environmental standards for products

Pros:

- This key impact of this option is the provision of additional information by the EUEB – which provides the potential and stimulus for better policy outcomes.
- The benefit of the information provided by the EUEB is likely to be high as the criteria development process for the EU Ecolabel follows clear guidelines including rules on stakeholder involvement and transparency. The expertise of the ecolabel community and the studies carried out for the Ecolabel could be used for other policy instruments.
- The provision of recommendations for minimum standards which are consistent with Ecolabel is efficient as it makes use of existing work and avoids a confusion of standards for stakeholders – particularly manufacturers.
- By publicly providing indications of future standards in advance – and through discussions of those in the EUEB stakeholder process – manufacturers have a clear indication of potential future requirements, giving both clarity and incentives to facilitate improvements in the environmental performance of their poorly performing products.
- This would lead to both reductions in environmental harm and reduced unfair competition for Eco-label products, which should provide greater incentives for innovation to further reduce the impacts of products.
- The decision making process triggered by the Eco-label process should ensure that standards are only in cases (or at levels, or to timescales) which lead to environmental gain that outweighs costs from changing product performance.

Cons:

- The extent of any benefit coming from this measure depends to a large extent on the resulting policy decision. Minimum standards may end up being set which do not significantly change manufacturers performance and therefore do not tackle the problem – which would continue to hinder improvements in the environmental performance of products, including those with Eco-labels.
- Through this approach development of mandatory performance standards would be limited to product groups for which Ecolabel criteria have been developed.

Option accepted/rejected: **Accepted.** The option should allow greater effectiveness of the Eco-label at improving product performance, with a mechanism that should ensure action is taken only when beneficial.

SECTION 7: COMPARISON OF OPTIONS

It is clear from Section 6 that macro-option 3 "Modify the scheme" is the only approach to ensure that the objectives from Section 4 can be achieved. For the sake of readability the micro-options under macro-option 3 have been accepted or rejected in Section 6. In summary, the following package of measures is proposed:

Accepted:

- Design Regulation to better fit into the other sustainable production and consumption actions of the Commission;
- Open up the scope of the label;
- Introduce measures to encourage harmonisation with other eco-labelling schemes: EU Ecolabel criteria as a standard for other eco-labels, fast track procedure to adopt criteria developed by national/regional ISO type schemes;
- More product groups / quicker criteria development / Introduce a template for criteria documents to ensure they are more user friendly;
- Incorporate guidance for Green Public Purchasing into criteria development;
- Abolition of annual fees;
- Simplification of assessment and verification;
- Boost Marketing;
- Peer review for Competent Bodies;
- Make recommendations for mandatory environmental performance standards for products.

Rejected:

- Introduce a new standard for making green claims in Europe;
- Change of rules for public procurement to favour the EU Ecolabel;
- Introduce measures to encourage harmonisation with other ecolabelling schemes: accreditation of national/regional ISO type 1 schemes to use the Flower; eventually ban national labels from operating when Ecolabel criteria exist;
- Introduce fiscal incentives for the ecolabelled products and services;
- Accredit bodies outside the EU to deal with Ecolabel Applications.

SECTION 8: ADMINISTRATIVE COSTS

As explained in Section 6, it is not possible to quantify the total administrative costs, including costs to public authorities of administering the scheme, because we are dealing with a voluntary instrument where costs to a large extent depend on the uptake by industry and the associated costs of market surveillance of the conformity of those using the label.

It is also possible to look at the impact of the selected micro-options on the administrative costs of individual procedures. It also needs to be emphasised that according to the strict Commission definition of administrative costs, the Ecolabel Regulation does not impose any administrative costs on companies because it is a voluntary scheme where companies are free or not to participate.

