2. Recommendations to support the development of eco-industries

Below are presented instruments and policies which might have the greatest effect on the development of eco-industries in the EU. These recommendations could potentially contribute to:

- Supporting the growth of eco-industry markets,
- Improving the competitiveness of eco-industries.

2.1 Supporting eco-industry market growth

Regulation: reinforcing environmental requirements and their implementation

Regulation is one of the main instruments of public authorities for supporting the development of eco-industries. Setting higher targets in terms of environmental performance or more stringent limit values for emissions and pollutants will have a critical influence on the further development of markets which are mainly driven by environmental regulation. These sectors cover both:

- Pollution management activities focused on the production of end-of-pipe solutions (for example, air pollution control and waste water treatment) which are purchased by facilities in order to be compliant with legal requirements. As these products and services do not generate any return on investment, they are often perceived by the user as a net additional cost (a "compliance cost"). Strengthening environmental requirements is therefore the most effective way to stimulate the demand for these sectors. For example, the development of air pollution control is to a large extent dependent on the development and implementation of new regulation on air emissions. This sector has significantly benefited from the adoption of several air emissions directives in the recent years (such as directive 2000/76/EC on the incineration of waste, directive 2001/80/CE on SOx, NOx and dust emissions from combustion plants, directive 2001/81/EC on national emission ceilings for SO2, NOX, VOCs and ammonia). Although some industry representatives consider that the additional cost of adopting more stringent requirements may hurt their competitiveness on global markets, the continuous development of new environmental legislation in the EU over the years has also contributed to building global leaders in some sectors (renewable energy, waste water treatment, for example). The preparation and adoption of new legislation helps keep European industries in a leading position on new emerging issues, such as carbon trading for instance.

- Resource management activities which are not able to develop due to competition from traditional industries, such as renewable energy production or recycling. For these activities, mandatory or indicative targets defined in EU legal instruments are a key element to support the demand, as demonstrated by the directive 2001/77/EC on the promotion of electricity from renewable energy sources (which defined an EU-wide indicative target of 22% of electricity needs by 2010). Similarly, recent directives on end-of-life products which set reuse and recovery targets also encourage the demand for recycled materials (for example, directive 2000/53/CE on end-of-life vehicles). In some sectors, regulation is the determining factor to modify the competitiveness of certain technologies or processes. For example, recent requirements in the field of waste management related to landfilling and incineration imply higher costs, so that recycling technologies become increasingly competitive solutions.

The existing policy framework in the EU has proven crucial for the development of eco-industry sectors. It remains a key instrument to sustain growth in these sectors, by setting more ambitious targets and/or requirements, as well as by broadening the scope of existing legislation. In the eco-construction sector for instance, a directive on the energy performance of buildings exists but its does not apply to existing buildings for which the surface is less than 1000 m2, where a large
potential for energy conservation through environmental construction lies. In the renewable energy sector, although the share of renewable energy sources is addressed in electricity (directive 2001/77/EC) and in fuel (directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport), the potential development of renewable energy in heating and cooling systems is not yet supported by a legal requirement.

However, most of the industry experts and executives interviewed in the course of this study believe that regulatory efforts should also strongly focus on the implementation of existing environmental legislation and regulation, which have not yet been fully applied. Further efforts are required on the following aspects:

- Providing information on new legislative developments and on the deadlines for application, in advance if possible, in order to allow public authorities, control bodies and companies to be prepared for forthcoming changes,
- Controlling the transposition of EU directives in national legislation and in operational regulation, perhaps by implementing more severe control procedures,
- Supporting the national and regional authorities in charge of controlling the effective implementation of environmental requirements by developing training and capacity building initiatives for these organizations and by pursuing efforts to streamline and coordinate the process of control and compliance with environmental regulation.

