Section 7

INDUSTRIAL POLLUTION CONTROL LEGISLATION
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Industrial Pollution Control and Risk Management - Overview

1. Introduction and Overview

This section of the Handbook deals with EC legislation related to industrial pollution control and risk management. It contains an introductory overview of the sector followed by individual fiches for selected pieces of legislation.

1.1 Overview

This chapter focuses on EC legislation regulating industrial pollution at source. The main legislation includes those in the below box:

- Regulation (EC) No. 1980/2000 on a revised Community eco-label award scheme

It should be emphasised that, although these directives have been specifically selected under the category of industrial pollution control, there is other EC legislation that has a direct or indirect impact on regulating pollution from industrial activities, especially in the water management sector, including Directive 2006/11/EC on dangerous substances aimed at restricting the discharge of dangerous substances. Council Directive 99/13/EC on volatile organic compounds is relevant to industrial pollution control, but as it is also of relevance to air pollution control the implementation of this directive is included in Section 3 of the Handbook.
covering air legislation.

Furthermore, legislation controlling emissions into the environment and the quality of the ambient environment (see Section 3 of the Handbook), legislation regulating waste disposal (see Section 4 of the Handbook), legislation governing water quality (see Section 5 of the Handbook), and legislation controlling the handling, use and disposal of chemicals (see Section 8 of the Handbook) all have implications for industrial pollution control and influence the content of permits granted under the IPPC regime.

Although the IPPC Directive does not itself set uniform Community-wide emission limit values, it makes applicable emission limit values provided through other EC directives, and provides for new emission limit values to be set where needed. However, existing emission limit values are minimum requirements. Under the IPPC Directive, stricter limits must be used if best available techniques (BAT) so require (see discussion below).

In addition, the chapter covers the Eco-Management and Audit Scheme (EMAS) Regulation and the Eco-Label Regulation. Although the EMAS Regulation applies more broadly than simply to industrial activities, to date companies that have implemented environmental management systems complying with the regulation have been mainly those carrying out such activities. The Eco-Label Regulation is a product-based, as opposed to process-based, regulation. However, the processes for manufacturing the products will have some bearing on the implementation of the requirements of the regulations.

The implementation of the IPPC Directive and the relevant legislation should be carried out taking into account the current "IPPC review". On 21 December 2007 the Commission adopted a proposal for a Directive on industrial emissions. The proposal will recast seven existing directives related to industrial emissions into a single clear and coherent legislative instrument and it includes in particular the IPPC Directive.

The IPPC Directive has been in place since 1997 and the Commission has undertaken a 2 year review with all stakeholders to examine how it, and the related legislation on industrial emissions, can be improved to offer the highest level of protection for the environment and human health while simplifying the existing legislation and cutting unnecessary administrative costs. The findings of this review has resulted in the draft Directive, which will have many consequences for the current IPC legislation.

1.2 EU Policy

The EU’s First Environmental Action Programme, adopted in 1973, established a number of general principles including:

- that pollution or nuisance should be prevented at source rather than trying to counteract their effects;
- that the effects on the environment should be taken into account at the earliest stage in planning and decision making;
- that exploitation of natural resources which causes significant damage to ecological balance must be avoided; and
- that the polluter must pay the costs of preventing and eliminating nuisances.

The importance of public participation through education and the necessity to improve knowledge through research were also important aspects of the policy.

The policy resulted in the laying down of scientific criteria for the degree of harm with respect to air and water pollution and for noise, and the definition of parameters for quality objectives.

The First and Second Environmental Action Programmes set out detailed lists of actions to be

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taken to control a broad range of pollution problems, resulting in a series of measures, primarily through the adoption of media-oriented directives to control pollution at source and to set up quality objectives for environmental media through the mechanism of, for example, ambient air quality targets, bathing water quality standards, and controls on the discharge of dangerous substances.

The Third Environmental Action Programme, adopted in 1983, attempted to provide an overall strategy for the protection of the environment and natural resources. The programme shifted the emphasis from pollution control to pollution prevention, and broadened the scope of environmental protection to include land-use planning and the integration of environmental concerns into other EU policies. The Fourth Environmental Action Programme sought to emphasise the practical implementation of the new and existing legislation.

The Fifth Environmental Action Programme (adopted in 1993) introduced a change in emphasis whereby priority is given to:

- the long-term management of natural resources;
- the overall fight against pollution and waste;
- reduction in the use of non-renewable energy;
- improvements in the choice of locations for industry and people and their means of transport; and
- improvements in health and safety.

The Sixth Environmental Action Programme (adopted in 2001) recognised that problems still remained and that the environment would continue to deteriorate unless:

- more progress was made in the implementation of environmental legislation in Member States;
- the integration of environment into the economic and social policies driving the pressures on the environment was improved and deepened;
- stakeholders and citizens took more ownership of efforts to protect the environment; and
- new impetus was given to measures aimed at addressing a number of serious and persistent environmental problems as well as a number of emerging concerns.

In addition, it emphasised that special attention would be paid to four priority areas for action. These were:

- tackling climate change;
- nature and bio-diversity — protecting a unique resource;
- environment and health; and
- sustainable use of natural resources and management of wastes.

It can be seen that integrated pollution prevention and control (IPPC) is integral to all of these action areas.

IPPC represented a major change in the permitting system for certain installations. The general principles of IPPC are given in Box below. It is important to emphasise that the IPPC Directive is the first piece of EC legislation that requires the truly integrated control of industrial pollution at source. The directive was adopted within the Fifth Environmental Action Programme, and encompasses the provisions of and replaces the Directive on Air Pollution Control from Industrial Plants (84/360/EEC) as from October 2007. There are links between the directive and other legislation regulating the environmental impacts of industrial activities — for example the
Environmental Impact Assessment Directive (85/337/EEC as amended by 97/11/EC\(^{158}\)), the Seveso II Directive (96/82/EC), and the EMAS Regulation (761/2001/EEC, as amended by Regulations No. 196/2006 and 1791/2006). However, it must be stressed that not all installations that are required to be regulated under the provisions of the IPPC Directive are covered by the other directives, and vice versa. For example, some installations, but not all, covered under the IPPC Directive will also require environmental impact assessments under the EIA Directive.

**General Principles of IPPC**

Installations shall be operated in such a way that:

- all appropriate preventative measures against pollution must be taken, in particular through the application of best available techniques (BAT);
- no significant pollution shall be caused;
- waste production is avoided (the waste management hierarchy should be followed in accordance with the Waste Framework Directive (2006/12/EC, incorporating changes from amending Council Directives 91/156/EEC and 91/692/EEC and Commission Decision 96/350/EC);
- energy is used efficiently;
- necessary measures are taken to prevent accidents and limit their consequences; and
- necessary measures are taken upon the cessation of activities to avoid pollution risk and to return the site of operation to a satisfactory state.

The Commission's draft Directive on industrial emissions reinforces the application of Best Available Techniques, as a way to reduce the harmful industrial emissions across the EU, translating into improved environment and human health. For the large combustion plants alone it will achieve net benefits of €7-28 billion per year, including the reduction of premature deaths and years of life lost by 13,000 and 125,000 respectively.

The draft directive includes minimum provisions covering the inspection of industrial installations, the review of permits, reporting on compliance and protection of soil. The draft directive shall be read in conjunction with the Communication of 2007\(^{159}\) setting out an IPPC Action Plan covering the period 2008-2010, which aim at supporting the implementation of the existing legislation.

Other guidance on IPPC principles according to the IPPC review and other key features include:

- Setting up of indicators on the number of permits issued for existing installations (available at: http://ec.europa.eu/environment/air/pollutants/stationary/ippc/ippc_indic_permits.htm)
- Use of EPER to identify installations with reported emissions of more than 10% of EU wide total emissions (see also document submitted by the United Kingdom), available at: http://ec.europa.eu/environment/air/pollutants/stationary/ippc/pdf/table_largest_emitters_jan_06.pdf)
- Assessment of the implementation of the IPPC (in particular see study launched on the assessment of 30 particular installations, more information on CIRCA IPPC Review website), available at: http://circa.europa.eu/Public/irc/env/ippc_rev/library
- Finalisation of the first round of BREFs and start of their review

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\(^{158}\) The EIA Directive is considered in detail in Section 2 of the Handbook.

The EIA Directive provides a means to assess and control the overall polluting effects of major industries and other activities on an integrated basis. The results of consultation and information gathered through the EIA process must be taken into account in considering applications for consents for relevant developments covered by the directive. For installations to which both the IPPC and EIA Directives apply, any relevant information obtained as a result of the latter directive may be taken into account in determining whether to grant the IPPC permit.

The effective co-ordination of the permitting and authorisation procedures under the IPPC, Seveso and EIA Directives is an essential part of the integrated approach to pollution prevention and control required by the Sixth Environmental Action Programme.

The adoption of an environmental management scheme under the EMAS Regulation (761/2001/EC, as amended by Regulations No. 196/2006 and 1791/2006) within a company helps it to, inter alia, comply with regulatory instruments and provides organisational guarantees that the company is capable of identifying, monitoring and acting upon the environmental impacts of its activities on a continuous basis. Both the IPPC Directive and the EMAS Regulation stress the importance of monitoring environmental effects, reducing environmental impacts and using an integrated approach to seeking solutions for different environmental problems.

As mentioned above, the Eco-Label Regulation (1980/2000) focuses more on products than processes. It establishes a voluntary scheme for awarding “eco-labels” to certain products. However, the decision as to whether or not to award an eco-label may take into account the environmental impacts of the processes applied in manufacturing the products, hence the link between this regulation and industrial pollution control. The eco-label scheme aims to promote products that have the potential to reduce negative environmental impacts. The scheme does this through the provision of guidance to consumers.

It is important to note the current overhaul of the existing legislation on industrial pollution control taking place at EU level. At the center of this review are:

- Draft proposal of 21 December 2007 on industrial emissions
- Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions - Towards an improved policy on industrial emissions

The proposal and communication is calling for a simplified framework for regulating industrial pollutants. The draft Directive will recast seven existing directives related to industrial emissions into a single clear and coherent legislative instrument and it includes in particular the IPPC Directive.

The IPPC Directive has been in place since 1997 and the Commission has undertaken a 2 year review with all stakeholders to examine how it, and the related legislation on industrial emissions, can be improved to offer the highest level of protection for the environment and human health while simplifying the existing legislation and cutting unnecessary administrative costs. The findings of this review has resulted in the draft Directive, which will have many consequences for the current IPC legislation.

1.3 EC Legal Instruments

The basic aims of the five directives and two regulations considered in this section, and an indication of certain EC legislation relevant to them, are illustrated in the Table below. The relationship between the legislation considered in this chapter with other legislation is discussed in more detail in Section 1.4.
**Table - Summary of Key Interrelationships between EC Legislation in the Industrial Pollution Control Sector and Selected EC Legislation in the Environmental Acquis**

<table>
<thead>
<tr>
<th>Directive/Regulation in the Industrial Pollution Control Sector</th>
<th>Other relevant legislation</th>
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<tbody>
<tr>
<td>The purpose of the directive is to achieve integrated prevention and control of pollution arising from a range of listed activities. It lays down measures to prevent or reduce emissions to air, water and land from these activities, including measures on waste, in order to achieve a high level of protection of the environment as a whole. It introduces an integrated permitting system, which is required for all listed activities and which must contain specific conditions including emission limit values and the application of best available techniques.</td>
<td>Waste Sector Legislation (see Section 4 of the Handbook)</td>
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<tr>
<td>Directives on Waste from the Titanium Dioxide Industry (78/176/EEC, 82/883/EEC and 92/112/EEC) (note that these directives will be repealed by the draft new directive on waste, which is soon to be adopted at EU level)</td>
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<tr>
<td>Water Quality Sector (see Section 5 of the Handbook)</td>
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<td>The Chemicals and GMOs Sector (see Section 8 of the Handbook)</td>
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<td>The Asbestos Directive (87/217/EEC)</td>
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<tr>
<td>Horizontal Legislation (see Section 2 of the Handbook)</td>
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<tr>
<td>The Environmental Impact Assessment Directive (85/337/EEC, as amended)</td>
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<td>The SEA Directive (2001/42/EC)</td>
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<td>Public Participation Directive (2003/35/EC)</td>
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<td>Reporting Directive (91/692/EEC)</td>
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The IPPC Directive (repealing Directive 84/360/EEC on air pollution from industrial plants) This directive aims, *inter alia*, to prevent or reduce air pollution from industrial plants, to ensure that certain categories of plants require authorisation before commencing operations, to set out general conditions determining whether authorisation shall be provided and to allow Member States to identify additional categories of plant for authorisation.

Industrial Pollution Control Sector
IPPC Directive (2008/1/EC)
Large Combustion Plants Directive (2001/80/EC)
Other Legislation
Ambient Air Quality Assessment and Management Directive (96/62/EC)
Directives on limit values for SOx, particulate matter, lead, NOx (1999/30/EC), benzene and carbon monoxide (2000/69/EC), ozone (92/72/EEC), and heavy metals (2004/107/EC)
Scheme on Greenhouse Gas emission Allowances
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<td>This directive establishes national emission ceilings to limit acidifying and eutrophying pollutants and ozone precursors using benchmarks from the years 2010 and 2020 and by means of successive reviews</td>
<td>Industrial Pollution Control Sector</td>
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<tr>
<td>IPPC Directive (2008/1/EC)</td>
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<tr>
<td>This directive aims to reduce air pollution by regulating, on the basis of established criteria, the emissions of sulphur dioxide, nitrogen oxides and, in certain cases, of dust from large combustion plants</td>
<td>Other Legislation</td>
</tr>
<tr>
<td>IPPC Directive (2008/1/EC), Please, note that a revised IPPC Directive consolidating and repealing a number of Directives is in draft format</td>
<td>Council Decision on the Convention on Long-Range Transboundary Air Pollution (81/462/EEC)</td>
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<td>Ambient Air Quality Assessment and Management Directive (96/62/EC)</td>
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<td></td>
<td>Directives on limit values for SOx, particulate matter, lead, NOx (1999/30/EC), benzene and carbon monoxide (2000/69/EC), ozone (92/72/EEC) and heavy metals (2004/107/EC)</td>
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<tr>
<td>This directive aims to prevent major accidents that involve dangerous substances and to limit their consequences for people and the environment.</td>
<td>Water Quality Framework Directive (2000/60/EC)</td>
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<td>Freshwater Fish Directive (2006/44/EC)</td>
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<td>Shellfish Water Directive (2006/113/EC)</td>
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<td>Chemicals and GMOs Sector (see Section 8 of the Handbook)</td>
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<td>The REACH Regulation (1907/2006) (on the registration, evaluation, authorisation and restriction of chemicals)</td>
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<td>Regulation on the export and import of dangerous chemicals (304/2003)</td>
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<td>Biocidal Products Directive (98/8/EC)</td>
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<td></td>
<td>Use of GMOs Directive (90/219/EEC) and Deliberate Release of GMOs Directive (2001/18/EC)</td>
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<td>Horizontal Sector (see Section 2 of the Handbook)</td>
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<td></td>
<td>Reporting Directive (91/692/EEC)</td>
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<td>European Pollution Release and Transfer Register Regulation 166/2006</td>
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<td></td>
<td>Other Legislation</td>
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<td></td>
<td>Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work</td>
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<tr>
<td>This regulation aims to promote continuous improvement in the environmental performance of organisations having an environmental impact by allowing such organisations to</td>
<td>Relevant standards</td>
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<td>ISO 100011</td>
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<td>ISO 14001</td>
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<td>EN 45012</td>
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participate in an eco-management and audit scheme. Participants are required to establish and implement policies, programmes and management systems in relation to their sites, audit the environmental performance of each site, and inform the public of the results. The policies, programmes and systems have to be independently examined to verify compliance with the regulation.

The main aim of this regulation is to reduce pollution by establishing a voluntary scheme for awarding eco-labels to products, in order to encourage the production and use of clean technology with reduced environmental impact throughout the product life cycle; and to meet the needs of consumers for information about the environmental impact of products.

Chemicals and GMOs Sector (see Section 8 of the Handbook)
REACH Regulation (see Section 8 of the Handbook)
Also several Commission decisions on eco-label criteria for specified products

Consideration needs also to be given to certain Commission decisions that have relevance to the above legislation. These include:

- Questionnaires regarding IPPC (1999/391/EC and 2003/241/EC)
- European Pollutant Emission Register (2000/479/EC)
- Application Fees of Eco-Labelling (2000/728/EC)
- Guidance on implementing the EMAS Regulation (2001/681/EC); and
- Decision on establishing the Community eco-labelling working plan (2002/18/EC)

The Seveso II Directive (96/82/EC) has given rise to two Council decisions that require Member States to provide information to the Commission in relation to the requirements of that directive. Council Decision 1999/314/EC required a report on activities associated with the directive covering the period 2000 to 2002, and Council Decision 2002/606/EC requires Member States to report in a similar fashion for the period 2003 to 2005.

The IPPC Directive requires Member States to submit certain reports. These reports can be in questionnaire format in accordance with Commission Directive 96/61 on the standardisation and rationalisation of environmental reports, as amended by Commission Decision 1999/391/EC and Decision 2003/241/EC. The second report covered the period 2003 to 2005.

In addition, Council Decision 2000/479/EC requires Member States to report on emissions from IPPC-regulated plants every three years. The decision gives details of the substances to be reported on, the units required and thresholds.

Council Decision 2000/728/EC (as amended by 2003/393/EC) established the level of fees to be levied in relation to the eco-labelling scheme. The fees ranged from a minimum of EUR 300 to a

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maximum of EUR 1,300. In the case of SMEs (as defined in the directive) these fees are reduced by 25%.


It is important to take into account the draft Directive on industrial emissions, proposed by the Commission on 21 December 2007. The implementation of the IPPC Directive and the relevant legislation should be carried out taking into account the current “IPPC review”\(^{163}\). The proposal will recast seven existing directives related to industrial emissions into a single clear and coherent legislative instrument and it includes in particular the IPPC Directive. The seven directives concerned are:


1.4 Relationship of IPPC with other EC Environmental Legislation

This section discusses in more detail those legal acts in the environmental acquis which will influence or will be influenced by the implementation of the IPPC Directive (2008/1/EC). The following text summarises the requirements of the other EC environmental legislation, highlights links with IPPC and sets out possible approaches for implementation.