Design Regulation to better fit into the other sustainable production and consumption actions of the Commission will mean that synergies between different product related policy instruments can be enhanced and therefore mean that there is a harmonisation of the framework in which criteria are presented. This will reduce the administrative burden on companies. Consider for example if we have mandatory minimum criteria (under the Energy using Products directive) for televisions and at the same time Ecolabel criteria for televisions. If the criteria are harmonised between the two policies it will mean fewer assessment and verification requirements for a company wishing to comply with both schemes. So compliance with the requirements of the different instruments is made simpler for companies, therefore reducing the overall costs for them. The detailed costs per company of applying for the Ecolabel cannot be precisely specified as product groups vary significantly, as does how much additional work a given company has to undertake to meet the criteria. However, in very general terms the costs of tests associated with applying for the Ecolabel might range from around €1,000 - €10,000. To calculate what the savings might be from having better synergies with other environmental policies, we need to look at the overlap of criteria that these policies can have with the Ecolabel. For example, the Energy Using Products directive will specify between one and three criteria on the environmental performance of products, focusing on energy use, whereas the Ecolabel might look at five to ten criteria covering the life-cycle of the product in more detail. If at least the three EUP criteria, and their associated assessment and verification basis, are harmonised with the matching criteria in the Ecolabel then any testing requirements can be harmonised – thus reducing administrative burden. The same could be true for recommended best Green Public Purchasing requirements. Considering these likely overlaps in criteria might range from 20-30% savings from better synergies of the criteria might be expected to be similar.

Introducing measures to encourage harmonisation with other ecolabelling schemes: For companies wishing to apply for more than one ecolabel, harmonising measures can only reduce their administrative burden. Costs of tests could be reduced by 100% if one label is already held as no additional testing or verification would be required. This reduced financial burden may be particularly interesting for small and medium sized enterprises.

More product groups / quicker criteria development: Simplified procedure for criteria development would reduce costs for all parties involved (less meetings to attend) but development of more product groups clearly has an associated cost. From the AEAT study an estimate for criteria development is as follows:

- *Two people working full-time for 2.5 months each on developing criteria, i.e. 2 x 50 man-days = 100 man-days (this effort may be spread over 18 months or so).*
- *Three AHWGs, each a day long, attended by 25 people on average, thus 75 man-days.*

- *Therefore 175 man-days in total, or approximately half a man-year.*
- *It has been estimated that this half man-year equates to €25,000 on average to develop an eco-label for a product group from start to completion (excludes overheads, travel, and subsistence costs that may add 100% to this figure).*
- *Calculations for known examples of where EU criteria have been adopted or used as the basis for national eco-labels have then been performed by multiplying the number of product groups used by a national scheme by the €25,000 saving, similarly for the time saving.*
- *For the technical potential the calculation was performed on the number of national labelling schemes in operation within the EU, assuming each one on average will use the Ecolabel criteria for one product group.*[42]

This estimate of €25,000 per product group is roughly in line with the budget the Commission currently provides for Ecolabel criteria development, although it should be noted that costs vary hugely depending on the scale, complexity and scope of the product group in question. The work that has previously been done in that sector and the availability of data will also change the costs of development. (The Life Cycle Analysis budget for Energy Using Products for domestic lighting, for example, is around €300,000). One of the aspects of the option "modify the scheme" will be allowing work that has already been done by others to be used more easily by the Ecolabel – for example by Member States' national labels, by the Global Ecolabelling Network or in the context of other Commission work such as that of the Energy Using Products Directive or new Sustainable Consumption and Production Action Plan. This will save time and money because developing Ecolabel criteria in isolation will be avoided.

This impact assessment cannot state exactly which product groups will be chosen for development over the coming years, however, it will be specified that priority for Ecolabel criteria development would be for those product groups with the highest environmental impact. A basis of this could be the EIPRO study, which highlights some sixty product groups as accounting for the vast majority of environmental production and consumption impacts. The overall cost of development will depend on: exactly how many product groups are developed each year; the nature of each product group in question; what other work has already taken place and what on-going work is underway elsewhere. The more money that is allocated by the Commission and Member States, the more product groups can be developed. Currently the Commission spends around €150,000 per year on criteria development and revision, which gives one or two new product groups per year, and revisions for another two or three. With more efficient development and revision processes, and by revising the Regulation to allow for better co-operation with other instruments, this number could be doubled at no extra cost, although over time, with more product groups, the administrative costs may increase. (One desk officer would be required for each additional ten product groups.)