**Standards: establishing harmonized standards for environmental goods and services and promoting the integration of environmental performance in construction standards**

In the framework of the Commission’s efforts to promote sustainable production and consumption, the development of standards and quality labels for environmental goods and services will contribute to promote their quality and to develop markets for eco-industries.

- As technical standards are not systematically harmonized at EU level, some technologies face barriers when trying to penetrate new markets in the EU. Establishment by the European Standards Committee of harmonized technical standards for environmental goods and services will enable some products to develop and to access new markets.
- For some sectors, establishing technical standards will play a decisive role in ensuring the customer of a guaranteed level of quality. In the recycled materials sector, quality standards for secondary raw materials (used tyre by-products, for example) will improve the image of these goods and of the products manufactured from recycled materials.
- Integrating environmental performance requirements in production standards for the building and transport industry can strongly develop markets for eco-construction in general and for technologies related to energy efficiency, water and waste management, noise reduction and renewable energy production.
**Market incentives: supporting price transparency and the internalization of environmental costs in market prices**

Demand in several eco-industry sectors has been limited by the cost of the equipment or services produced unless the use of the technologies was made mandatory by law. Larger markets for eco-industry technologies could be developed if existing activities responsible for emissions of pollutants and environmental degradation were compelled to integrate external environmental costs into their operating costs.

The use of market incentives such as taxes (for example, on resources, landfill, incineration, emission of pollutants into the air and water or noise) could in some cases, allow the market to judge comparable technologies based on the integrated performance of each solution, rather than only on cost. Similarly, recycling would become competitive for other waste streams, as it already is for several waste streams such as glass, metal and cardboard, if the market prices for currently preferred treatment solutions included more accurately the costs of environmental degradation.

Emphasis on the fair pricing of goods and technologies should also be considered in order to support eco-industry development. Subsidies for energy, water or transport infrastructure, for example, do not allow the end user (a water management executive, for instance) to see the true cost of these activities. These market distortions create a competitive disadvantage for more resource-efficient technologies that are developed by eco-industries. For example, renewable energy and energy efficiency technologies are not competitive in markets where prices of conventional energy are subsidised.

In addition to ensuring fair pricing systems, the establishment of market incentives can significantly support the demand for environmental goods and services. These incentives may include:

- Tax credits, for example to support the use of energy efficient technologies or of recycled materials,
- Soft loans and other supporting mechanisms may reduce the cost of financing for some technologies,
- Including environmental performance criteria for accessing grants and contracts,
- Developing trading markets for pollution credits, with the example of the EU Emissions Trading Scheme.

The most effective market incentives will probably need to be identified by market or sector. Further work will therefore be needed to define the most adequate incentives, in cooperation with the economic actors.

**Awareness-raising: providing targeted information on eco-industries to customers**

Developing the demand for the goods and services provided by eco-industries will require further efforts to develop awareness of consumers (households, industries, local authorities) on the availability of technologies and services offered by eco-industries, as well as on their costs and potential benefits. Better information must be communicated on the comparative advantages of environmental goods and services in order to support sustainable consumption practices. These aspects have proven crucial in order to convince buyers of the advantages of investing in cleaner production technologies, for example.

Depending on the priorities of the awareness-raising strategy, key targets could include households (for example through media campaigns) industries (by targeting professional organisations as well as purchasing departments) and public authorities, as well as financial institutions. For some sectors, another key instrument to promote eco-industry goods and services...
and to improve their image could be the establishment of a specific quality label, either by building on sector-specific quality labels or on the experience of the Community eco-label award scheme²⁵.

**Financing mechanisms: helping new Member States comply with EU environmental regulation**

Because growth rates are stable in the more mature EU-15 eco-industry markets, the new member states are considered to be critical markets for the future growth of eco-industries. However, lack of investment capacity in some new member states may slow down expected development. Financial support from the EU budget is a means to help these countries upgrade their environmental infrastructure to comply with the *acquis communautaire* and indirectly is an incentive to develop eco-industries.