1.4.1 Directives setting specific limits on emissions to air

A number of directives establish specific controls on emissions to air. At present, most of these exist as supplementary directives to Directive 96/62/C on ambient air quality assessment and management. Additional provisions are contained in the IPPC Directive and in the individual air quality daughter directives. These directives have to be considered when implementing the IPPC Directive. The IPPC Directive specifies that conditions of permits should include emission limit values for various pollutants, in particular those listed in Annex III. Annex III lists the main air-polluting substances. There are separate directives setting emission limits for most of these. Operators of permitted installations must comply with these limits. This would involve allowing minimum requirements to be set out in regulations, without prejudice to any stricter requirements that may arise through an assessment of BAT under IPPC. The main directives for which such

\(^{163}\) Proposal is available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007PC0844:EN:NOT
an approach could be used are summarised below.

1.4.2 The Large Combustion Plants Directive (2001/80/EEC as amended)

This directive sets out a number of controls relating to the operation of large combustion plants with a rated thermal input equal to or greater than 50 MW, irrespective of the type of fuel used. Key elements of the directive are that it obliges Member States to develop programmes of emissions reductions for existing plants (Art. 3) based on emission ceilings and corresponding percentage reductions, as laid down in Annex I and Annex II of the directive in order to tackle one of the principal causes of acid rain by limiting or reducing emissions of sulphur dioxide (SO2) and nitrogen oxides (NOx), and also restricting emissions of dust, particularly from new plants, without prejudice to the IPPC Directive and bearing in mind obligations under the NEC Directive. Existing plants are subject to total national emission ceilings with phased reductions and with different limits for different Member States. Member States had to draw up programmes by 1 July 1990 for the progressive reduction of total annual emissions of SO2 and NOx from existing plants in accordance with these ceilings. Emissions limits applicable to individual authorisations for new plants are defined and are subject to a licensing regime (Art. 4) in line with the requirements of part A or B of Annexes III to VII. Emission limits should be determined for SO2, NOx and dust.

Candidate countries must establish a mechanism to adopt national emission ceilings and confer responsibility on one or more competent authorities to develop plans to meet those ceilings. In view of ongoing developments in EU environmental policy, it is recommended that this mechanism should be flexible enough to permit different types of ceilings and pollutants to be covered. This could be achieved by making provision for the adoption of regulations establishing ceilings and defining how those ceilings are to be achieved. Ceilings for existing plants may need to be negotiated during accession procedures.

Note that the draft Directive on industrial emissions will consolidate and recast a number of directives including the Large Combustion Plants Directive. The draft would reinforce the application of Best Available Techniques, as a way to reduce the harmful industrial emissions across the EU, translating into improved environment and human health. For the large combustion plants alone it will achieve net benefits of €7-28 billion per year, including the reduction of premature deaths and years of life lost by 13,000 and 125,000 respectively.


This directive regulates the permitting, design, equipment and operation of waste incineration plants in order to control air pollution. It lays down extensive requirements for monitoring, inspection and reporting by the operators of such plants, and establishes different emission limit values depending on the nominal capacity of the plant. This directive provides measures and procedures to prevent and, if prevention is not a practicable option, to reduce negative effects on the environment and human health related to air, soil and water pollution caused by the incineration of hazardous waste. The directive sets out operating conditions and emission limit values for hazardous waste incineration plants. Commission Decision 98/184 sets out a questionnaire for Member States to complete when reporting to the European Commission on the implementation of the directive.

Note that the draft Directive on industrial emissions will consolidate and recast a number of directives including the Waste Incineration Directive.

1.4.4 Ambient Air Quality Directives

The most important instrument in relation to air quality management is the Air Quality Framework Directive (96/62/EC). This directive provides for the establishment of new ambient air quality standards and objectives, the assessment of air quality, the provision of information to the public, and the development and implementation of programmes to maintain air quality. “Limit values” and “alert thresholds” (see Section 3 of the Handbook) are to be defined for various ambient air

1.4.5 The Dangerous Substances Directive (2006/11/EC) and its daughter directives

This directive should be considered within the regime provided for by the Water Quality Framework Directive (2000/60/EC). Directive 2006/11/EC sets a framework for the elimination or reduction of discharges of dangerous substances to inland, coastal and territorial waters. An annex to the directive contains a list I and a list II of families and groups of dangerous substances. Discharges of both List I and List II substances are to be subject to prior authorisation by a competent authority. Specific controls for List I substances have been defined in the following daughter directives: Directive 82/176/EEC (mercury discharges from the chlor-alkali electrolysis industry); Directive 84/156/EEC (other discharges of mercury); Directive 83/513/EEC (cadmium); Directive 84/491/EEC (hexachlorocyclohexane); and three further directives (86/280/EEC, 88/347/EEC and 90/415/EEC) covering a range of additional substances. To control the discharge of these dangerous substances, Member States may choose between setting either emission standards based on Community limit values or rather by reference to quality objectives set in the daughter directives. For controlling List II substances, Member States are to establish pollution reduction programmes with deadlines for implementation.

1.4.6 The IPPC Directive (2008/1/EC)

This directive will supersede the permitting requirements of the Dangerous Substances Directive (2006/11/EC). The Water Framework Directive (2000/60/EC) will gradually replace the Dangerous Substances Directive. According to Article 20(1) of the IPPC Directive, the requirements of the Dangerous Substances Directive will continue to apply to existing facilities until they have been brought under the IPPC regime. The Dangerous Substances Directive will also continue to apply to some facilities that are outside the scope of the IPPC Directive. With regard to the implementation of the IPPC Directive, it will be necessary to ensure that the emission limits and environmental quality standards defined in the daughter directives to the Dangerous Substances Directive (2006/11/EC) are carried through to establish minimum requirements for permit conditions under IPPC. However, the implementation of the IPPC Directive and the relevant legislation should be carried out taking into account the current “IPPC review”. On 21 December 2007 the Commission adopted a proposal for a Directive on industrial emissions. The proposal will recast seven existing directives related to industrial emissions into a single clear and coherent legislative instrument and it includes in particular the IPPC Directive.

1.4.7 Water Framework Directive (2000/60/EC)

The Water Framework Directive (2000/60/EC) will lead to substantial changes in the way water resources are managed (see Section 5 of the Handbook). The Water Framework Directive requires water resources to be managed on the basis of river basins, instead of administrative or political boundaries. A river basin management plan will have to be established for each river basin district and updated periodically in order to ensure that the objective of good water status is met. A combined approach to pollution control is anticipated, with Member States needing to

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164 Proposal is available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007PC0844:EN:NOT
include in their programmes both limit values to control emissions from point sources and environmental quality standards to limit the cumulative impact of emissions on water resources. New standards set under this directive will replace the water quality standards required for certain uses under existing directives, specifically: the Directive on Surface (Drinking) Water (75/440/EEC); the Shellfish Water Directive (2006/113/EC); the Freshwater Fish Directive (2006/44/EC); and the Groundwater Directive (80/68/EEC). Links will need to be established between the water management and regulation regime to be set up under the Water Framework Directive and the implementation of IPPC procedures under the IPPC Directive. These links in particular should aim to ensure that the requirements of river basin management plans are given due consideration in issuing IPPC permits, and that emission limits and water quality requirements established under the Water Framework Directive are respected in IPPC permit conditions. Consideration should also be given to the SEA Directive (2001/42/EC).

1.4.8 Directives setting water quality requirements

As stated above, there are a number of directives that define water quality requirements. These exist in the form of daughter directives under the Dangerous Substances Directive (2006/11/EC) or as separate directives on the quality of waters for certain uses (e.g. for shellfish waters). Some of these directives, as discussed above, are largely to be modified or replaced by new requirements under the Water Framework Directive. In respect of IPPC, however, the fundamental position is unaltered, namely that there will be various EC water quality standards, which have to be respected under an IPPC permitting regime.

1.4.9 The Bathing Water Directive (2006/7/EC)

This directive defines requirements for the quality of bathing water in order to protect public health and the amenity value of bathing areas. The directive lists various physical, chemical and microbiological parameters that are to be used in the assessment of bathing water quality, as well as minimum sampling frequencies. The directive is intended principally to limit the discharge of sewage to bathing waters, and as such can be implemented largely independently of the IPPC Directive (2008/1/EC). Nevertheless, the water quality requirements specified will have the status of environmental quality standards for the purposes of IPPC permitting, so again a link will need to be established to ensure that they are considered when setting permit conditions for installations covered by the IPPC regime.

1.4.10 The Nitrates Directive (91/676/EEC)

This directive is aimed at reducing or preventing the pollution of water by nitrates from the application and storage of inorganic fertiliser and manure on farmland. It is intended both to safeguard drinking water supplies and to prevent wider ecological damage in the form of the eutrophication of freshwater and marine waters. Member States must identify waters affected by pollution from nitrates, and all known areas of land which drain into waters identified in this way and thus contribute to pollution are to be designated as “vulnerable zones”. Action programmes relating to vulnerable zones must then be established. These must contain certain mandatory measures including periods when the application of certain fertilisers is prohibited, and limits on the quantities of fertilisers applied. There should be a link to ensure that action programmes for nitrate vulnerable zones and other requirements can be given due consideration when authorising IPPC installations which have the potential to affect the designated zones.

1.4.11 The Urban Waste Water Treatment Directive (91/271/EEC as amended by Directive 98/15/EC)

The Urban Waste Water Treatment Directive seeks to reduce the pollution of freshwater, estuarial and coastal waters by domestic sewage, industrial wastewater and rainwater run-off — collectively “urban wastewater”. It sets minimum standards for the collection, treatment and discharge of urban wastewater. Different requirements are specified for different sizes of towns and villages (agglomerations). In brief, all towns and villages above a specified size will have to
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establish sewage collecting systems and provide “secondary treatment” (involving biological treatment with a secondary settlement) of wastewater entering these systems. Higher standards of treatment are required for discharges to particularly sensitive areas designated by Member States on the basis of criteria set out in the directive (e.g. waters subject to eutrophication). The directive sets emission limit values and minimum percentage reductions for discharges from secondary and tertiary treatment plants. The directive also makes provision for Member States in some circumstances to identify less sensitive coastal and estuarial areas, where levels of wastewater treatment can be lower. In such areas, the directive requires a minimum of “primary treatment” (a physical and/or chemical process involving the settlement of suspended organic solids) and evidence that the environment is not adversely affected.

The provisions of the Urban Waste Water Treatment Directive can be transposed and implemented largely independently of the IPPC Directive (2008/1/EEC). However, any designation of sensitive or less sensitive areas should be relevant to the consideration of local factors particularly in determining best available techniques on which emission limit values and other technical measures to be included as part of the permit conditions must be based. A further element of the Urban Waste Water Treatment Directive is that industrial discharges to collecting systems are subject to prior regulation and/or specific authorisation, as well as forms of pre-treatment specified in an annex. Any resulting sludge must be disposed of safely in an environmentally acceptable manner. Biodegradable industrial wastewater from specified sectors of the food and drink industry that is discharged direct to receiving waters is also to be subject to prior authorisation. Controls introduced in fulfillment of these requirements will need to be respected in IPPC permits issued to relevant industrial installations.

The Waste Framework Directive (2006/12/EC as amended by Council Directives 91/156/EEC and 91/692/EEC and Commission Decision 96/350/EC). This directive sets out a framework for the management of waste and its production in the EU. It requires Member States to avoid the production of waste and, where waste is produced, to encourage its recovery, including recycling, reuse or reclamation, and the use of waste as a source of energy. Where this is technically and economically impossible, waste must be disposed of in a manner which avoids or reduces environmental impacts. The IPPC Directive includes the same principles in the general principles governing the basic obligations of operators of relevant installations. In addition, the scope of the IPPC Directive, as defined by Annex I, covers a number of installations also regulated under the Waste Framework Directive. These include:

- installations for the disposal of hazardous waste;
- certain installations for the recovery of hazardous waste;
- installations for the disposal of waste oils;
- installations for the incineration of municipal waste;
- large-scale installations for the biological or physico-chemical treatment of non-hazardous waste; and
- large landfills.

Consequently, the installations covered by these categories will have to meet the requirements of both regimes. Ideally, a mechanism could be established allowing this to be achieved by a single permitting system.

It should be noted that the draft directive on waste will replace this directive and introduce several changes to the current system. In addition, it will repeal the separate directives related to the titanium dioxide industry. (The text of the proposal can be accessed at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2005:0667:FIN:EN:PDF)


This directive establishes controls (in addition to those in the Waste Framework Directive) for the
disposal of hazardous waste. It prohibits the mixing of different categories of hazardous waste and of hazardous waste with non-hazardous waste except in certain circumstances (see the Landfill Directive (99/31/EC) for the prohibition in the future of co-disposal to landfill). It also specifies more detailed permitting and record-keeping requirements that go beyond the general provisions of the Waste Framework Directive. Implementation of the Waste Framework and Hazardous Waste Directives should be linked with implementing the IPPC Directive (2008/1/EC) so that appropriate controls can be imposed on installations which produce or treat hazardous waste.


The purpose of the directive is to create a harmonised system for the collection, treatment, storage and disposal of waste oils, without harming the environment. Member States are required to establish systems for the registration, permitting and supervision of activities involving the processing or disposal of waste oils. The highest priority for managing waste oils is given to regeneration, followed by combustion, then destruction or controlled storage or disposal. A general duty is placed on Member States to ensure that the collection and disposal of waste oils does not cause damage to human beings and the environment. Member States are required to give priority to regeneration (producing base oils) where it is technically and economically feasible. Where it is not feasible, the directive sets out certain conditions that must be achieved for the burning of waste oils. Waste oils that are neither regenerated nor burnt must be safely destroyed or stored or disposed of under controlled conditions. Plants above a certain size which burn waste oils must observe emission limits required by the directive for heavy metals, chlorine and fluorine. Some provisions of this directive, such as those relating to discharges to water and emission limits to air, will also be applicable to the issuing of IPPC permits for relevant installations. A link will need to be established between such requirements and conditions in IPPC permits.


These directives relate to the prevention and reduction of pollution caused by waste from the titanium dioxide industry. Again, in respect of the IPPC Directive, the requirements of the directives on waste from the titanium dioxide Industry will need to be established in law as minimum standards without prejudice to any stricter obligations that BAT may entail. It should be noted, however, that the new draft directive on waste (which is expected to be adopted soon) will repeal all this titanium dioxide-related legislation. Note that the draft Directive on industrial emissions will consolidate and recast a number of directives including the three titanium dioxide directives.

1.4.15 Landfill Directive (99/31/EC)

The Landfill Directive sets standards for the operation of landfills. Its provisions cover the opening, management, closure and monitoring of sites and the acceptability of the waste for landfill. In particular, the directive includes the need for pre-treatment of waste, limits on the landfilling of organic waste, and restrictions on the “co-disposal” of hazardous waste and municipal waste. The Landfill Directive defines minimum technical requirements that must be reflected in IPPC permits issued to landfill operators.


The Access to Environmental Information Directive aims to ensure that environmental information is systematically available and disseminated to the public and in a manner that is consistent throughout the Member States. Public information that can be obtained includes national, regional and local legislation concerning the environment; information on environment policies, programmes and plans; reports on the state of the environment (which are to be
published at least every four years); data on activities affecting the environment; environmental
authorisations and agreements, environmental impact studies and risk assessments. Therefore,
information on several industrial pollution control-related elements, particularly planning, EIA,
operation, licensing and emissions, would thus potentially be available under this directive.

1.4.17 Regulation concerning the establishment of a European Pollutant Release and Transfer
Register (166/2006)
This regulation sets up a pollutant release and transfer register (PRTR) at EU level in the form of
a publicly accessible electronic database. The public will be able to access this register free of
charge on the Internet and will be able to find a wide range of information (type of pollutant,
geographical location, affected environment, source facility etc.)
The register will contain information on releases of pollutants to air, water and land, as well as
transfers of waste and pollutants, where emissions exceed certain threshold values and derive
from specific activities. The register will also cover releases of pollutants from diffuse sources
(such as transport).
Annex II lists the waste and pollutants covered by the register, which include greenhouse gases,
acid rain pollutants, ozone-depleting substances, heavy metals and dioxins. Annex I sets out the
activities concerned, which are, in particular, those covered by the IPPC Directive, including
power stations, mining, quarrying and metalworking industries, chemical plants, paper and
timber industries and also waste and wastewater treatment plants. Operators of listed activities
have to report periodically to the Member States as regards these activities and the resulting
pollutants.

1.4.18 Environmental Liability Directive (2004/35/EC)
The directive covers direct or indirect damage to the aquatic environment and to species and
natural habitats, where protected at Community level. The principle of liability applies to
environmental damage and imminent threat of damage resulting from occupational activities,
where it is possible to establish a causal link between the damage and the activity in question.
The first liability scheme applies to the dangerous or potentially dangerous occupational
activities listed in Annex III to the directive. These include industrial activities that require an
IPPC licence, activities that discharge heavy metals into water or the air, installations producing
dangerous chemical substances, waste management activities (including landfills and
incinerators) and activities concerning genetically modified organisms and micro-organisms.
Under this first scheme, operators may be held responsible even if they are not at fault.
The second liability scheme applies to all occupational activities other than those listed in Annex
III if there is damage, or the imminent threat of damage, to species or natural habitats protected
by Community legislation. In this case, operators will be held liable only if they are at fault or
negligent. Where there is an imminent threat of environmental damage, the competent authority
designated by each Member State will require the operator (the potential polluter) to take the
necessary preventive measures, or will take such measures itself and recover the costs incurred
at a later date. Where environmental damage has occurred, the operator concerned will be
requested to take the necessary restorative measures.