Introduce a template for criteria documents to ensure they are more user-friendly: Making criteria documents standardised and more user-friendly will mean reduced administrative burden for companies and purchasing bodies using criteria for technical specifications.

Incorporate guidance for Green Public Purchasing into criteria development: As already indicated in the previous point, procurement officers will have easier access to EU-wide harmonised criteria and companies will have a level playing field if the same criteria are used

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[42] http://ec.europa.eu/environment/ecolabel/pdf/market_study/benefitsfinalreport_1104.pdf: page 54

across Europe in technical specifications for contracts. Member States will also save money because the same criteria can be used for eco-labelling and public purchasing (see above "fit into the upcoming SCP Action Plan").

Abolition of annual fees: The current direct income for competent bodies from fees is around €1million per year in EU 27. This direct income will be lost if fees are abolished, however the administrative burden will be reduced for companies. The administrative savings could be around half a man-day per year for a company per year, along with the benefit of not having to pay an annual fee. For Member States, the administrative burden of operating the scheme will remain the same as the work required to undertake assessment and verification in the current scheme will be equal to the work required to administer and undertake market surveillance under the new proposals. Simpler criteria should, however, help to reduce the administration required.

Peer review for Member States: Depending on the number of reviews per year (3 to 4) and assuming 4 to 5 working days for the team per visit, with 3 team members and one person from the reviewed Member State this measure would mean on average approx. 3 or 4 working days per Member State per year. This work should be offset by better, harmonised working practices that result that will reduce the need for interventions to correct poor implementation of the scheme by the Commission at a later date.

Boosting marketing: In this impact assessment a figure of up to €5 million per year for five years for professional promoting of the Ecolabel brand is proposed. For companies a marketing campaign of this magnitude paid for by the Commission and Member States would increase the value of the Ecolabel brand and help to improve sales of eco-labelled products and might reduce the need for them to conduct their own marketing campaigns. Overall more companies would mean higher income from fees, so in the long term spending on a campaign could be recouped. To what extent would depend on the uptake of the label.

SECTION 9: MONITORING AND EVALUATION

Several measures will allow the monitoring and implementation of the scheme and to evaluate the success of the Ecolabel Regulation:

- The Commission will continue using the Eurobarometer surveys to get data on public awareness of and trust in the Ecolabel.
- The service contract for the collection of statistical information on Green Public Procurement which is currently being prepared by the Commission includes reference to EU-wide Ecolabel criteria. This work will provide input on the use and uptake of Ecolabel criteria by public purchasers.
- The annual statistics exercise will continue as before: Competent Bodies are asked to provide information on the volume of sales of Eco-labelled products, the number of Eco-labelled products, the fees received from licence holders and the resources (staff and money) dedicated to the scheme.
- On a continuous basis, the Competent Bodies will report any new licences to the Commission, which will continue to publish them on the internet in the so-called green store (www.eco-label.com).
- The regular meetings with Member States and stakeholders will also continue to be a source of information on the implementation of the scheme.
- The proposed new peer review mechanism described in micro-option xv , aimed at ensuring and monitoring a harmonised implementation of the Ecolabel Regulation will make the way the different Member States deal with issues of how licence holders are dealt with more transparent.

Furthermore, the draft proposal will contain a review clause along the lines of the one in the existing Regulation:

"Within five years after its entry into force, the Commission will review the scheme in the light of the experience gained during its operation. The Commission shall propose any appropriate amendments to this Regulation."

SECTION 10: CONCLUSION

The Ecolabel scheme has potential, particularly as part of a coherent package of measures, but is over-bureaucratic and isolated from other policies. Rather than giving up on it, it should be overhauled and given another chance. It is very important, however, to continue to monitor the progress of the Ecolabel against those objectives.

This impact assessment builds on experience from operation of the Ecolabel scheme and extensive consultation with parties involved in the Ecolabel scheme, including users. It follows a detailed external evaluation of the scheme – the EVER study – and uses the evidence produced by that study. As a result of the analysis, we recommend a number of separate changes to the operation of the Ecolabel scheme that can be put into effect through changes to the Ecolabel Regulation. These changes will lead to an increase in the potential of the scheme to effectively achieve its objectives.