Financial mechanisms aimed at supporting the development of the demand for eco-industry goods and services are usually grants or long-term loans for building new capacities. These financial instruments should be maintained and reinforced, and if possible, focused on investments in pollution and resource management activities. For some sectors (renewable energy, for example), supporting the development of local investment capacity could take the form of providing a contribution to the resources of dedicated funds at national level.

²⁵ Adopted in 1992, the objectives of this scheme are mainly to promote the design, production, marketing and use of products which have a reduced environmental impact during their entire life cycle, and to provide consumers with better information on the environmental impact of products.
2.2 Improving the competitiveness of eco-industries

Strengthening the performance of eco-industry sectors: helping SMEs adapt to emerging market needs

For some market segments, the existing eco-industries do not have the capacity to respond to emerging market needs, such as integrated approaches to environmental monitoring in urban areas. This can partly be explained because a large number of eco-industry firms are small and medium enterprises and do not always have the resources to research and follow such market developments. The Commission can help eco-industries maintain their competitiveness by:

- Pursuing the analysis of the markets for eco-industries in the years to come, as significant gaps remain in the available information on these activities. Improved data on the EU eco-industries is necessary for sector professionals to obtain a more accurate vision on the size of existing markets, on growth trends and on emerging market opportunities.

- Improving the information on market developments available to small and medium enterprises (SMEs) by developing specialized market intelligence services for some sectors or by providing support to access adequate financing possibilities as well as insight into future legislative developments, on economic and technological developments, and on global trends. Such services should focus on maintaining the capacity of EU eco-industries to focus on shifting from providing goods and services necessary to comply with environmental requirements to offering high-value expertise and technical solutions which will enhance their clients’ competitiveness.

- Supporting capacity-building initiatives for SMEs and enhancing their competitiveness, in particular by providing training and encouraging the creation of networks of eco-industry firms, aimed at improving their market entry and development abilities. The aims of such networks could include:
  - Providing information on market procedures which SMEs will need to gain expertise in bidding for opportunities that will develop in the new member states.
  - Encouraging the sharing of experience and information through this network of eco-industries should also lead to partnerships on specific projects (developing new products, penetrating new markets, etc) based on pooling resources.
  - Setting up focal points by sector (or by country) on the development of opportunities in the eco-industry markets would constitute a simple way to offer information (market trends, business opportunities) as well as technical advice to eco-industry companies.

Export potential: expanding efforts to help eco-industries access export markets

As several large eco-industry markets are approaching maturity in the EU-15 area, the strongest growth opportunities for most sectors are considered to be in new member states or in fast growing emerging economies. For this reason, EU and member state initiatives to support eco-industries in understanding and accessing export markets should be pursued and expanded. Efforts in this field could include in particular the following aspects:

- Expanding existing export promotion programmes at EU and member state level, including supporting specialised trade fairs, exchanges of expertise and technology transfer programmes, assistance and advice on overseas market opportunities and tendering procedures, financing feasibility studies and market surveys, sponsoring demonstration projects of innovative technologies, etc.
• Access to growing export markets for eco-industries located in the EU-15 area will require improved networking between providers of environmental goods and services to build solid partnerships for large contracts, including with local suppliers. Similarly, in order to adapt to the development of public-private partnerships in environmental utilities and services, eco-industries will need to establish stronger links with financial institutions and investors for offering integrated financing solutions for large markets.

• EU and member state development aid can significantly support the growth of demand for environmental goods and services in developing countries. A large proportion of exports of environmental goods and services have benefited from “tied aid” or non tied aid programmes. The EU financial instruments dedicated to external aid (such as MEDA, ALA, ACP-EU water facility, or European Investment Bank programmes such as FEMIP, for example) could further support the development of the export potential of eco-industries, in particular by increasing the focus on interventions in key issues for developing countries such as environment protection, waste and water management, renewable energy and energy efficiency. These financial instruments could support the development of new market opportunities in countries outside the EU for eco-industries as well as transfers of technology.