1.4.19 The Environmental Impact Assessment (EIA) Directives (85/337/EEC and 97/11/EC)
Under these directives, an environmental assessment on the effects of certain projects on the
environment must be undertaken prior to granting consent to the development of these projects,
so that the impacts of the project are considered during the decision-making process. The
developer is required to consult on the proposals and to supply a report on the environmental
assessment to the regulatory authorities. The report must also be available for inspection by
consultees and the public. The directives create procedural rather than substantive obligations
and do not require that Member States refuse to approve projects that are damaging to the
environment.
Not all installations within the scope of the IPPC Directive require an environmental impact assessment. However, Article 1 of the IPPC Directive (2008/1/EC) states that the application of IPPC is to be without prejudice to the EIA Directive. In other words, the requirements of the EIA Directive must still be met, even if an activity is also subject to IPPC. Moreover, Article 9(2) requires that any relevant information obtained under the EIA process be taken into account in IPPC permitting procedure. The EIA Directive (85/337/EEC as amended by 97/11/EC and 2003/35/EC) specifies that Member States may provide for a single consenting procedure for both EIA and IPPC.

1.4.20 The Seveso II Directive (96/82/EEC, as amended by 2003/105/EC) and see also Council Decision 2001/792/EC

The Seveso II Directive provides various controls to prevent major industrial accidents involving dangerous substances and to limit the consequences of those that occur. The directive contains provisions requiring the preparation of safety reports and emergency plans for industries using dangerous substances. It also prohibits the operation of an installation when safety measures are seriously deficient. There may be scope for linking the authorisation procedures under this directive with the permitting procedure under the IPPC Directive so that dual requirements can be satisfied in a single exercise, particularly if the same body is the regulatory authority. This is particularly important in considering the siting of installations that fall under both regimes. Amending Directive 2003/105/EC extends the scope of the directive to incorporate storage and processing activities associated with mining, a redefinition of pyrotechnic substances to include firework manufacturers, and an amendment to the qualifying levels of carcinogenic substances.

1.4.21 Eco-Management and Audit Scheme (EMAS) Regulation 761/2001/EC (as amended by Regulations No. 196/2006 and 1791/2006)

Regulation 761/2001/EC establishes a voluntary system allowing organisations to register one or more of their sites in an EU Eco-Management and Audit Scheme (EMAS). Organisations must be able to demonstrate that they meet various requirements, such as the adoption of an internal environmental management system (EMS), before they may qualify. Member States have to designate competent authorities to register participating sites, and to establish a system for the accreditation and supervision of environmental verifiers (who are to validate environmental statements produced by companies under EMAS). There is no formal requirement for a link with the IPPC Directive; however, it may be possible to establish arrangements whereby regulators could take account of EMAS certification, for example in scheduling enforcement actions under IPPC.

1.4.22 Mining Directive (2006/21/EC)

Industries involved in the extraction, treatment and storage of mineral resources and the working of quarries must ensure that the resulting waste is managed in specialised facilities in accordance with specific rules. Operators of such facilities are subject to liability in respect of environmental damage caused by their operations according to the Environmental Liability Directive (2004/35/EC).

Mining operators must obtain a permit from the competent authorities and must comply with the provisions of the directive. There are also provisions on informing and involving the public in decision making on applications for permits. There are a number of conditions applicable to the establishment of new waste facilities or changes to existing waste facilities in terms of location, physical stability, monitoring and inspection, as well as mandatory arrangements after closure. Operators of so-called A facilities must establish a number of important policies and systems to ensure safe operation and the prevention of major accidents.

1.4.23 International agreements

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2. Development of a Sectoral Strategy and Implementation Plan

2.1 Key Factors Influencing Strategy Development

The IPPC Directive is the key legislation in this sector. The key factors in the development of a strategy for implementation relate to the following:

• the need to consider the effects of industrial and other activities on the environment as a whole rather than on a medium-specific basis, using a holistic approach to include assessment of energy use and waste minimisation, and to effectively adopt a life cycle approach in the consideration of effects. This involves consideration of raw material consumption, including water, and whether adequate provision is made to avoid pollution risk on cessation of activities at a particular installation; and

• the requirement to issue permits authorising such activities which integrate all of these issues, and setting emission limit values for discharges which are based upon the best available techniques for the processes, in order to prevent emissions into the air, water or soil, or, where this is not practicable, to minimise them.

The Seveso II Directive applies to large installations using dangerous substances, and links health and safety issues to those of the environment. Because it also operates through regulatory control of the activities on a site, it is complementary to the operation of the IPPC Directive.

Persons voluntarily entering the national schemes set up to implement the EMAS Regulation must take account of both of these directives.

Under the directive, the competent authority is the authority with responsibility for carrying out obligations arising from the directive. Depending on administrative structure in the country and the size of the installation concerned, this could be a national, regional or local body. Authorities at different levels of government responsible for different types of environmental impact may be involved in permitting the same installation. Under such circumstances, it is important to have an effective co-ordinating system for the various permitting regimes.

In initiating the implementation of the IPPC Directive, candidate countries need to assess whether an “integrated” approach to controlling industrial installations is already practised, or whether the more traditional route of exercising separate control in respect of air, water and waste is followed. It is important to consider whether any such integrated approaches consider only polluting substances, or if, as the directive requires, they also address related factors such as noise, energy efficiency and resource conservation. Broadly speaking, existing Member States can be divided into three categories:

• those with current legislation and practices that cover most if not all aspects of IPPC, such that only minor changes will be needed (e.g. the Netherlands, Luxembourg, Ireland);

• those applying an approach to permitting which is already integrated but which is different from IPPC in certain significant respects, and requires some modification to remedy this (e.g. UK, Sweden, France) — for example, to bring additional issues from IPPC such as control of noise, energy efficiency and resource conservation into consideration alongside the current control of polluting releases; and

• those who apply medium-specific controls for air, water and waste, which will require
The IPPC Directive applies to six main categories of industry as described in Annex I. Each facility covered by the directive must be authorised through permitting. The basic technology requirement to be reflected in IPPC integrated permits is best available techniques (BAT), which are defined in the directive (Art. 2(12)) as follows:

“‘Best available techniques’ shall mean the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole:

• ‘techniques’ shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;

• ‘available techniques’ means those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator;

• ‘best’ shall mean most effective in achieving a high general level of protection of the environment as a whole.”

The application of BAT will require significant input of technical resources and a high degree of support for both the regulator(s) and industry. The production of comprehensive advice and guidance notes will be essential for effective implementation of the integrated pollution control regime. The European IPPC Bureau (EIPPC) in Seville is charged with producing BAT reference documents (BREFs) for each of the categories of industrial activities listed in Annex 1 of the directive. The BREFs will assist the regulatory authorities by describing reference techniques and reference levels for each sector. Competent authorities in each Member State will be able to use them to develop BAT, taking into account local considerations. This fine-tuning of BAT may take some time. The strategic planning for implementation of the IPPC Directive should be carried out in close consultation with the draft Directive on industrial emissions, which will consolidated and streamline seven existing directives bringing them under the same legislative framework, with tangible economic and efficiency benefits for both the public and private sectors.

2.2 Potential Difficulties in the Implementation Process

Different countries are likely to face different problems, and generally these can be divided into three main types as follows:

• Constitutional: Countries with a decentralised system of government may suffer from constitutional difficulties based on the fact that IPPC provides a site-specific approach to control which may lead to different conditions from one site to the next, while the Member States’ constitution guarantees equal treatment for everyone.

• Administrative: Several countries may have to adjust their present administrative and organisational arrangements to implement IPPC. This creates not only a major task and possibly significant upheaval, but also the scope for political tension where bodies currently charged with regulating particular installations or media fear loss of power as a result of new arrangements for IPPC. The main institutional options available for implementing a system of integrated permitting are a choice between the appointment of

165 The web link to the existing and proposed BREF notes is: http://eippcb.jrc.es/pages/FActivities.htm.
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It is common practice to establish a single body as competent authority with the capabilities and resources to be able to cope with an integrated approach or, alternatively, using a system of “co-ordinated pollution control” (CPC), in which separate organisations each responsible for different environmental media or different sectors (i.e. more than one competent authority) may be involved. In the latter case, Member States must take measures to ensure that procedures for the granting of permits and conditions attached to them is fully co-ordinated. Which particular route a country decides to take will depend largely on the existing situation.

- Technical: The introduction of technical control of not only the releases but the process itself into pollution control regimes to fully satisfy IPPC may raise several difficulties, in part because the technical issues in question are themselves complex and largely outside the previous experience of regulatory regimes, but also because the text of the directive itself allows for discretion and national interpretation. The obtaining of suitable expertise and training should be a subject for serious consideration by candidate countries.

2.3 Key Stages in Strategy Development

The development of an effective strategy for a fully integrated pollution control regime involves the following key stages:

- establishment of a strategy development project team;
- review and analysis of the existing situation;
- development and evaluation of options;
- preparation of a draft strategy and options paper for consultation with stakeholders;
- review of strategy and options following the consultation process; and
- preparation of strategy and implementation plan.

The main considerations for each of these stages are outlined below.

2.3.1 Strategy development project team

A strategy development project team could be established, drawn mainly from existing senior staff within the main pollution control organisation(s) and from governmental departments related to trade and industry and industrial representatives, with expertise in the following areas:

- the current industrial pollution control framework and its development;
- the current levels of environmental performance in industry and internationally;
- the capacity of industry to absorb additional pollution control costs;
- national and international environmental legislation; and
- the functioning and relationships of national, regional and local governmental organisations.

2.3.2 Review and analysis of the existing situation

The team could compile information relating to the industrial installations within the country likely to come under the control of IPPC in each of the sectors listed in Annex I of the directive. The review should include:

- a quantitative review, by sector, of industries to be covered by IPPC, including volumes within each sector;
- a review of current regulation and permitting legislation and authorities, and the extent to
which these cover requirements of the IPPC regime;

- a review of the permitting procedures, with particular reference to application procedures, documentation requirements including environmental impact statements, demonstration of best practicable means for prevention, and disposal of residues. The review should also include permit issuing practices, whether it is appropriate to permit at national, regional or local levels, and whether splitting responsibility for environmental regulation along disciplinary lines will provide a better permitting framework than a single responsible permitting authority;

- an examination of the verification procedures prior to issue of the permit, and whether it is appropriate to consider the energy utilisation as part of the permitting procedure;

- an examination of the control procedures, and how conditions of permits are enforced.

The review should also consider any national regulations or standards related to the control of industrial accident risks and also make some assessment of the extent, if any, of the use of environmental management systems in industry. This will help to ensure optimal use of resources in developing the strategy for this sector.

2.3.3 Development and evaluation of options

Completion of the review should result in sufficient information to allow options for implementation to be considered. These should include suggestions as to:

- how the requirements of BAT and environmental standards may be defined by the competent authority;

- how the existing permitting, monitoring and control procedures could be improved to incorporate an integrated approach;

- how the existing institutions may be strengthened, and whether combinations of disciplines would improve compliance by the authorised installations;

- how to ensure effective co-ordination between the controlling authorities, and designation of responsibility;

- how to manage relationships with industrial concerns during their applications for permits;

- how to monitor and control permitted processes and ensure that they remain within the limits imposed by the permits;

- how to manage the archive of BREFs and similar material, and ensure proper dissemination.

The initial options put forward should vary from doing the minimum relative to the existing situation, whilst still complying with the requirements of the IPPC Directive, to introducing substantive reforms. The options should also allow for integration or co-ordination with regulatory functions associated with the control of industrial accidents and the accreditation of environmental management system standards.

Each option will require an assessment of the resource implications of implementation, which will include itemisation of the training, staffing and fixed resources required to complete the implementation. In addition, the timescales associated with the options will need to be established.

2.3.4 Preparation of a draft strategy and options paper for consultation with stakeholders

As part of the initial stages of implementation it is advisable to undertake a series of consultation exercises in order to canvass the opinions of the various stakeholders. This would include the regulatory bodies, central, regional and local government, industry and industrial organisations, environmental organisations and NGOs and the general public. It would initially involve the
preparation of a consultation document to be circulated to the various interested parties. The
document would discuss the key issues associated with IPPC, potential difficulties and possible
options. Experience has shown this type of exercise to be very beneficial in smoothing the way
forward for implementation, and in helping to prepare all those likely to be involved.

2.3.5 Review of strategy and options following the consultation process

Following the consultation process and feedback from the stakeholders, the strategy can be
refined and the preferred options developed so that a detailed implementation plan can be drawn
up. Some of the likely questions that will need to have been answered at this stage are listed
below:

• Is it better to determine BAT generically for industry sectors, individually for particular
  sites or via some form of combined system?
• How are the requirements of site restoration to be tackled?
• How should the confidentiality provisions of the directive be implemented?
• What should the permit review periods be?
• How should “substantial change” to a process be interpreted in the context of permit
  review and public consultation?
• How will IPPC link with other legislation (e.g. planning laws)?

The above illustrates the type of issues on which consultation could be beneficial or necessary.
The outcome of this task should be two or more options for each item of the IPPC Directive
where the country’s competent authority would like opinions regarding the most appropriate
method of implementation.

2.3.6 Preparation of strategy and implementation plan

At this stage, the main tasks, roles and responsibilities of the key bodies to be involved in the
implementation process and the operation of the system need to be defined. Possible bodies
that could be involved are as follows:

• the government;
• the competent authority — this is likely to be the minister of environment;
• the permitting or enforcing authority — this may be the same as the competent authority.
The enforcement provisions are often carried out by departments of the organisation
which issues permits, but not in all cases, and it is considered advisable to have a clearly
defined division between permitting and enforcement roles. The permitting and
enforcement authorities may involve more than one body depending on whether a
system of co-ordinated pollution control is to be employed.

The Table below shows the possible tasks that the above bodies would be required to carry out
as part of the implementation process.

Table - Possible Tasks for the Bodies Involved in the Implementation Process

<table>
<thead>
<tr>
<th>National Government</th>
<th>Competent Authority</th>
<th>Permitting/Enforcing Authority</th>
</tr>
</thead>
</table>
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| Issue regulation to establish competent authority | Establish a technical committee* (TC) to lead the development of BAT and BAT guidance |
| Establish competent authority | Train personnel |
| Appoint suitable personnel to staff competent authority | Establish options for IPPC implementation |
| Issue regulation to establish permitting/enforcement authority | Consult with interested parties and the public |
| Establish permitting/enforcement authority | Set up a system for determination of BAT |
| Establish a system for transboundary consultation | Work to ensure co-ordination of IPPC with the mechanism for control of industrial accidents |
| Establish a data collection system for reporting to the Commission | |
| Establish a system of IPPC decision appeals | |
| Provide representation to committee assisting the Commission | |
| | Set up appropriate staff structure |
| | Train personnel |
| | Establish permitting system |
| | Establish mechanism for public involvement in permitting |
| | Establish system for permit review and variation |
| | Establish system for public access to IPPC data |

* A technical committee could be set up to co-ordinate the introduction of BAT, including development of a time schedule, as this will need to be carefully phased to bring in each industrial sector at set intervals in order to allow the various bodies involved to cope with the workload. The technical committee could also act as a main focus for policy issues.

3. Institutions and Relevant Parties

3.1 Key Stakeholders

The legislation in this sector, particularly the IPPC Directive, has major implications for industrial activities and environmental protection in a country. Therefore, many institutions and other parties need to be involved. Any implementation programme needs to be carried out in a transparent way with the maximum consultation of interested parties, as noted above. The key stakeholders likely to be involved and the nature of their involvement is illustrated in the Table below.

The involvement of stakeholders in the implementation process is critical if the legislation involved is going to be ultimately effective. It is important to have the opinions of all those likely to be involved and also to raise awareness of the issues involved. It is important for the national government to take on board the need for effective communication with stakeholders and to make resources available for consultation and support in understanding the technical and scientific issues involved.

3.2 Institutional Requirements for Implementation and Operation of Industrial Pollution Control Sector

In addition to the role of government in transposing the IPPC Directive and establishing the legal and institutional basis for its implementation, the following main responsibilities will fall upon the competent authority and, if separate, the permitting and enforcement organisation:

- undertake supervision and regulation of the permitting and enforcement organisation if separate;
• conduct consultation on IPPC implementation options;
• act as the centre of excellence for IPPC via some form of technical committee;
• provide guidance documents on BAT;
• establish and maintain the system for tracking BAT;
• decide on interpretation of IPPC Directive provisions which must be determined at Member State level;
• ensure that transboundary consultation is carried out;
• report to the European Commission on the IPPC regime and statistics in the country;
• act as appeal body against permit decisions under the IPPC system and possibly the appeal body for the enforcement decisions;
• provide representation to the committee assisting the European Commission; and
• establish a public register and ensure public access to IPPC applications, compliance data and related materials.

The permitting and enforcing organisation, which may be part of government or a separate national environmental agency or regional/local government, will be responsible for:

• establishing and operating the IPPC permitting system including the issuing of permits and their enforcement;
• conducting regular, planned permit review and variation of permit conditions;
• considering potential transboundary effects of IPPC sites and initiating consultation if necessary within the framework of international co-operation;
• maintaining and operating a system for public access to IPPC applications and related materials; and
• establishing and operating an appropriate monitoring system.

Table – Principal Stakeholders and Their Roles in the Industrial Pollution Control Sector

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Role or Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>National government — principally the ministry of environment but likely to involve others such as those linked to economy, agriculture, trade and industry</td>
<td>Transposition of legislation Appointment of competent authority Establishment and control of permitting and regulatory bodies Support and technical guidance Ultimate responsibility for compliance Dissemination of information and direction from the commission e.g. BREF documents Economy, trade and industry ministries also interested in the cost of compliance</td>
</tr>
<tr>
<td>Permitting and regulatory Bodies — may include national environmental or health and safety agencies representing government, regional and local government bodies, and accreditation bodies</td>
<td>Permitting and authorisation Compliance monitoring and enforcement Support and technical guidance Data collation and reporting Verification for environmental management systems and eco-label products</td>
</tr>
<tr>
<td>Industry and agriculture — including state-owned and private sector</td>
<td>Key interest will be in the cost of compliance as this will be a significant factor in forward planning Fear of prosecution and fines Keen to protect public image and maintain competitiveness</td>
</tr>
</tbody>
</table>
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Private sector — retailers and businesses, manufacturing
Opportunities for business in supplying of pollution abatement equipment or environmental consultancy
Opportunities for competitive advantage linked to better environmental performance e.g. through eco-labelling scheme or EMAS

Professional and technical institutions — linked to industrial or commercial sectors
Representation of industry views
Provision of technical support and guidance

Public
Impact on public health due to industrial pollution
Environmental costs may eventually be passed on to the general public as consumers of goods etc.