It can be expected that this modification and simplification of the scheme will lead, on the one hand to a considerable increase in companies using the label, therefore also to an increase in Ecolabelled products on the market and, on the other hand, to an increase in the number of consumers that know about and are prepared to buy eco-labelled products as well as to an increase in the use of Ecolabel criteria in public procurement, specifically over and above the number of licences, companies involved and overall environmental benefits that would be achieved if the scheme was left as it is. More details can be seen in the EVER study.

Future sustainable production and consumption policy in the Commission will put in place a coherent package of policy instruments that provide incentive for improvement in the environmental performance of products. It will build-on and reinforce various existing policy instruments also adding a number of new environmental policy initiatives. The Ecolabel scheme will need to be a key part of such an SCP package, linking to other policies and providing a backbone of good quality life-cycle based product information for them to use. An overhaul of the way the Ecolabel Regulation is written will allow it to be not just a stand alone instrument, but a usable and integral part of the wider SCP framework. A Regulation, written in a more simple and open way is needed, giving it the flexibility to link easily with other instruments as and when the need arises and decision making structures and processes will be simplified so they can be speeded up removing unnecessary bureaucracy.

The Ecolabel Regulation as it stands is overlong and spread across six additional Commission Decisions, it is difficult to follow and implement as a result and needs to be tidied up. The Regulation is also too restrictive meaning that when new innovative ideas are put forward, they cannot be reacted to. Improving the way the Regulation is written and how criteria can be developed will increase the chances that the potential environmental and economic benefits are realised – key to this will be the ability of the scheme to respond to innovation.

The Ecolabel will be better tailored to policy makers and will be a useful benchmark and information tool on the environmental performance of products. In terms of the objectives set out in Section 4, if this package of measures is adopted, we might expect success rates comparable to those of the Blue Angel or Nordic Swan labelling schemes.

The economic and environmental impacts of the scheme will depend on its success, though indications of the potential environmental benefits at different levels of success can be found in the AEAT report referenced in this impact assessment.

The success of the Ecolabel will depend, amongst other factors, on how well it co-ordinates with other policy instruments aiming at promoting innovation in the life-cycle environmental performance of products. The forthcoming Commission Sustainable Consumption and

Production Action Plan will examine ways to use a range of product policy instruments in a coherent and co-ordinated way to maximise their effect as a whole in driving both innovation and sales of better performing products. As the Ecolabel would be a part of that package of instruments, its impact will need to be judged as part of that package.

The Ecolabel imposes no administrative burden on companies in the strict definition of the administrative burden used by the Commission[43] because costs only incur to companies that voluntarily decide to apply for the label. However, this is not a reason to reduce any unnecessary costs from the scheme's operation. Reducing these costs will lead to a more effective achievement of the scheme's objectives, making the Ecolabel both more attractive and increasing its net benefits. Several of the micro-objectives recommended to be accepted will reduce unnecessary administrative burden.

In conclusion, it seems fair to say that, as a voluntary instrument, a modified Ecolabel can have net economic benefits for the EU economy, and increase both competition and competitiveness. The Ecolabel therefore works with the market and – with its simplified approach – is a model "better regulation" policy instrument.

[43] Administrative costs are defined in the 2007 Commission Action Plan for Reducing Unnecessary Administrative Burden as "the costs incurred by enterprises…..in meeting legal obligations to provide information on their action or production".

Annex

List of current product groups:

Dishwashers

Footwear

Televisions

Hard Floor Coverings

Tissue paper

Refrigerators

Textile products

Soil improvers

Growing Media

Paints and varnishes

Copying and graphic paper

Light bulbs

Bed Mattresses

Washing machines

Dishwashing Detergents

Laundry detergents

Vacuum Cleaners

Tourist Accommodation Service

Personal Computers

Portable Computers

All-purpose & sanitary cleaners

Hand dishwashing detergents

Camp Site Services

Lubricants

Soaps, shampoos & hair conditioners