Access to finance: supporting the development of financial solutions adapted to eco-industry needs

For several eco-industry sectors, the cost and availability of finance is a crucial barrier for their business development. The specific needs of some projects, for example in the renewable energy sector, sometimes include long pay-back periods and high risk or uncertainties on the market potential which make it difficult to obtain adequate financing at limited costs. Possible initiatives in this field could include for example:

• Supporting the development of adapted financial mechanisms for some sectors or projects, such as grant facilities (for demonstration projects, for example, or for certain items such as feasibility studies or environmental audits, etc.) and soft loan mechanisms, which can play a significant role in improving the profitability of the project and to make it more attractive for other investors. Mechanisms for guaranteeing credit are also a key issue. Due to the perceived risks to financial institutions, the guarantees required are sometimes an obstacle to accessing project finance.

• Training of banks and financial intermediaries on eco-industry projects should be expanded, in order to increase knowledge on the specificities of these projects in terms of cost structure, usual return on investment rates, market growth potential, etc. Developing awareness of financial institutions is a key aspect in helping the emergence of adapted financial mechanisms for eco-industries. This may also further develop the trend towards increasing integration of environmental requirements in lending policies and procedures.

• Developing mechanisms to finance innovative environmental products, processes and services could lead to the establishment of investment funds dedicated to providing equity for the development of new activities, or possibly of structures aimed at “incubating” and supporting eco-industry start-ups in the initial phases of their development.

Innovation: improving the development and access to markets of innovative environmental technologies

Innovation capacity is crucial for the competitiveness of eco-industries, as it enables them to continuously adapt to new market demands. The development of new eco-industry technologies has historically suffered from the fact that investing in such research activities presents a strong financial risk due to uncertainties in the potential markets for these technologies. Financial support
for research and development efforts in eco-industries is critical to ensure continuous innovation and to maintain the sectors’ competitiveness. The influence of the European Commission on R&D aspects is already very high through the financial support provided to research programs and projects and through the Commission’s ability to highlight potential new market opportunities.

Most of the difficulty today lies in enabling new technologies to turn into commercial applications and to access markets. Efforts should therefore focus on the following aspects:

- Improving the commercial application of environmental technologies, most of which fail to reach the market, either because the technology is not sufficiently mature or because it does not meet the market’s current needs. Focusing support on technologies that present the highest potential for market application could be an efficient way to promote the most relevant research programs such as, the elimination of incinerator flue gas residues, CO2 capture and solid waste sorting technologies. This requires a better identification of **new market demands**. From this perspective, increasing the relationships and collaboration between developers, manufacturers and end-users (for example through increased networking, building on the ETAP initiative, supporting the setting up of specialised activity zones, etc.) would stimulate the development of new technologies and processes, and would also ensure that these new solutions meet the needs of industry and public authorities.

- Providing companies, particularly SMEs, with more and better information on new commercial applications, on procedures to obtain patents, will contribute to helping them access the latest technologies. Providing more **information on new technologies** available should target especially manufacturers and end-users of environmental goods and services, for example via initiatives to disseminate information on recent innovation and to demonstrate the benefits of these new technologies. This could, for example, concern new applications for recycled materials, new technologies in the field of eco-construction (house automation, internal air purification, local water reuse, etc).

- Promoting the use of new technologies and their access to markets will require not only increased awareness of suppliers and users but also probably **market incentives** to stimulate demand. These incentives include, for example, tax credits for cleaner products or equipment, access to finance with improved conditions, as well as fixed feed-in tariff systems or quota systems, which have proven effective in developing renewable energy markets.

- Investing in research and development is difficult for a number of companies active in environmental markets because they lack critical size. The growing number of mergers is partly due to this drive to have a sufficient volume of activity in order to support large R&D investments. Encouraging the **pooling of research efforts** could offer increased leverage in developing the innovation capacity of eco-industries.