NGOs
Representation of public interest
Highlighting environmental issues
Exerting pressure on government and industry

Universities and academic institutions
Research into improved environmental technology and techniques
Research into effects of pollution

International organisations
Provision of technical guidance and information, e.g. the European IPPC Bureau in Seville
Sources of reference on environmental standards
Provision of grant support for technical assistance to improve environmental performance

For the control of major-accident hazards, the competent authorities, usually staffed by specialists in health and safety rather than environmental experts, has a similar range of duties, including:

- planning to ensure that objectives for the prevention of major accidents are taken into account in land-use and other relevant policies;
- identifying establishments where there are increased risks;
- drawing up emergency plans;
- prohibiting the operation of establishments that do not comply with the standards laid down in the directive;
- implementing a system of inspections to enforce obligations placed on operators;
- monitoring major accidents and ensuring that specified measures are taken; and
- providing information to and consulting the public, and reporting to the Commission.

4. Technical Standards

Standards and guidelines are vitally important in creating a harmonised system of IPPC in Europe. Directives and regulations in themselves cannot contain the detailed technical information necessary for sound implementation; this is commonly provided by standards and guidelines. Relevant standards may be European — produced by the European Standards Organisation (CEN); or international — such as those produced by the International Standards Organisation (ISO). European standards often form the basis for, or are incorporated directly into, national standards. Standards are not legally binding by themselves. However, they are widely regarded by regulatory bodies as indicating best practice and they can become legally binding if incorporated into legislation. Moreover, in some instances compliance with harmonised European Community standards results in a presumption of conformity with the corresponding essential requirements laid down in European Community directives or regulations.
Standards apply to a range of targets that are important to the IPPC sector. For example, factories that have and observe standard operating procedures are more likely to be reliable in pollution control. Laboratories observing good laboratory practice guidelines will probably be more effective in monitoring emissions than ones that do not. Usually, some body other than the pollution control competent authority will have responsibility in such areas, which emphasises the need to establish good communications over a very wide area if requirements of the IPPC Directive are to be achieved.

5. Regulation and Enforcement

5.1 Introduction
Once the IPPC legislation is in place, measures are required to ensure its effective implementation and enforcement. Enforcement of legislation on IPPC, as the framework legislation, will be considered primarily in this section. Control of industrial accidents, eco-labelling and EMAS will be given further attention at the end of the section.

5.2 IPPC

5.2.1 Overview
The previous sections have detailed the mechanisms needed to establish and implement a statutory system for the IPPC Directive. Once this is established, there will be a need for administration and enforcement systems, procedures and resources to fulfil the requirements of the regulatory framework.

The regulatory function consists of the following primary tasks:
- issuing licences/permits for activities covered by IPPC;
- monitoring and inspecting IPPC-licensed sites to ensure adherence to licence/permit conditions;
- taking enforcement action if they are not.

5.2.2 Licensing/permitting and regulation
IPPC licences are intended to control the facilities and activities listed in Annex 1 of the directive to control releases of substances to air, land and water. The main intention of the directive is the control of the overall impacts of IPPC-controlled sites on the environment and human health. The primary tasks in relation to the issuing of licences/permits are:
- receiving applications for licences/permits; and
- consideration of applications and granting of permits.

The granting of licences/permits will involve subsequent regulation of their operation. This should consider whether:
- all appropriate preventative measures have been taken through the use of BAT;
- significant pollution is caused;
- waste production is prevented or minimised;
- waste that is unavoidably produced is disposed of with minimal effect on the environment;
- energy is used efficiently;
monitoring data indicate compliance with conditions including emission limit values (ELVs); and

specific conditions imposed by the Member State are complied with.

The granting of permits and their regulation will require the permitting and enforcement organisation to possess a detailed technical understanding of the processes involved and the potential environmental and health effects, as well as the ability to establish and administer the IPPC regime. The organisation may need to formulate licences/permits that define in detail substances that may be emitted and subject to emission limits. It may also need to consider the environmental fate of these substances once they have been released. The regime will provide and make use of guidance (such as BREF notes) produced at all levels of the regime. As a result of such considerations, conditions will be attached to licences. These must be justifiable, unambiguous and enforceable. These conditions should be applied consistently and constant reference to the above guidance, once it becomes available, will be required to ensure this. In drafting licence/permit conditions, the permitting authority should ensure that the operator is not unduly constrained from being able to operate in a cost-effective manner.

It will be necessary to upgrade permits from time to time, as a result of improved understanding of the environmental impacts of the released substance requiring reconsideration of the condition, or the licence holder may request modification in relation to a substantial change in operation of the process. The resulting administrative requirements must be taken into account in planning for the implementation of the directive.

The granting of a licence/permit will usually require the establishment of a scheme to monitor releases from installations. The permit will specify monitoring requirements, frequencies and analytical techniques to be used. Routine surveillance visits may be undertaken by the enforcement organisation on a regular basis with occasional random, unannounced inspections.

5.3 Control of Industrial Accident Hazards

It is common for control of industrial accidents to be outside the remit of those bodies associated with environmental regulation. Control is more often with health and safety regulators. However, due to the requirement in the IPPC Directive that necessary measures be taken to prevent accidents and limit their consequences, there is a need for a linking and co-ordination mechanism to be established between the competent authorities for the two directives.

5.4 EMAS

There is a similar requirement within environmental management system standards such as for EMAS to make provisions to control environmental effects under abnormal or emergency conditions. Although EMAS is a voluntary tool, candidate countries must put in place the necessary structures. Furthermore, the use of environmental management system standards is likely to assist in the relationship with both environmental and health and safety regulators. This is not just the case in relation to industrial accidents but also with meeting the requirements of IPPC in general. Similar to the IPPC Directive, EMAS also requires a more holistic systems type approach to the control of pollution. The principles behind both EMAS and IPPC are very similar. The difference is that one is effectively a voluntary code of practice for industry and the other is a regulatory tool.

The regulation of EMAS within Member States is dependent upon external or third-party verification. There may be more than one verification body within a Member State and it is also possible to use verifiers from another Member State. However, verification bodies themselves have to be approved by a national body within their own territory.

5.5 Relationships between IPPC, Seveso II, and EIA Legislation
The field of application of the EIA Directive (85/337/EEC, as amended by 97/11/EEC) is very broad and essentially covers all projects that have a significant effect on the environment. (The EIA Directive is fully discussed in Section 2 of the Handbook on the horizontal legislation sector. However, note that plans and programmes for activities within the scope of the IPPC regime are subject to Community law under the SEA Directive 2001/42/EC.) The IPPC Directive applies to industrial activities and some agricultural activities, and the Seveso Directive applies to establishments where dangerous substances are present. All these directives apply to new projects and, where required, to existing activities including changes and extensions. The EMAS Regulation applies to the operation of both industrial activities and non-industrial sectors.

There is a large degree of overlap in the categories of projects to which IPPC and EIA apply, and it is also likely that Seveso projects are included within both IPPC and EIA assessments. Where IPPC projects or Seveso activities fall within the scope of the EIA Directive, a screening procedure under Article 4.2 of the EIA Directive is required. Where cases fall within the scope of two or three directives, a single screening phase will contribute to the efficiency of the decision-making process.

Article 2a of the EIA Directive (amended by Directive 97/11/EC) states that a single procedure may be used to fulfil the requirements of both the EIA and IPPC Directives. The procedures may also be applied separately but the results of the EIA procedure must be taken into account for the purposes of granting the IPPC permit. Consideration should be given to the provision of a common public participation phase in this case.

The Seveso procedure may be integrated into the IPPC procedure where Article 9.4 of the Seveso Directive applies, and similarly in the case of modification under Article 10 of the Seveso Directive, where Member States have to decide whether to prohibit the bringing into use, or the continued use, of the establishment concerned.

The relationships with other legislation will increase considerably once the draft Directive on industrial emissions is adopted, since it will consolidate and recast the IPPC Directive and six related directives:


5.6 Reporting

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166 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007PC0844:EN:NOT
Environmental reports, information or documentation are required under the IPPC, Seveso and EMAS legislation. Links should be established to avoid duplication, and consideration should be given to the co-ordination of the stages of the procedures where the submission of information is required. Note the requirements for reporting to the Commission (a key important decision in this respect is Decision 1999/391/EC on the IPPC questionnaire) on the application and operation of national law and practice intended to implement the IPPC Directive.

The reports required under the IPPC procedures are focused on environmental effects and the measures for their prevention and reduction. The Seveso reports are focused on risk analysis and safety conditions. Both reports examine in particular the design, construction and operation of plant. On the other hand, the EMAS reports are related to operational phases of management. Nevertheless, a uniform system to classify installations, activities and substances would overcome the need for different information needs for the three instruments.

In setting up information systems, candidate countries should take account of the need for public participation in the regulatory function. Where candidate countries intend to use a common phase of public participation, the information provided must comply with the requirements of the directives. The information supplied for the EIA Directive could be used as a basis, supplemented by other information as required by the other directives. The provision of information to the public should be carefully timed where a common implementation approach is used.

Information exchange between neighbouring states is also required under the IPPC and Seveso Directives where there are transboundary impacts, and these obligations may be achieved by establishing a single uniform procedure.

In addition, industrial operators and Member States must submit information pursuant to Regulation (EC) No. 166/2006, which establishes a European Pollutant Release and Transfer Register (PRTR). This regulation harmonises rules for the Member States regarding the regular reporting of information on pollutants to the Commission, and also for operators.

### 6. Priorities and Timing

#### 6.1 Introduction

Within the sector, priority must be given to the IPPC Directive, which is essentially a framework directive, embracing other directives and regulations within and outside the IPPC sector as defined in this account. The Seveso Directive must also receive priority, but as the competent authority is likely to fall within the health and safety area there should be no conflict in terms of resources.

#### 6.2 Timescales

The first IPPC Directive (96/62/EEC) came into force for new or substantially changed installations on 30 October 1999. Its provisions applied fully to existing plants as of 30 October 2007. By this date, all existing installations to which the provisions of former Directive 84/360/EEC applied had to be brought within the permitting regime of the IPPC Directive.

The key stages of implementation referred to in Section 2 give an idea of the order in which events need to be carried out in this sector. It is likely that the implementation process will take a minimum of four to five years once the strategy and implementation plan have been finalised. This in itself could take up to two years. It is imperative that a phased programme of implementation is employed for the introduction of control of each industrial sector under IPPC in order to be able to allow the resources of those organisations involved to cope. The particular order can be decided upon by each Member State. The order could reflect the timing of the production of BREF documents or the priorities of industry and environment in the country concerned, or be a combination of the two.
7. Economic and Financial Issues

7.1 Initial Costs

Cost is a major consideration in meeting the approximation and implementation requirements of the accession process. Countries seeking to become Member States recognise that high costs will result from applying the regulations and the overall costs of approximation.

In the fiches prepared for the IPPC sector of this Handbook, the cost of the regulatory process itself was considered. It is clear from this that there are a variety of costs to be met, which can be grouped as follows:

- the preliminary costs of setting up, or restructuring, a regulatory body (e.g. a competent authority) and any agencies that it might require — this will include costs associated with physical and human resources and training;
- costs of introducing a permitting and enforcement regime and carrying out inspections;
- costs associated with identifying the installations to be covered by the directives and assessing their current situation;
- costs associated with the development of BAT guidance documents for each industrial sector;
- costs associated with consultation;
- costs of data recording and reporting;
- training costs; and
- the continued costs of operating the system.

These costs may be offset by the implementation of a cost recovery scheme in accordance with the polluter pays principle, whereby — through levying a charge for the permit and regulatory regime — the government recoups the costs of regulation from the operators of installations. There could be complete cost recovery for all the expenses associated with permits, and schemes such as EMAS and the eco-labelling scheme should be entirely self-financing as far as the regulatory bodies are concerned.

The draft Directive on industrial emissions which was proposed by the Commission in December 2007 and brings seven directives under the same legislative framework is estimated to save costs both for public administration and for industry. For instance, it reinforces the application of Best Available Techniques, as a way to reduce the harmful industrial emissions across the EU, translating into improved environment and human health. In terms of the Directive on large combustion plants alone, it estimated that the new legal framework proposed at EU level will achieve net benefits of EUR 7-28 billion per year, including the reduction of premature deaths and years of life lost by 13,000 and 125,000 respectively.

Furthermore, the streamlining of permitting, reporting and monitoring requirements as well as a renewed cooperation with Member States to simplify implementation will lead to a reduction in unnecessary administrative burden of between €105 and €255 million per year. The draft directive shall be read in conjunction with the Communication of 2007167 setting out an IPPC Action Plan covering the period 2008-2010, which aim at supporting the implementation of the existing legislation.

7.2 Costs to Industry

It is clear that the costs to industry of compliance will be far greater than the direct costs of implementing the legislation. For example, the costs of ensuring that large combustion plants reduce emissions to an acceptable level may include the construction of new plants to replace outdated ones, the addition of new units to less-polluting plants to compensate for the loss of energy from the shut-down of those that cause major pollution, the changing of units within a plant so that less-polluting fuel can be used and so on. The IPPC Directive imposes far-reaching obligations and substantial costs on industry and government at all levels. There is no consensus as to the level of these costs, except that they will be very large indeed.

A study carried out for the Commission estimated that an overall figure for the cost of compliance with the various air pollution directives in 10 CEEC countries would be EUR 48.2 billion, and of this, EUR 8.45 billion was attributed to the Baltic countries. In Estonia, for example, the costs of applying BAT to large combustion plants is estimated to require capital outlay of EUR 427.9 million by 2005 and EUR 801.8 million by 2010.

Application of the principles of BAT will be a key determining factor in the costs to each industrial sector. The elements of cost benefit analysis will have a large role to play and how each Member State decides to incorporate the concept of sectoral affordability will come into play. The biggest price to pay ultimately could be the closure of certain industries. The BREF documents should be able to provide some guidance in this area and the assessment of local circumstances and conditions will also have a large influence.

### 7.3 Cost recovery

The systems of charges or fees and fines in each Member State tend to vary considerably. The economic conditions in any particular country will be influential. Enhancement of health and welfare and avoidance of unemployment are often likely to be higher up the list of priorities than environmental protection. Accordingly, there may be resistance to imposing high charges for impacts on the environment.

With regard to EMAS and eco-labelling, these are systems that, if applied effectively, offer opportunities to organisations in terms of both environmental performance and cost savings. This is particularly true in terms of energy and water consumption, waste minimisation and levels of raw material consumption. The potential for cost savings and reduced environmental charges can often offset the costs of operating the system and other pollution control costs.

### 8. Summary of Key Issues

Achieving and maintaining compliance with EC policies and legislation in the industrial pollution control sector presents a major challenge for the Member States which, in order to minimise the associated administrative burden and costs, needs to be managed in a systematic and cost-effective manner. With this in mind, the governments of the Member States should endeavour to focus their efforts and actions on addressing those issues and requirements which are fundamental to the approximation of EC legislation in this sector, in particular by asking the following:

**Checklist of Key Questions to Be Considered in Implementing the Industrial Pollution Control Sector**

Is there sufficient knowledge of the existing arrangements for managing pollution control and risk management including, particularly:

- existing legislative, institutional and regulatory arrangements?
- permitting regimes in all environmental sectors —water, air and land?
- identification of installations requiring control by the IPPC and Major-Accident Hazards
Directives?

- organisations currently involved in pollution control and accident management?

Have all the significant problems associated with the existing arrangements been identified, in particular:

- the legislative/institutional/regulatory framework?
- the shortfalls in plant design and management to meet the required standards?
- the training/expertise shortfalls?
- the needs for communication between regulatory bodies?
- the need for consultation with industry?

Can the institutional framework operate on an integrated basis, in particular:

- Are there organisations that have the expertise and resources to act as competent authorities?
- Can the organisations work in a co-operative fashion to ensure an integrated approach?
- Do the organisations have sufficient knowledge of all environmental sectors?
- Have sufficient provisions been made to ensure effective co-ordination to prevent areas of overlap and make the most effective use of resources?

Are there clear links between the competent authorities, central government, and other organisations that have responsibilities for issues that affect pollution control and hazard management such as local authorities, health authorities and planning authorities?

Are arrangements in place for the effective involvement and participation of all other bodies or interested groups, including the public, which have a significant role or function to perform in relation to pollution control and major-accident hazard issues?

Is there a suitable accreditation body established?

Has guidance been issued on:

- best available techniques?
- permitting arrangements and procedures?
- transitional arrangements for dealing with industrial air pollution and combustion plants?
- preparation of an accident prevention policy?
- preparation of emergency plans and safety reports?
- environmental management systems and approaches to accreditation?
- standards for eco-labels?

Is there an enforcement regime in place with clear lines of accountability and appropriate penalties?

Do the competent authorities have sufficient legal powers to:

- enter premises?
- inspect and sample?
- require co-operation?
- authorise processes and emissions?
- review and revoke authorisations?
• take legal proceedings against operators?
• prohibit operations?

Are there arrangements in place for monitoring and for inspections of premises?

Is there an adequate data-processing system in place for:
• recording data?
• processing data and preparing reports?

Are there adequate means of consultation with/reporting to:
• the Commission?
• the public?
• organisations affected by IPPC?
• organisations that undertake major-accident prevention activities?
• other countries where cross-border issues are concerned?

Has a means of funding been established to cover the costs of regulatory activities in the sector?

Has industry been made aware of the likely costs of implementation and has it established a source of capital for improvement works in IPPC and major-accident prevention?

Are there adequate training expertise and resources available?
The Large Combustion Plants Directive


1. Summary of Main Aims and Provisions

Directive 2001/80/EEC on pollution from large combustion plants (hereinafter referred to as the LCP Directive) replaced and repealed Directive 88/609/EEC. It applies to large combustion plants (LCPs) with a thermal input of 50 megawatts (MW) or more, irrespective of the type of fuel that is used.

It regards LCPs as falling into one of three classes, depending on when they were first licensed:

- “existing” plants (those first licensed before 1 July 1987);
- “new” plants (those first licensed between 1 July 1987 and 27 November 2002); and
- “new-new” plants (those receiving a licence for the first time after 27 November 2002).

Gas turbines licensed before 27 November 2002 are excluded from the scope of the directive. However, those licensed after that date, either as a single unit or where aggregated with another LCP on the same site and where the total rated thermal input is equal to or greater than 50 MW, are covered by the directive.

The LCP Directive takes into account recent advances in combustion and abatement technologies and introduces revised limits for releases of SO₂, NOₓ and dust for LCPs which must be met at specified respective dates according to the category of LCP or for gas turbines.

Directive 2001/80/EC has been amended by 2006/105/EC in order to adapt it to reflect the accession of Bulgaria and Romania to the EU, introducing entries for these two countries in Annex I (setting out the individual ceilings and reduction targets for emissions of SO₂ from existing plants) and Annex II (ceilings and reduction targets for emissions of NOₓ from existing plants).

It is important to note the draft Directive on industrial emissions, which was adopted by the Commission in December 2007. It will recast seven existing directives related to industrial

emissions into a single clear and coherent legislative instrument including the IPPC Directive, the Large Combustion Plants Directive, the Waste Incineration Directive, the Solvents Emissions Directive and 3 Directives on Titanium Dioxide. For instance, this new directive will reinforce the application of Best Available Techniques, as a way to reduce the harmful industrial emissions across the EU, translating into improved environment and human health. For the large combustion plants alone it will achieve net benefits of €7-28 billion per year, including the reduction of premature deaths and years of life lost by 13,000 and 125,000 respectively.

2. Principal Obligations of Member States

2.1 Planning

- Member States had to draw up and implement programmes to reduce the total annual emissions of sulphur dioxide, nitrogen oxides and dust from existing plants (Art. 3 and Annex IX) and to report these plans to the Commission by 27 November 2003 or by the date of accession in the case of candidate countries.

2.2 Regulation

- Ensure that licences for the construction or operation of new plants contain conditions relating to:
  - compliance with emission limit values for sulphur dioxide, nitrogen oxides and dust (Arts. 4 and Annexes III to VII);
  - a derogation for plants greater than 400 MW that do not operate for more than 2,000 hours per year until December 2015 and 1,500 hours per year from 1 January 2016 (Art. 5) (the 2,000 hour derogation applies to the plant not to an individual boiler —the obligations of the directive apply to plants not to the plants’ constituent boilers);
  - consideration of the use of combined heat and power (Art. 6);
  - procedures to be followed in the case of malfunction or breakdown of abatement equipment (Art. 7);
  - a calculation of emission limit values when multi-fuel firing (Art. 8);
  - the discharge of waste gases through a stack (Art. 9); and
  - the extension of capacity by more than 50 MW, which will invoke new plant emission limits (Art. 10).

2.3 Monitoring and Enforcement

- Use of monitoring or self-monitoring of emissions and a requirement to report emissions (Arts. 12, 13 and 14).
- Determine total annual emissions of sulphur dioxide and nitrogen oxides from plants (Art. 12 and Annex VIII (A)).
- Monitor emissions from plants in accordance with specified methods, ensuring that operators report the results of monitoring to the competent authorities, and evaluate the results of monitoring in accordance with specified criteria (Arts. 13, 14 and 15, and Annex IX).
- The use of effective, proportionate and dissuasive penalties (Art.16).
SECTION 7 – INDUSTRIAL POLLUTION CONTROL LEGISLATION
THE LARGE COMBUSTION PLANTS DIRECTIVE

• Where emission limit values are exceeded, ensure that action is taken to achieve compliance as soon as possible, and where there is a breakdown of abatement equipment, ensure that action is taken to reduce the consequences of the breakdown until the plant can operate normally again (Art. 7).

2.4 Reporting

• Consult with other Member States where the construction of a plant is likely to have significant effects on the environment of another Member State (Art. 11).

• Report to the Commission on the results of implementation programmes (Art. 15) giving an overall view of:
  − all combustion plants covered by the directive;
  − emissions of sulphur dioxide and nitrogen oxides in tonnes per annum and concentration in the waste gases;
  − measures taken or envisaged with a view to reducing emissions and changes in the choice of fuel used;
  − changes in the method of operation;
  − definitive closures made or envisaged; and
  − emission limit values imposed.

2.5 Additional Legal Instruments

The following legislation should be borne in mind when implementing this directive:

• IPPC Directive (2008/1/EC), which repealed Directive 84/360/EEC in 2007 and had to be implemented in parallel

• Air Quality Framework Directive (96/62/EC), which addresses ambient air quality standards and management (see Section 3 of the Handbook)

• Directive 2004/107/EC on arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air


• Directive on Access to Environmental Information (2003/34/EC), which allows the public access to environmental information held by public bodies (see Section 2 of the Handbook)


• Regulation concerning the establishment of a European Pollutant Release and Transfer Register (No. 166/2006)


169 For more information and guidance on the application of the EPER decision consult: http://ec.europa.eu/environment/air/pollutants/stationary/ippc/pdf/table_largest_emitters_jan_06.pdf
3. Implementation

3.1 Key Tasks
The key tasks involved in implementing this directive are summarised in the following checklist. Key tasks are organised in chronological order, wherever applicable.

### LARGE COMBUSTION PLANTS DIRECTIVE - KEY IMPLEMENTATION TASKS

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
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| 1 Planning | 1.1 The competent authority should introduce a system for defining and classifying large combustion plants to which the directive will apply and produce a plan to reduce these emissions in line with reduction targets given in Annexes I (SO₂) and II (NOₓ) to the directive.  
1.2 The competent authority should establish an authorisation procedure requiring existing and new large combustion plants specified in the directive to obtain licences to operate.  
1.3 The competent authority should use monitoring methodologies given in Annex VIII, ensure monitoring of emissions by operators using the approved methodologies, and collate the results of monitoring.  
1.4 Determine total annual emissions of sulphur dioxide and nitrogen oxides.  
1.5 Prepare an inventory of total annual emissions of sulphur dioxide and nitrogen oxides.  
1.6 The competent authority should establish an inspection and monitoring facility to enable it to assess compliance with the emission limit values and the effects on air pollution. The degree to which self-monitoring by the operator is accepted, and the conditions under which this is carried out, should be specified. |
| 2 Regulation, Monitoring and Enforcement | 2.1 Apply emission limits for sulphur dioxide, nitrogen oxide and dust to individual existing plants and incorporate them within the authorisations granted under this directive (Annexes III to VII).  
2.2 Calculate emission limit values for multi-fuel firing units, and for extensions to plants, in accordance with specified provisions.  
2.3 Apply the emission standards for sulphur dioxide, nitrogen oxides and dust from plants to (the authorisation of) new combustion plants, except where derogations are allowed by the directive or permitted by the Commission.  
2.4 Inspect and monitor plants and evaluate the results of measurements to assess compliance with emission limit values.  
2.5 Where necessary, apply enforcement measures, which should be effective, proportionate and dissuasive. |
| 3 Consultation and Reporting | 3.1 Where the construction of combustion plants may have transboundary effects, establish channels of communication with the competent authorities in neighbouring states so that an exchange of information and consultation may take place.  
3.2 Ensure that operators inform the competent authority of the results of continuous monitoring and other measurements made in accordance with the operating permit.  
3.3 Establish a reporting system and database to enable reports to be made to the Commission and information to be available to the public. |
3.4 Report to the Commission on the results of implementation programmes (Art. 15), giving an overall view of:

- all combustion plants covered by the directive;
- emissions of sulphur dioxide and nitrogen oxides in tonnes per annum and concentration in the waste gases;
- measures taken or envisaged with a view to reducing emissions and changes in the choice of fuel used;
- changes in the method of operation;
- definitive closures made or envisaged;
- emission limit values imposed.

4. Implementation Guidance

This directive applies only to combustion plants with a rated thermal input of 50 MW or more, which are designed for the production of energy, whether using solid, liquid or gaseous fuel.

The key implementation issues are ensuring that:

- a national reduction plan is produced by the due dates;
- existing plants are modified to meet the required emission levels; and
- new plants comply with the specified emission limits.

The following text presents a number of general observations and suggestions for implementing this directive based on the collective experience of Member States.

Candidate Countries are advised to consult the draft Directive on industrial emissions\(^\text{170}\) in the planning and introduction of legislative and administrative provisions and frameworks concerning the seven directives which will fall under this new piece of legislation, including the Directive on Large Combustion Plants. This has a large potential of saving administrative and financial resources in the permitting, reporting and monitoring of industrial emissions.

4.1 Planning

- The competent authority must ensure that industrial plants covered by this directive are properly authorised, that emission reduction targets are set for individual plants, that plants comply with standards and that the required reporting is undertaken. The competent authority is likely to be the same organisation responsible for the implementation of the Air Quality Framework Directive (96/62/EC) and the IPPC Directive (2008/1/EC). In most countries, the competent authority would be an environmental protection agency.

- Allocation of emission reduction targets to different classes of combustion plants will require decisions on energy policy, which may have significant social and economic consequences. These will need to be taken into account by central government and will involve, amongst others, ministries dealing with environmental and energy issues.

4.1.1 Major issues outstanding

A number of major issues remain outstanding as regards the implementation of the revised directive in the UK. The majority of these involve decisions to be taken by the government over the next six months. The most important concerns whether the government decides to implement the revised directive for existing plants (i.e. those first licensed before 1 July 1987) by way of emission limit values (ELVs) or through a national plan approach.

An outline of the more important major issues outstanding which Defra is currently considering is given in Table 2.

4.1.2 What happens next?

It will be necessary to:

- identify where the sites coming under the revised LCP Directive are and when they will come under the scope of the directive;
- check if these sites are compatible with the scope of the revised LCP Directive;
- check that authorisation/permit limits for releases of SO₂, NOₓ and dust are met;
- identify all the existing combustion plants that are to be included under this directive, and set up an inventory of existing emissions from each. A plan then needs to be formulated for allocating national emission reduction targets between the different plants. This should take account of technical and economic factors, in particular the requirement under the IPPC Directive (2008/1/EC) to apply best available techniques (BAT). The plan will also need to address the implications of the introduction of new plants and their contribution to national emission limits. It will, therefore, require integration with national energy planning. It should be noted that the closure of a plant cannot count as a compliance measure toward meeting the emissions reduction target contained in the national plan;
- achieve national emission targets, as an immediate objective, at the lowest practicable economic cost by allocating reductions to the installations that can most readily achieve them. However, account also needs to be taken of BAT requirements to avoid having to make a separate set of alterations to implement each directive. It should also be remembered that whereas this directive places limits on emissions to air, the IPPC Directive (2008/1/EC) requires integrated pollution control, i.e. discharges to water, waste and noise should also be minimised, so pollution may not escape from one medium to another. Approaches to achieving emission reductions may include:
  - fuel substitution, for example the use of low-sulphur coal;
- installation of pollution abatement equipment, for example flue-gas desulphurisation or catalytic reduction of nitrogen oxides;
- plant closure and replacement with new facilities having lower emissions, for example the replacement of coal-fired combustion plants with gas-fired combustion plants;

- meet ambient air quality guidelines set under Directive 96/62/EC and its daughter directives. It will usually be cheaper to incorporate BAT into new plants at the outset, rather than to retrofit existing plants;
- achieve, in the case of new plants, the emission limits specified by the directive, depending on the type of fuel and thermal capacity of the plant. In the case of multi-fuel firing units and extensions to existing plants, the directive provides for determination of emission limits according to a prescribed method. Certain exceptions from the standard emission limits are permitted for plants which burn indigenous solid fuel or which are not used for more than 2,200 hours per year;
- make arrangements for dealing with exceptional situations permitted by the directive. These are:
  - shortages of low-sulphur fuel requiring the use of high-sulphur fuel for a limited period of up to six months;
  - shortages of gaseous fuel requiring the use of other fuels for a short period;
  - malfunction of pollution abatement equipment requiring the shut-down of operations, unless there is an overriding need to maintain electricity supplies, in which case all necessary steps to recommission abatement equipment are to be taken as quickly as possible.

4.2 Regulation, Monitoring and Enforcement

- In each case, the competent authority must be informed of, and must agree to, any proposed derogation from the emission limits. An obligation needs to be included in the plant authorisation for the operator to do this, and the competent authority needs to appoint a person to deal with and determine such applications. Operating rules should also be drawn up to provide guidance to the competent authority on circumstances when plants may be allowed to continue operating because of an overriding need to maintain electricity supplies.
- The competent authority needs to specify monitoring procedures, including technical approaches, analytical techniques and validation arrangements. Article 15 of the directive specifies some elements of the monitoring protocol that need to be incorporated into the procedures. It is recommended that monitoring be undertaken by the operators themselves, with checking by the competent authority. Arrangements need to be put in place for the results to be reported to the competent authorities, collated and analysed. Monitoring results should be included within the public register, which is required by the Directive on Air Pollution from Industrial Plants (84/360/EEC).
- Enforcement mechanisms are specified as part of the implementation of the Directive on Air Pollution from Industrial Plants (84/360/EEC), and may involve fines or, in cases of persistent non-compliance, plant closure.

5. Costs

The main types of cost arising during the implementation of the Large Combustion Plants Directive are illustrated, as far as possible, in the checklist below.
Checklist of the Types of Cost Incurred to Implement the Directive

Initial set-up costs:
- establishment of competent authority;
- devising systems and procedures;
- provision of training;
- preparing technical guidance notes.

Capital expenditure:
- alteration of existing plant to meet emission limit values;
- construction of new plant to meet BAT for air pollution abatement.

Ongoing running costs:
- processing licence applications;
- operating emissions abatement technology;
- maintaining emissions inventory;
- reporting to the Commission.

Significant costs will be incurred by the competent authority in administering the directive, including licensing, monitoring and reporting. However, the costs incurred by operators in complying with the directive and abating emissions will be many times higher.

In practice, most of the costs that fall on the competent authority will also be required in order to comply with the IPPC Directive (2008/1/EC). Arrangements should be made to recover at least some of the costs from operators through fees for licensing in accordance with the polluter pays principle.

The draft Directive on industrial emissions which was proposed by the Commission in December 2007 and brings seven directives under the same legislative framework is estimated to save costs both for public administration and for industry. For instance, it reinforces the application of Best Available Techniques, as a way to reduce the harmful industrial emissions across the EU, translating into improved environment and human health. In terms of the Directive on large combustion plants alone, it estimated that the new legal framework proposed at EU level will achieve net benefits of EUR 7.28 billion per year, including the reduction of premature deaths and years of life lost by 13,000 and 125,000 respectively.

Furthermore, the streamlining of permitting, reporting and monitoring requirements as well as a renewed cooperation with Member States to simplify implementation will lead to a reduction in unnecessary administrative burden of between €105 and €255 million per year.
The IPPC Directive


1. Summary of Main Aims and Provisions

The purpose of the directive is to achieve an integrated system of pollution prevention and control for a range of specified industrial activities including measures concerning waste. The aim of the integrated system is to prevent or reduce emissions to air, water and land (including waste) and to achieve a high level of protection of the environment as a whole. The directive requires Member States to establish an integrated system of permits that contain specific conditions, including emission limit values and the application of best available techniques (hereinafter: BAT). Apart from the integrated permitting and BAT, flexibility and public participation are the third and fourth basic elements of the IPPC laws.\(^{171}\)

In order to receive a permit, an industrial or agricultural installation must comply with certain basic obligations. In particular, it must:

- use all appropriate pollution prevention measures, namely BAT (which produce the least waste, use less hazardous substances, enable the recovery and recycling of substances generated etc.);
- prevent all large-scale pollution;
- prevent, recycle or dispose of waste in the least polluting way possible;
- use energy efficiently;
- ensure accident prevention and damage limitation;
- return sites to their original state when the activity is over.

On 21 December 2007 the Commission adopted a proposal for a Directive on industrial emissions.\(^{172}\) The proposal will recast seven existing directives related to industrial emissions into a single clear and coherent legislative instrument and it includes in particular the IPPC Directive.

The IPPC Directive has been in place since 1997 and the Commission has undertaken a 2 year review with all stakeholders to examine how it, and the related legislation on industrial emissions, can be improved to offer the highest level of protection for the environment and human health.

\(^{171}\) See: http://ec.europa.eu/environment/air/pollutants/stationary/ippc/index.htm
\(^{172}\) Proposal is available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007PC0844:EN:NOT
SECTION 7 – INDUSTRIAL POLLUTION CONTROL LEGISLATION
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while simplifying the existing legislation and cutting unnecessary administrative costs. The findings of this review have resulted in the draft Directive, which will have many consequences for the current IPC legislation.

2. Principal Obligations of Member States

2.1 Planning

• The interrelationship between environmental impact assessment (hereinafter: EIA) and integrated pollution prevention and control (hereinafter: IPPC) shall be clarified and the proper timing and positioning of these procedures in the line of permitting procedures for large, environmentally significant investments shall be determined (Recital 11).

• Establish or designate authorities to be responsible for sending information to the Commission on the implementation of the directive and for the exchange of information with Member States (Art. 17(4)).

• Determine what relevant types of permitting procedures shall be merged into the IPPC permitting procedure or ensure full co-ordination of the authorisation procedures and conditions between the competent authorities (Arts. 7 and 15).

2.2 Regulation

• Ensure that definitions of “substance”, “pollution”, “installation”, “existing installation”, “emission”, “emission limit values”, “environmental quality standard”, “competent authority”, “permit”, “change in operation”, “substantial change”, “best available techniques”, “techniques”, “available techniques”, “best”, “operator”, “the public” and “the public concerned” are inserted into the national law either at a general level or specifically in the IPPC law (Art. 2).

• Ensure that installations are operated in such a way that specified conditions relating to the prevention and control of pollution are met. Among these conditions are that preventive measures are taken and, in particular, BAT are applied; that no significant pollution is caused; that the waste management hierarchy (avoidance, recovery or, if even this is not possible, disposal) is applied; that energy is used efficiently; that necessary measures are taken to prevent accidents and limit their consequences; and that when activities cease the necessary measures are taken to avoid any pollution risk and to return the site to a satisfactory condition (Art. 3).

• Ensure that new installations obtain a permit before they are allowed to operate, taking into consideration the exceptions and the different definitions in Directive 2001/80/EC on air emission from large combustion plants (Art. 4). Ensure that existing installations comply with specified provisions of the directive within specified time limits. This can be achieved either through permits or by reconsidering, and if necessary updating, existing operating conditions (Art. 5). The different time schedules belonging to different provisions of the directive shall be taken into consideration (Art. 5(1) and (2)).

• Ensure that applications for permits contain specified information. In granting permits, take into consideration any relevant information obtained through the EIA procedure, including data on transboundary effects (under Council Directive 85/337/EEC) (Arts. 6 and 9(2)).

• Refuse to grant a permit if the installation is unable to comply with the directive, in particular if it cannot be established that the installation is able to keep to the pollution standard limits in the long term without unacceptably wide-scale differences in the actual emission values (Arts. 6, 8 and 9).
• Ensure that permits contain such conditions as are necessary to ensure that the installation can be operated in compliance with the directive, including:
  – emission limit values and technical measures (where appropriate to supplement or replace limit values) based on BAT, including other than normal operating conditions (Arts. 9(3) and (4) and 18, and Annexes I, II and III) and taking into account the existing scheme for greenhouse gas emission allowances and requirements in order to avoid duplication in the relevant permits, unless an installation is temporarily excluded from the scheme;
  – details of arrangements made for the protection of air, water and land (Art. 8);
  – monitoring requirements (Art. 9(5));
  – measurements for conditions other than normal operation, including start-up, leaks, malfunctions etc. (Art. 9(6));
  – provisions on the minimisation of transboundary pollution (Art. 18); and
  – additional measures, where necessary, to achieve environmental quality standards (Art. 10).
• Ensure that the conditions of the permit and the procedures for granting the permit are fully co-ordinated if more than one competent authority is involved in issuing a permit (Art. 7).
• Ensure that operators comply with the conditions of their permit, that they assist the competent authorities to carry out inspections, to take samples and to gather any information necessary for the performance of their duties, and that they supply the competent authorities with all the necessary information, including the results of monitoring (Art. 14).
• Ensure that operators inform the competent authorities of any changes planned in the operation of the installations and that the authorities update the permits or the conditions thereof if necessary (Art 12).
• Reconsider and update the conditions of permits in certain circumstances, and ensure that permits are amended or renewed where there is a substantial change to an operation (Arts. 12 and 13).
• Ensure that no substantial change is made to the operation of an installation without a permit having been issued to the operator (Art 12).
• Ensure that there is a competent authority to monitor developments in BAT (Art. 11).
• Ensure that the public concerned is given early and effective opportunities to participate in the procedure for issuing and updating the IPPC permits, in accordance with Annex V of the directive (Art. 15).
• Ensure that members of the public concerned have access to a review procedure before a court of law or another independent and impartial body (Art 16).

2.3 Information and Reporting
• Make information available to the public, including information on permit applications and the results of monitoring of releases (Art. 15(4)).
• Make practical information available to the public on access to administrative and judicial review procedures in the framework of capacity-building efforts (Art. 16(5)).
• Send to the Commission every three years the available representative data on the limit values laid down by specific category of activities in accordance with Annex I and, if available, the BAT from which these values are derived (17(3)).
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- Consult with other Member States if the operation of an installation is likely to have a significant negative effect on the environment of the other Member State (Art. 18).
- Report to the Commission on:
  - measures (with text of the national legislation) taken to comply with the directive (Art. 21);
  - transposition with texts of the main provisions of national laws, regulations and administrative provisions to comply with the directive (Art. 21);
  - information on the practical implementation of the directive on the basis of a questionnaire or outline drafted by the Commission in accordance with the directive on standardising national reports, every three years.

2.4 Related Legal Instruments
A number of other legislative instruments are relevant to the IPPC Directive and should also be borne in mind during the implementation of this directive. These include:

- All directives listed in Annex II to the IPPC Directive
- Seveso II Directive (96/82/EC)
- Air Quality Framework Directive (96/62/EC) (see Section 3 of the Handbook)
- Commission Decision 96/302/EC establishing a format in which information is to be provided pursuant to Art. 8(3) of Council Directive 91/689/EEC
- Landfill Directive (99/31/EC) (see Section 4 of the Handbook)
- Regulation (EC) No. 166/2006 concerning the establishment of the European Pollutant Release and Transfer Register

3. Implementation

3.1 Key Tasks
The key tasks involved in implementing this directive are summarised in the following checklist, organised in chronological order (where possible).
### THE IPPC DIRECTIVE - KEY IMPLEMENTATION TASKS

<table>
<thead>
<tr>
<th></th>
<th>Planning</th>
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<tbody>
<tr>
<td>1.1</td>
<td>Appoint a competent authority (or authorities) to implement and enforce the requirements of the directive.</td>
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<tr>
<td>1.2</td>
<td>Determine the interrelationship between EIA and IPPC procedures and the proper timing and positioning of these procedures in the line of permitting procedures for large, environmentally significant investments.</td>
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<td>1.3</td>
<td>With the leading role of the competent authority, prior authorisation procedures shall be established for new and existing industrial installations of the categories listed in Annex I, involving the issuing of permits using an integrated approach to the control of releases to all environmental media.</td>
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<tr>
<td>1.4</td>
<td>Determine what relevant types of permitting procedures shall be merged into the integrated pollution prevention and control permitting procedure.</td>
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<tr>
<td>1.5</td>
<td>Based on proper legal arrangements, the competent authority should establish liaison arrangements with authorities responsible for the permitting of installations in respect of other legislation such as the Dangerous Substances Directive (2006/11/EC).</td>
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<tr>
<td>1.6</td>
<td>The competent authorities, by survey or other means, should identify the installations to which the directive applies throughout the territory.</td>
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<tr>
<td>1.7</td>
<td>For each installation, or more generally for industrial sectors, the competent authority should establish BAT. This may be undertaken through consultation with the industries or industrial sectors or by external research and also taking into consideration the information requested by the Commission in accordance with Article 17(2) of the directive. BAT must be appropriate for the prevailing conditions at the site and take into account the likely costs and benefits as well as applying a precautionary and preventative approach.</td>
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<td>1.8</td>
<td>The government should take a decision on whether to adopt general rules for specified categories of installations as an alternative to individually determined permit conditions.</td>
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<td>1.9</td>
<td>Establish emission limit values for all releases to the environment for all installations having regard to BAT for the installation, so that these may be incorporated as legally binding conditions in permits.</td>
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<tr>
<td>1.10</td>
<td>Establish a means of acquiring information on developments in BAT (through the reports of the Commission prepared as a result of the exchange of information on BAT and limit values) and ensure that the competent authorities are kept informed.</td>
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<tr>
<td>1.11</td>
<td>Provide training for the technical staff of the competent authorities.</td>
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<tr>
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<th>Regulation</th>
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<tr>
<td>2.1</td>
<td>Require the operators of all existing and proposed new installations to apply to the competent authority for authorisation to operate.</td>
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<tr>
<td>2.2</td>
<td>Require applicants for authorisations to supply details of the installation and its activities, materials and energy used on the site, the sources of emissions, conditions on the site, likely emissions to the environment and their possible effects, techniques to prevent or reduce emissions, measures for the prevention and recovery of waste, operational parameters of the site, and monitoring proposals. Information relating to applications under other specified directives may be included.</td>
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<tr>
<td>2.3</td>
<td>The competent authority should issue guidance on the procedure to be followed, including guidance on the information to be included in applications, and the definitions of BAT for the sector or the specific installation.</td>
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</table>
| 2.4 | The competent authority should establish a procedure by which the proposals put
forward in the application are examined for their ability to prevent pollution through the
use of BAT and to ensure that no significant pollution is caused, that waste production
is minimised or that there is adequate recycling or disposal in such a way that pollution
is avoided, that energy is used efficiently, that accidents are prevented, and that the
site will be returned to a satisfactory state on completion of activities.

2.5 As a result of the examination of the application, the competent authorities should
propose emission limit values for releases from the site into all environmental media.
Other competent authorities should be consulted, where more than one such authority
is involved.

2.6 Proposals should be available to the public early in the procedure for a period of time
to allow them to comment to the competent authority. The public must have
opportunities to participate in procedures for reviewing or updating the IPPC permits
and shall have access to legal remedies before a court of law or another independent
and impartial body.

2.7 The final decision on granting or refusing the permit together with its reasoning and
with a reference to the results of public participation must also be made available to
the public.

2.8 Establish a procedure for the inspection and monitoring of facilities to ensure
compliance with permit conditions. The monitoring procedure may involve both the
competent authority in inspecting and taking samples, and a degree of self-monitoring
undertaken by the operator. The competent authority should decide the amount of
self-monitoring which is appropriate for particular installations, and it should specify
the conditions to be upheld by the operator in carrying out self-monitoring. An audit
procedure should be applied to such results.

2.9 A procedure should be established such that the competent authority is regularly
informed by the operator of the results of monitoring or of any incident affecting the
environment.

2.10 A legal obligation should be placed on the operators of installations to inform the
component authorities of any changes planned in their operation so that the
competent authority can update the permit conditions.

2.11 A legal obligation should be placed on operators to inform the competent authorities of
any substantial changes in operation so that prior authorisation may be obtained.
Guidance on what constitutes substantial change should be issued to operators.

2.12 A legally binding review period should be set requiring the periodic review of
authorisations by the competent authority. The review may be undertaken at any time
for situations specified in the directive.

2.13 The competent authority should implement an enforcement regime for installations
which fail to use BAT or which breach their emission limit values or which implement
changes without informing the competent authority. This should include the ability to
revoke the operating permit, and apply penalties to the operators of the installation.

3 Consultation and Reporting

3.1 For IPPC applications that may have transboundary effects, establish channels of
communication with competent authorities in neighbouring Member States so that
consultation may take place.

3.2 Establish a consultation mechanism to publicise applications for permits and to allow
for public responses to proposals. Capacity-building efforts, such as informing the
public on legal remedies and the use thereof, shall be part of the public participation
provisions.

3.3 Send the Commission every three years the available representative data on the limit
values laid down by specific category of activities in accordance with Annex I and, if
3.5 Report to the Commission on:
- transposition and implementation;
- data on emission limit values and BAT on which emission limit values are based (Art. 16);
- pollutant emissions register data.

3.2 Phasing Considerations

Experience within Member States suggests that the most demanding and time-consuming tasks associated with implementing this directive are:

**Phase 1:**
- Establishing and developing the institutional structure for integrated permitting of installations, including the enforcement regime.
- Surveying and identifying the installations to which the directive applies.
- Establishing a reporting and database system.

**Phase 2:**
- Establishing technical standards for BAT and determining emission limit values.
- Implementing the authorisation procedures, including preparation of applications, public consultation and issuing permits.

**Phase 3:**
- Detailed planning, design, permitting and construction of new or upgraded facilities to conform to the new environmental standards.

It should be noted that, for Member States, separate time limits were set for Directives 96/61/EC, 2003/35/EC and 2003/87/EC by Annex VI/B, with deadlines in 1999, 2005 and 2003 respectively. Also, according to Article 5 (and Recital 13), certain responsibilities concerning existing installations had to be applied by 1999, while others had to be applied by 2007.

4. Implementation Guidance

This directive differs from previous EC directives on industrial pollution as it establishes a system of *integrated* pollution prevention and control (IPPC). *Integrated* means that pollution (which includes air, water, land, solid waste and noise) of all environmental media must be minimised. The directive also requires minimising the use of energy and raw materials and preventing accidents. This approach contrasts with previous directives, which concentrated on emissions to one environmental medium only. The inclusion of noise, energy and raw materials also differs from previous approaches, which concentrated on physical pollutants. *Prevention* means that pollution should be reduced at source as well as at the point of discharge.

The IPPC Directive requires the use of best available techniques to prevent and reduce pollution. The term “techniques” replaces “technology”, which is used in previous directives on air pollution. The term “techniques” is wider in scope since it includes both the technology and the way in which it is used. The definition of “available” includes reference to being “economically and technically viable …taking into consideration the costs and advantages”, which implies that the use of excessively costly techniques would not be required by the directive. In this sense the definition of BAT is comparable to but not identical with that of BATNEEC (best available
techniques not entailing excessive costs) used in some Member States and which appears in several earlier directives, but less emphasis is given to the issue of costs.

The IPPC Directive applies to a list of specified installations which includes both industrial and agricultural undertakings. Many categories have a scale threshold, below which IPPC need not be applied. It is effectively a framework directive controlling the procedures to be used for more specific directives in several sectors. The emission limits specified in the existing directives listed in Annex II are adopted, and there is provision for further limits to be specified by future daughter directives.

Implementation of this directive will be influenced by the present status and organisation of permitting in each candidate country. Drawing on the collective experience of the Member States, a number of general observations and “good practice” suggestions for implementing the directive are presented below.

The implementation of the IPPC Directive and the relevant legislation should be carried out taking into account the current “IPPC review”. On 21 December 2007 the Commission adopted a proposal for a Directive on industrial emissions173. The proposal will recast seven existing directives related to industrial emissions into a single clear and coherent legislative instrument and it includes in particular the IPPC Directive. Candidate Countries are advised to consult this draft Directive in the planning and introduction of legislative and administrative provisions and frameworks concerning the seven directives which will fall under this new piece of legislation, including the Directive on Large Combustion Plants. This has a large potential of saving administrative and financial resources in the permitting, reporting and monitoring of industrial emissions.

4.1 Planning

While, in connection with planned installations, Articles 6(2) and 9(2) prescribe taking into account in the IPPC procedure the results of the EIA procedure, in countries where the environmental impacts of existing installations are also examined in a procedure that is similar to EIA (e.g. procedures for significant modifications or in the event of the expiry of the EIA permit/consent), such results might also be taken into consideration in the IPPC procedures for existing installations mutatis mutandis.

Example of Practice in a Member State

In one Member State examined (SE), the implementation of the IPPC Directive did not cause major legislative or institutional changes, since the Environmental Protection Act of 1969 is already based on an integrated pollution prevention approach. This act is the main piece of legislation concerned with pollution prevention, covering emissions to water and air, and noise emissions. It also includes provisions on environmental impact assessment and on environmental damage insurance. The issuing of permits is mainly within the competence of the National Licensing Board (NLB) and the county administration boards (CABs) with the national Environment Protection Agency (EPA) acting as an advisory body particularly to the NLB.

A new piece of environmental legislation, the Environmental Code, has recently been introduced. The code aims to promote sustainable development and will operate as umbrella legislation incorporating 15 existing legal acts. Detailed provisions will be laid down in implementing ordinances. The code will apply to all human activities that may harm the environment, regardless of the size of the operation or who carries out such activities. The code is based on a number of fundamental principles, inter alia the precautionary principle, the product choice principle, the proximity principle, BAT, and the resource management and eco-cycle principle. The code includes provision for the establishment of environmental courts to replace the NLB. This should ensure that fully objective decisions are taken regarding environmental aspects. The courts will be staffed by specialist personnel. The system includes provision for representation by

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A competent authority will need to be appointed to issue permits and inspect the industrial facilities which fall within the domain of the directive. The directive does not specifically require a single permitting authority to deal with the permitting of pollution to all different media, although co-ordination of separate organisations would be required as the permit will have to take account of all such releases in an integrated manner. Where an institution covering all environmental media does not already exist, the establishment of such an integrated authority is recommended. Another possible solution is to appoint a lead authority, which is responsible for collecting and integrating the consent of the other relevant authorities with a view to harmonising their procedures (e.g. using the same application form/requirements for the permit, managing the whole of the evidence taking and expert opinion in a single procedure, summarising the decisions in a single decision etc.).

The competent authority may be a centralised body or decentralised and under the control of local or regional government. The former offers the advantage of a better use of scarce resources and greater national consistency of approach, while the latter offers local accountability.

Examples of Practice in a Member State
In one Member State (FR), the Ministry of Environment is responsible overall for the preparation of the legislation on classified installations. Permitting is undertaken on a decentralised basis at a regional level. Regional inspectorates, which are administratively attached to the Ministry of the Interior, are responsible for the technical conditions of the permits and for co-ordinating the inspection of classified installations.

- BAT will have to be established for each industrial sector or for individual establishments in each country. These will need to be appropriate for the prevailing conditions and established environmental quality standards, having reference to the BAT reference documents (BREFs) that are issued by the Commission.
- In order to establish ground rules for setting what constitutes BAT, the directive requires Member States to provide data on emission limit values and BAT, whereupon the Commission is to organise an exchange of information. The Commission has already commenced this process by starting to prepare BREFs, 27 of which have been formally adopted. These are freely accessible on the homepage of the European Integrated Pollution Prevention and Control Bureau (http://eippcb.jrc.es/pages/FActivities.htm).
- Emission limits for some classes of installations and some environmental media are specified in existing directives (e.g. the Waste Incineration Directive (2000/76/EC), and these are to be applied under the IPPC regime. In general, the requirement to apply BAT means that emission limits may be progressively reduced over time rather than being fixed.
- The definition of what constitute “economically and technically viable” techniques is somewhat unclear. Economically viable is usually taken to apply to the category of installations as a whole, rather than to individual operators. However, what is economically viable may be different between different sectors of industry, and may be different in the case of existing plants as against new ones. In practice, the competent authority should, in consultation with representatives of the industrial sector concerned, examine the viability of proposed processes to arrive at an acceptable definition of a BAT which is achievable by the installations. Reference to worldwide examples of techniques and assessment of availability in the country concerned should feature in the examination.
Example of Practice in a Member State

In one Member State (UK), under present legislation the regulating authority issues technical guidelines describing what it considers to be BAT for each industrial sector. The processes take into account information obtained by the regulatory authority from within and outside the country and include descriptions of techniques which should be used to minimise releases to all environmental media. The applicants must take such information into account when applying for a permit, but they may propose alternative processes if these will lead to a similar degree of environmental protection.

4.2 Regulation and Monitoring

- Some of the definitions that must be transposed into national laws can be inserted into the more general environmental legislation (e.g. environmental code). These include the definitions of “substance”, “pollution”, “installation”, “existing installation”, “emission”, “emission limit values”, “environmental quality standard”, “competent authority”, “permit”, “operator”, “the public” and “the public concerned”; while others, such as the definitions of “change in operation”, “substantial change”, “best available techniques”, “techniques”, “available techniques”, and “best” are more specific to IPPC and should therefore be inserted into the specific IPPC laws.

- In connection with the obligation to ensure that new installations obtain a permit before they are allowed to operate (Art. 4), countries need to take into consideration the exemption included in Directive 2001/80/EC that regulates the term “new plant” differently from the IPPC Directive: “new plant” means any combustion plant for which the original construction licence or, in the absence of such a procedure, the original operating licence, was granted on or after 1 July 1987, while “existing plant” means any combustion plant for which the original construction licence or, in the absence of such a procedure, the original operating licence, was granted before 1 July 1987.

- In order to issue a permit for installation, the competent authority must be satisfied that the plant is constructed and operated in such a way that all the obligations in the directive for pollution prevention, waste minimisation etc. are met and that the agreed BAT for the type of installation are applied. The operators should therefore submit applications which contain full information on the process. This could include information on the technical process, raw materials, how these are used, the end-products, what waste is likely to be generated and how it is recycled or disposed of, how much energy will be used and of what type, water usage, precautions against accidents, management regimes, staffing levels and responsibilities, competence of staff, and training of staff. The application could contain flow diagrams to assist the competent authority in understanding the process. The process must comply with the recognised BAT or evidence must be provided that the process is equivalent to this, or reasons given why such BAT cannot be used. A consultation process between the operator and the competent authority is helpful in resolving problems. There must also be an opportunity for public consultation on the proposal to issue a permit before it is issued. The non-technical summary should be drawn up in such a way as to be understandable by the public.

- Permits must be issued such that the requirements for different environmental media are integrated even if different authorities are involved. This condition is most easily fulfilled by an integrated environmental protection agency to handle all permitting requirements under IPPC. If more than one authority is involved, clear guidelines for co-ordination must be established.

- Authorities shall ensure that the conditions of the permit and the procedures for granting the permit are fully co-ordinated if more than one competent authority is involved in issuing a permit in accordance with Article 7 of the directive.
Example of Practice in a Member State

In one Member State (HU), the screening/scoping procedure is available for both EIA and IPPC cases, where the authority decides in the detailed procedure whether the EIA and IPPC procedures can be merged or whether they have to be implemented consecutively, and determines the content of the EIA and IPPC examinations. In this preliminary procedure the environmental authority shall organise a joint negotiating trial for all the participants in the cases, including the contributing authorities. These authorities hold specific legal responsibilities in connection with the planned project, which are related to environmental protection. Authorities that belong here include those concerned with public health; nature protection; catastrophe prevention; cultural heritage; plant, animal and soil protection; forestry; spatial planning etc. During this trial, all the questions to be decided in the preliminary phase shall be negotiated with the participants.

- If temporary derogations are requested by the operator, details of the expected reduction in pollution must be provided.
- It is helpful for the competent authority to formulate standardised forms of application and to issue guidance on the procedure to be used, outlining the information which must be submitted by those wishing to apply for authorisation to operate under the directive.

Example of Practice in a Member State

In one Member State (HU), an application for a permit shall be denied if the realisation or continuation of the activity:

1) is not compatible with the targets of the National Environmental Programme (as stipulated in Article 40 of the Environmental Code); or
2) hinders the fulfilment of any of the international nature protection or environmental agreements concluded by the country.

- Bringing existing plants within the permitting regime will require a rolling programme. A timetable needs to be established at the outset, probably based on tackling one sector at a time.
- Inspection procedures are fundamental to the IPPC Directive. Article 14 requires that operators of installations allow competent authority representatives to carry out inspections and co-operate fully with them as required. It would be helpful for competent authorities to notify operators well in advance of the potential for such co-operation and what this would entail, while the exact timing and number of inspections should not usually be known by the operators. Public participation in monitoring activities is encouraged by the directive.

Example of Practice in a Member State

In one Member State (UK), in implementing comparable legislation the government drew up a formal timetable for authorising existing installations, tackling a small number of sectors each year so that all sectors were authorised at the end of a five-year programme. This gave the authorities an opportunity to develop and issue information on BAT for each sector, gain experience and deal with applications at a rate commensurate with staff capacity, and enabled the site operators to plan effectively against a known deadline.

- There is an overriding requirement to ensure a high level of protection for the environment as a whole and to ensure the maintenance of environmental quality standards, even if this requires additional measures over and above the use of BAT. In practice, this is likely to mean that some proposed installations may have to be relocated.
to sites where existing pollution is lower so that compliance with environmental quality standards can be achieved.

- Permits have to be periodically reviewed to take account of changes in BAT, operational safety requirements or new legislation, or when the significance of the pollution requires review. No fixed timescale for reviews is given in the directive, but Member States should place a legal obligation on the competent authorities to undertake reviews after a specified period of time, and the review period should be incorporated in the permit. The minimum frequency of the reviews should be regulated by law — although the frequency of the reviews might differ from activity to activity or according to groups of activities in Annex I.

- It will also be necessary to establish a procedure to revise permits if there is a significant change to an operation. New permits must be issued if there is a substantial change. The competent authority should issue guidance on what it considers to be “substantial change”. Substantial change may be the use of different raw materials, alterations to the process or the way in which it is managed, or the production of different end-products or intermediate products, any of which may give rise to an environmental effect which the competent authority considers significant. The competent authority may have to undertake investigations to determine the significance of such alterations at a particular installation by assessing the sensitivity of the local environment to the proposed changes.

Example of Practice in a Member State

In one Member State (SE), three categories of environmentally hazardous installations (A, B and C) have been defined in terms of their potential environmental impact. “A” represents the largest and potentially most polluting industries, “B” are medium-sized industries, and “C” are the smallest, least-polluting industries.

For category A, an operational permit is required from the National Licensing Board (NLB) while for category B a permit is required from the county administration boards (CABs). For category A and B permits there is a system of regular inspection and monitoring, which includes self-assessment by industry and the submission of an annual environmental report to the responsible authorities. This report is also made available to the public. The annual reports must follow directions issued by the national Environmental Protection Agency. The self-monitoring programme must be inspected regularly at the operator’s expense by an external consultant. Industries falling within category C are required to register with the municipalities, which provide specific guidance on environmental standards required. There are also reporting requirements consisting of the submission of an annual environmental report to the municipality followed by review and feedback from the municipalities.

The costs of the permitting system, including monitoring and inspections, are met by industry, with the regulatory bodies determining the nature and timing of the inspections. Due to reasons of cost and distance, routine inspections are often conducted by the municipalities under the guidance of the CABs. The cost for any CAB work is charged to central government, which provides the budget for operation of the CABs, whereas the municipalities receive inspection fees directly from industry.

- The competent authority needs to ensure that monitoring is undertaken to verify compliance with the permit conditions. The permit should contain conditions specifying self-monitoring to be performed by the plant operator, including the parameters to be monitored, analytical techniques to be used, frequency and recording format. The competent authority should undertake periodic inspections to ensure that the permit conditions are complied with and that monitoring is undertaken correctly. At least a proportion of these inspections should be made unannounced.

- In order to ensure that the operators inform the competent authorities of any changes planned to the operation of the installations (Art. 12) or of any changes in circumstances, countries might introduce a system of sanctions. Encouraging public participation with
proper capacity-building elements (trainings, leaflets, explanatory materials on the homepage of the authorities etc.) might also ensure a better rate of reporting on substantial changes.

- Public participation in harmony with Annex V might give rise to a series of practical problems. These problems should be solved in harmony with the solution of similar problems during EIA procedures. While the notification shall come early in the procedure, it should contain substantial data. If data important for meaningful public participation emerge later, the competent authority might decide on additional information dissemination activities. The form of notification should be prescribed by law in the form of minimum requirements. The best solution is most probably a combination of written and electronic media and local means of disclosing public information (such as billboards, flyers etc.).

- Article 16(2) establishes the discretionary power of the national legislation to determine at what stage the decisions, acts or omissions might be challenged. While legal remedies are usually practical at the very end of the administrative procedures, in certain cases the end of a lengthy procedure is too late, and irreversible, irrecoverable harm to significant public interest might occur. Therefore, in certain matters, such as the very fact of the possibility of public participation in respect to certain groups or associations, an immediate legal remedy seems to be the most effective solution.

- Legal remedies shall be fair, equitable, timely and not prohibitively expensive. A fair procedure is even-handed for all parties, while an equitable procedure offers more help to those parties that are not fully in a position to represent their cases in the most effective way (usually to members of the public or public associations). As concerns timeliness, countries should take into consideration ensuring expedited procedures for legal remedies in certain cases of public participation in the IPPC permitting procedures.

4.3 Consultation and Reporting

- Because the application of BAT under this directive will often require significant changes to the way individual installations are operated (and investments may be required), all stakeholders, especially the relevant industries, should be consulted during the development of the BAT and emission limit standards. The requirements for legally binding methods of operating as well as the need to meet more stringent emission limit values will require a programme of information dissemination to the industries by the competent authority, followed by training programmes for plant operators within the industries concerned.

- Although it is the responsibility of the plant operators to work within BAT, the directive requires the competent authority to ensure that BAT is used. To assist in this issue, technical guidance documents on BAT for each process should be drawn up by the competent authority for the benefit of both the plant operators and the regulators.

- The directive requires permit applications to be made available to the public for consultation, prior to a decision being made on them. Implementation of this provision will vary from country to country, but may involve the publication by the competent authority of a notice in a local newspaper summarising the nature of the application, where further information can be obtained, and to whom comments should be directed. Sufficient time must be allowed for the public to present comments. Where land-use planning permission for the installation is also required (for example in the case of new installations), and similar public comment is part of the procedure, it may be possible to combine the public consultation arrangements for IPPC with the consultation procedures regarding land use.
• Member States are to ensure that they have a relevant authority capable of compiling and transmitting the information required to be reported on the application of national law and practice provided for under Commission Decision 1999/391/EC.

Example of Practice in a Member State
In one Member State (SE), the permitting procedure often involves consultations with the Environment Agency and, to a certain extent, with other organisations or individuals which may have an interest in the matter. Every application for a permit is made public in the newspapers and individuals may participate in public hearings. Individuals also have the right to appeal against a permit decision. The competent authorities at the regional level are required to keep a register available to the public of environmentally hazardous activities.

5. Costs

The main types of costs arising during the implementation of the IPPC Directive are illustrated, as far as possible, in the checklist below. There are three main aspects:

• the cost of setting up the administrative arrangements to deal with allocating and implementing operating permits;
• the costs of application of BAT for new plants mentioned in Annex 1 of the directive; and
• the costs of applying BAT for existing plants after 2004.

In accordance with the polluter pays principle, the costs for the administrative arrangements, in so far as they relate to individual installations, should be recovered from operators under a system of fees for authorisation applications and renewals. The extent of the costs involved in setting up the competent authority, including equipment and staff training, will depend on the nature of existing arrangements in that state for permitting discharges to the environment. The major costs will relate to the application of BAT.

Based on a series of questionnaires\(^\text{174}\), it has been estimated that the total investment costs required for the 141 affected industries in Estonia to comply with the IPPC Directive will be approximately EUR 1.4 billion (EEK 21.4 billion).

In Latvia, at the time of undertaking the questionnaires, there were 59 enterprises that were defined as category A industries. These are required to meet the requirements of the IPPC Directive. The total estimated costs of compliance are approximately EUR 714 million, with energy installations requiring most investment.

For Poland, a different study\(^\text{175}\) estimated that the costs of compliance with the IPPC Directive would require, between 2000 and 2006, an approximate outlay of EUR 19,452.3 million, with a total approximate implementation cost of EUR 25,960.1 million.

Checklist of the Types of Cost Incurred to Implement the Directive

Initial set-up costs:

\(^{174}\) See the report of the meeting “Implementation of the IPPC Directive: A dialogue between Environmental Authorities and Industry”, held 29-30 November 2001, Sigulda, Latvia, with representatives from environmental authorities (ministries of environment, inspectorates, environmental boards), industry associations, enterprises and consultants from the Baltic states, and experts from Sweden, Finland, Germany and Austria. In total there were 56 participants.

\(^{175}\) Source: K. Berbeka, Kraków University of Economics
The draft Directive on industrial emissions which was proposed by the Commission in December 2007 and brings seven directives under the same legislative framework is estimated to save costs both for public administration and for industry. For instance, it reinforces the application of Best Available Techniques, as a way to reduce the harmful industrial emissions across the EU, translating into improved environment and human health. Furthermore, the streamlining of permitting, reporting and monitoring requirements as well as a renewed cooperation with Member States to simplify implementation will lead to a reduction in unnecessary administrative burden of between €105 and €255 million per year.
The Seveso Directive


1. Summary of Main Aims and Provisions

The aim of the directive is to prevent major accidents that involve dangerous substances and to limit their consequences for people and the environment. The directive applies to establishments at which certain dangerous substances are present in sufficiently large quantities to create a major-accident hazard. As well as requiring the operators of such establishments to take preventive measures, the directive places a number of procedural requirements on Member States relating to planning, policy integration, inspection, reporting and public access to information.

The directive was most recently amended by Directive 2003/105/EC, which was adopted in the aftermath of a number of major industrial accidents (e.g. the cyanide spill that polluted the Danube following the accident at Baia Mare in Romania in 2000; the fireworks accident in the Netherlands in May 2000; and the explosion at a fertiliser plant in Toulouse, France in 2001), which raised concerns regarding storage and processing activities in connection with mining, the storage and manufacture of explosive substances, and the storage of ammonium nitrate fertilisers. Amendments have also been prompted by new research studies on carcinogens and environmentally harmful substances.

2. Principal Obligations of Member States

2.1 Planning

- Establish competent authorities to implement the requirements of the directive and, if necessary, technical assistance bodies to assist the competent authorities (Art. 16).
- Ensure that objectives for the prevention of major accidents are taken into account in land-use policies and other relevant policies, and establish consultation procedures to facilitate the implementation of these policies. There should be an appropriate distance between Seveso establishments and residential areas, buildings and areas of public use as well as major transport routes and sensitive nature areas (Art. 12, Directive 96/82/EC, as amended by Directive 2003/105/EC).
• Identify establishments or groups of establishments where the risks of major accidents are increased because of their location and their dangerous substances and ensure provision is made for co-operation in informing the public and supplying information (Art. 8).

• Draw up external emergency plans to be implemented in the event of a major accident, and review, test and revise these plans and ensure that the facilities supply the competent authorities with the necessary information to enable the Member States to draw up such plans (Art. 11 and Annex IV).

2.2 Regulation

• Prohibit the operation of establishments that do not comply with the standards laid down in the directive (Art. 17).

• Ensure that operators may appeal against a prohibition order issued by the competent authority (Art. 17).

• Ensure that operators of establishments fulfil their obligations as laid down in the directive:
  − to prepare and implement a major-accident prevention policy (Arts. 7 and 10, and Annex III);
  − to prepare an internal emergency plan in consultation with those working within the facility, including subcontracted personnel (Art. 11);
  − to prepare a safety report (Arts. 9 and 10, and Annex II);
  − to review and revise the policies and plans referred to above (Arts. 9, 10 and 11);
  − to take measures to prevent major accidents and limit their consequences (Art. 5);
  − to provide information to competent authorities about their operations and their measures to prevent major accidents and limit their consequences (Arts. 5, 6, 7, 9, 10 and 11);
  − to exchange information and co-operate with competent authorities and other establishments as regards domino effects (Art. 8); and
  − following a major accident, to provide specific information to competent authorities and to take remedial measures (Art. 14).

• Following a major accident, ensure that specified measures are taken, including the gathering and analysis of information, the remediation of damage, and the making of recommendations for the prevention of future accidents (Art. 14).

2.3 Monitoring and Enforcement

• Establish and implement a system of inspection of establishments to ensure that they comply with the directive (Art. 18).

2.4 Information and Reporting

• Make certain information relating to the implementation of the directive available to the public, subject to specified exemptions such as confidentiality; and consult the public on specified plans and proposals. The public needs to be consulted on external emergency plans when established or updated (Arts. 11, 13 and 20).

• Provide information on safety measures and procedures to people who are liable to be affected by a major accident. This information should relate to requisite behaviour in the...
event of an accident and should be submitted periodically, in appropriate and user-friendly formats, to all persons and public establishments in the vicinity of the establishment. In cases of accidents with possible transboundary effects, inform other potentially affected Member States (Art. 13 and Annex V).

- Report to the Commission on:
  - establishments that are considered incapable of creating a major-accident hazard (Art. 9);
  - major accidents and results of the analysis of such accidents (Art. 15);
  - experience acquired in preventing and limiting major accidents (Art. 19);
  - the name or trade name of the operator, its address and the activities involved (Art. 19);
  - implementation of the directive (Art. 19 and Council Directive 91/692/EEC);
  - transposing measures and other steps taken to comply with the directive, including legislative and administrative provisions introduced to ensure that new Seveso installations were also in compliance with the amending directive as of 1 July 2005 (Art. 24).

2.5 Additional Legal Instruments
A number of other legal acts need to be borne in mind in implementing this directive. These include:

- Directive 91/692/EEC standardising and rationalising reports on the implementation of certain directives relating to the environment
- Decision 98/443/EC on laying down harmonised criteria for granting dispensations by virtue of the provisions of Article 9 of Directive 96/82/EC on the control of major-accident hazards involving dangerous substances
- Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work
- Directive 85/337/EEC (as amended by 97/11/EC and 2003/35/EC) on environmental impact assessment on the assessment of the effects of certain public projects and private projects on the environment (see Section 2 of the Handbook)
- Directive on access to environmental information (2003/4/EC) (see Section 2 of the Handbook)
- Directive 2008/1/EC on integrated pollution prevention and control
- Decision 2007/779/EC establishing a Community Civil Protection Mechanism (see Section 11 of the Handbook)
- Directive 2006/21/EC on mining waste
- Regulation concerning the establishment of a European Pollutant Release and Transfer Register (166/2006)
- Directive 2007/2/EC establishing an infrastructure for spatial information in the European Community (INSPIRE)

3. Implementation
### 3.1 Key Tasks

The key tasks in implementing the Seveso Directive are summarised in the following checklist, arranged in chronological order (where possible).

<table>
<thead>
<tr>
<th>THE SEVESO DIRECTIVE – KEY IMPLEMENTATION TASKS</th>
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<tbody>
<tr>
<td>1 Planning</td>
</tr>
<tr>
<td>1.1 Establish a system of notification of the use, processing or storage of certain dangerous substances above specified thresholds at establishments, and prohibit the operation of establishments where dangerous substances are present and are capable of creating a hazard unless safety measures are adequate.</td>
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<tr>
<td>1.2 Appoint a competent authority to carry out the duties detailed in the directive. This might be an institution that already has responsibility for health and safety issues.</td>
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<td>1.3 If necessary, appoint a body for the provision of technical assistance to the competent authority in matters relating to the directive.</td>
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<td>1.4 Appoint an institution to be responsible for preparing external emergency plans (possibly the competent authority or often local authorities).</td>
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<td>1.5 Establish and implement a programme of training for issues related to the directive for both regulators and operators.</td>
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<tr>
<td>1.6 Elaborate procedures for collecting, exchanging and disseminating information on accidents and near-accidents to improve prevention methods and emergency procedures. This can probably best be done by creating committees with representatives from affected establishments in defined areas, chaired by a representative of the competent authority.</td>
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<tr>
<td>2 Regulation</td>
</tr>
<tr>
<td>2.1 Establish a system of notification of the use, processing or storage of certain dangerous substances above certain thresholds at establishments, and for the assessment of notifications, the approval of major-accident prevention policies, and, where appropriate, safety reports and emergency plans.</td>
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<tr>
<td>2.2 Ensure that operators notify competent authorities of their location, operations and use of dangerous substances.</td>
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<tr>
<td>2.3 Identify establishments incapable of creating a major-accident hazard.</td>
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<tr>
<td>2.4 Establish and implement a system of inspection, and carry out periodic inspections to ensure that operators are fulfilling the directive’s requirements.</td>
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<td>2.5 Establish procedures for investigating major accidents (with the assistance of the technical assistance body if necessary).</td>
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<tr>
<td>2.6 Ensure that designated institutions have prepared external emergency plans on the basis of the information supplied by the operator.</td>
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<tr>
<td>2.7 Ensure that internal and external emergency plans are reviewed, tested and where necessary revised and updated regularly and that the public is fully informed about</td>
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them (see below).

2.8 Ensure that all information requirements are being met (see below).

3 Standards and Guidance Notes

3.1 Establish criteria for the assessment of potential hazards for identifying establishments where risks are increased.

3.2 Provide guidance notes on safety issues associated with the storage and use of dangerous substances, including information to be included in a notification and the content of safety reports and emergency plans.

4 Land-Use Planning

4.1 Incorporate criteria for land that can be allocated for developments involving dangerous substances in land-use planning policies.

4.2 Indicate in land-use plans the most appropriate land for establishments presenting hazards from dangerous substances.

4.3 Review individual applications for land-use permits in the light of the potential hazards from dangerous substances and policies. Ensure that land-use planning ensures that the siting of new Seveso installations is not approved unless there are sufficient distances from residential areas and areas of public use.

5 Communication and Consultation

5.1 Establish a procedure to ensure adequate public consultation when applications are made for land-use planning permits for establishments where dangerous substances are present.

5.2 Establish a procedure to ensure that the public has the opportunity to express its opinions on relevant matters and take account of those opinions when assessing notifications, safety reports and emergency plans.

5.3 Establish a procedure to ensure that the safety report from the operator and the inventory of dangerous substances are made available to the public. Provide safety information on major-accident hazards to the public.

5.4 Establish a procedure to ensure that the public is consulted during the preparation of, and is fully aware of, the actions outlined in external emergency plans.

5.5 Establish procedures to ensure that information is exchanged between establishments where the likelihood and the possibility or consequences of a major accident may be increased.

5.6 Provide sufficient information to Member States that may potentially be affected by major accidents with transboundary effects.

6 Reporting

6.1 Establish reporting systems to ensure that the data required (see below) are collected.

6.2 Report to Commission on:

- establishments considered incapable of creating a major-accident hazard;
- major accidents and results of analysis;
- experience acquired on the prevention of major accidents; and
- transposition and implementation of the directive.
3.2 Phasing Considerations

This directive has a high technical content. Training, particularly for regulatory staff, will therefore be necessary in the early stages for successful implementation. Sufficient time should be allowed early in the implementation phases to properly undertake this training. It is equally useful to take into consideration experiences and successful procedures in other Member States. The assessment of notifications for both new and existing installations will require a high level of resources as large amounts of technical information will need to be reviewed. It may be practical to introduce requirements for existing establishments in phases on a sector-specific basis or gradually depending on size. Candidate countries could ask the Commission whether transitional periods for certain sectors might be possible. Before implementation, technical criteria will need to be defined for assessments as identified in Section 3.1 above.

4. Implementation Guidance

4.1 Planning

This directive is concerned with health and safety and involves competent authorities concerned with these issues. The original directive was introduced following an accident at Seveso, Italy, where dioxins were released into the atmosphere. However, further accidents, including the fireworks accident in Enchede, the Netherlands, and the cyanide spill from a mining facility in Baia Mare, Romania, have underlined the need for a broad scope of application to ensure coverage of the main activities involving dangerous substances.

The key actors in the implementation of this directive are the ministries responsible for industrial safety and land-use planning, the competent authority(ies) and the operators of industrial establishments where dangerous substances are present. Increasingly, insurance companies have a role to play, as do specialised consultants who are experienced in risk assessments and hazard analysis procedures.

The directive specifically requires that procedures are to be set up to identify establishments that are not capable of creating a major-accident hazard. However, it does not discuss the mechanisms by which the operation of such "safe" establishments can be allowed. This need can be met by issuing permits to establishments that are judged to be "safe", but equally, as is demonstrated in the case study below, regulations can be introduced to introduce a uniform requirement for those establishments falling under the remit of the directive.

4.2 Regulation

**Example of Practice in a Member State**

In one Member State (UK), the directive was implemented by means of regulations closely modelled on the directive that fall into two parts. The first part places a general duty on operators to operate safely and to notify the competent authority of any major accidents. This involves identification of major-accident hazards, and the implementation of measures to limit their consequences and to train and protect staff. Establishments may be inspected at any time and asked to demonstrate that these requirements are being met. Companies are also required to have a health and safety policy, which is a statutory document for which the chief executive is responsible. Directors and managers are personally liable for the health and safety of employees and negligence is a criminal offence that can be, and is, punishable by large fines and imprisonment. They are also, of course, liable under civil law.

The second part of the regulations makes specific requirements for safety reports, emergency plans and information to the public.
4.3 Standards and Guidance

A whole array of guidance documents are available from the Commission (see link: http://mahbsrv.jrc.it/GuidanceDocs.html). This guidance includes:

- Safety Management System Guidance — Seveso II: This guidance has been developed by the Commission together with representatives from EU Member States and industry. It sets out to provide guidance and explanation on the requirements of the Seveso II Directive (96/82/EC) concerning a major-accident prevention policy and safety management systems.
- Safety Report Guidance — Seveso II (1998): This document is intended to provide guidance on the preparation of safety reports to meet the requirements of the Seveso II Directive (96/82/EC) on the control of major accidents involving dangerous substances.
- Guidance on Inspections.
- Seveso II, Article 9(6) — Explanations and Guidelines.
- Information to the Public Guidance.

**Example of Practice in a Member State**


In addition, detailed guidance is available on:

- how a safety report should be prepared, including the need to review the risk associated with the operation of the installation. These are known as HAZOP studies and are often prepared with the assistance of external consultants;
- environmental sampling after a COMAH accident. The aim is to provide guidance on the sampling procedures necessary to assess the extent and nature of environmental contamination following a chemical accident. It is addressed to industrial chemists on relevant sites, local authority environmental health officers and inspections and pollution control officers of the Environment Agency and Scottish Environment Protection Agency.

5. Costs

The cost of implementing this directive will primarily fall on the operators who will have to introduce safety equipment and implement safety procedures to prevent major accidents and hazards. This may result in increased capital and operating costs. There will also be costs associated with introducing the new regulatory structure and, in particular, set-up costs associated with training regulatory staff and assessing safety information submitted by the operators of existing establishments. The costs of establishing standards and guidance criteria could be minimised by transferring approaches developed elsewhere in Europe. The requirement to review information regularly will mean that ongoing costs will also be incurred. In addition, there will also be the costs of developing and communicating external emergency...
plans. These costs may be passed through to the operator. On the other hand, all these costs have to be set against the very high costs that could arise in the event of a major accident.
The Eco-Management and Audit Scheme Regulation


1. **Summary of Main Aims and Provisions**

The aim of this regulation is to encourage organisations whose activities have an adverse environmental impact to continuously improve their environmental performance through a voluntary eco-management and audit scheme. This aim is achieved through:

- the introduction and implementation of environmental management systems by organisations, as set out in Annex I to this regulation;
- objective and periodic assessment of those systems;
- the training and active involvement of the staff of such organisations;
- the provision of information to the public and other interested parties.

Participating organisations are required to establish and implement policies, programmes and management systems for their sites. These must be independently examined to ensure that they comply with the regulation. Information about these policies, programmes and systems must be made available to the public. The regulation defines “organisation” as meaning a company,


\(^{177}\) Council Regulation (EC) No. 1791/2006 of 20 November 2006 adapting certain regulations and decisions in the fields of free movement of goods, freedom of movement of persons, company law, competition policy, agriculture (including veterinary and phytosanitary legislation), transport policy, taxation, statistics, energy, environment, cooperation in the fields of justice and home affairs, customs union, external relations, common foreign and security policy and institutions, by reason of the accession of Bulgaria and Romania.
corporation, firm, enterprise, authority or institution, or part or combination thereof, whether incorporated or not, public or private, that has its own functions and administrations.

Any organisation that would like to take part in the scheme must:

- adopt an environment policy establishing the objectives and principles of its environmental measures;
- conduct an environmental review of its activities, products and services, unless the organisation has a certified, recognised environmental management system;
- introduce an environmental management system (in accordance with Annex I);
- carry out regular environmental audits (in accordance with the requirements set out in Annex II) and make an environmental statement, including a description of the organisation and its activities, products and services; the organisation's environmental policy and environmental management system; a description of its environmental impact and the aims with regard to the impact; the environmental performance of the organisation and the date of the statement. That statement must be validated by an environmental verifier whose name and number must appear in the statement;
- register the validated statement with the relevant Member State body; and
- make the statement available to the public.

Amending Commission Regulation No. 196/2006 adds Part A of Annex I to Regulation 761/2001 regarding the environment management system requirements, setting out the specifics of EN ISO 14001:2004. These requirements, which are mandatory for organisations participating in the EMAS scheme, cover items such as:

- general requirements;
- environmental policy;
- planning (environmental aspects, legal requirements, objectives, targets and programmes);
- implementation and operation (e.g. resources, roles and responsibility, competence, training and awareness raising, communication, documentation, control of documents, operational control, emergency preparedness and response);
- checking (e.g. monitoring and measurement, evaluation of compliance and non-conformity, control of records, internal audit);
- management review.

The annex also lists national standard bodies in all of the EU countries, including the new Member States. The second amending regulation, Regulation No. 1791/2006, amended this list of bodies to include entries for Bulgaria and Romania. Annex IV was also amended, regarding the logo that may be used by an EMAS-registered organisation. The amended annex lists the wording applicable in the 22 official languages of the EU.

Other instruments that are useful for applying the EMAS Regulation include:

- Commission Decision 2001/681/EC on guidance for the implementation of Regulation (EC) No. 761/2001 of the European Parliament and of the Council allowing voluntary participation by organisations in a Community eco-management and audit scheme (EMAS). This decision sets out guidance (Annex I) regarding the registration of entities referred to in Article 2 of the EMAS Regulation. The decision also requires organisations to have the updates of their environmental statement validated in accordance with the guidance set out in Annex II. The EMAS logo will be used in accordance with the guidance set out in Annex III to the decision.


2. Principal Obligations of Member States

2.1 Planning

• Designate an independent competent body to register sites and to carry out other tasks to implement the regulation (Art. 5).

• Establish a system for accrediting independent environmental verifiers and for supervising their activities (Art. 4).

2.2 Regulation

• Ensure that participants in the eco-management and audit scheme take the actions required in order for their sites to be registered in the scheme, including:
  − conducting an environmental review;
  − introducing an environmental programme and environmental management system;
  − carrying out environmental audits at registered sites;
  − establishing an environmental management system document including the specifics in Annex I;
  − preparing an environmental statement;
  − having the environmental programme, management system, audit procedure and environmental statements independently reviewed to verify that they meet the requirements of the regulation;
  − making the environmental statement available to the public;
  − establishing and implementing procedures for emergency preparedness and response;
  − carrying out training and developing awareness procedures in regard to environmental aspects and the EMAS;
  − developing checking procedures regularly to monitor and measure operations that can have a significant environmental impact and to document information to monitor performance and conformity with the set environmental objectives and targets;
  − repeated reviews of the organisation’s environmental management system to ensure that the system is adequate and effective, also reviewing the results of internal audits, communications, environmental performance and the meeting of objectives and targets (Art. 3, and annexes as amended by Regulation (EC) No. 196/2006).
• Take legal or administrative measures in cases of non-compliance with the provisions of the regulation (Art. 6).
• Register sites and prepare a list of registered sites (Art. 7).
• Accredit verifiers according to Annex V and prepare a list of them (Art. 4).
• Ensure that organisations have the updates of their environmental statement validated in accordance with the guidance set out in Annex II to Decision 2001/681/EC (Art. 2, Decision 2001/681/EC).
• Ensure that the EMAS logo is used in accordance with the guidance set out in Annex III to Decision 2001/681/EC (Art. 3, Decision 2001/681).

2.3 Information and Reporting
• Inform companies and the public about the regulation and how the eco-management and audit scheme works (Arts. 4, 5, 7 and 12).
• Promote participation of companies, in particular small and medium-sized enterprises (SMEs) (Art. 11).
• Report to the Commission on:
  – measures taken to establish a system for the accreditation and supervision of environmental verifiers, and provide a list of these verifiers (Arts. 4 and 7);
  – the designation of a competent body (Art. 5); and
  – the list of registered sites (Art. 7).

3. Implementation

3.1 Key Tasks
The key tasks involved in implementing this regulation are summarised in the checklist below. The key tasks are arranged under subheadings and organised in chronological order of implementation wherever possible.

<table>
<thead>
<tr>
<th>THE ECO-MANAGEMENT AND AUDIT SCHEME REGULATION - KEY IMPLEMENTATION TASK</th>
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<tbody>
<tr>
<td><strong>1 Planning</strong></td>
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<tr>
<td>1.1 Appoint a competent body that will be responsible for the registration of sites. The composition of the competent body must be independent and neutral.</td>
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<td>1.2 Designate parties to represent the Member State at the regulatory committee chaired by a Commission representative.</td>
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<tr>
<td>1.3 Establish an accreditation body responsible for the assessment and accreditation of environmental verifiers. A consultation procedure should be established between the parties involved.</td>
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</table>
### 1.4 Undertake training of personnel in the competent body and the accreditation body to ensure that:
- they are fully conversant with the objectives and provisions of the regulation;
- they fully understand the administrative requirements; and
- the accreditation body has the capability to assess those individuals or organisations wishing to become accredited environmental verifiers and to supervise them, as well as verifiers accredited in other countries.

### 1.5 Establish a mechanism for application to be an accredited verifier.

### 1.6 In accordance with current practice in the Member State, establish a system of fees to cover the cost of administration of the system (option).

### 1.7 The government should implement a programme of dissemination of information on the scheme to organisations and local government and the public.

### 1.8 The government should develop mechanisms for training and technical support to small and medium-sized enterprises. In particular, this should include measures to provide organisations with the expertise necessary to set up environmental policies, programmes and management systems, conduct audits and prepare and validate statements.

### 1.9 The competent body should develop a mechanism for application to the scheme (this is done by the accreditation system).

### 2 Regulation

#### 2.1 The accreditation body must establish and maintain a list of accredited environmental verifiers.

#### 2.2 The competent body must establish and maintain a list of registered sites.

#### 2.3 The competent body must establish mechanisms of communication with other environmental regulatory bodies so that it has the ability to check whether a site is in compliance with all relevant environmental legal requirements before awarding registration. Lines of communication should also be established to ensure that the competent body will be made aware of any future breaches of environmental regulations.

#### 2.4 The government must ensure that there are mechanisms and structures in place to be able to take legal or administrative measures in the event of non-compliance with the provisions of the regulation.

### 3 Information and Reporting

#### 3.1 The Member State must inform the Commission of the designation of the competent body.

#### 3.2 The Member State must designate representatives to form part of a regulatory committee chaired by a representative of the Commission. The committee will ensure compatibility of the system between the Member States, and the representatives of each Member State will have voting rights accordingly.

#### 3.3 The state must ensure that the following are reported to the Commission:
- measures taken regarding accreditation of independent environmental verifiers;
- list of accredited environmental verifiers (every six months); and
- list of registered sites (to be published each year in the Official Journal).
3.2 Phasing Considerations

In order to implement the regulation, some procedures must be established. In establishing these procedures, it is advisable to keep in mind the requirements of ISO 14001.

The phasing of key tasks is outlined below:

Phase one:
- Establish competent body and accreditation body.
- Inform organisations about EMAS.
- Prepare and issue guidance to organisations on the application of the scheme.

Phase two:
- Organisations’ take-up of scheme.

The most time-consuming factor associated with implementation is probably trying to persuade organisations to take up the scheme. It may take a number of years before there is any significant take-up. However, as more sites do take part in the scheme, this will create momentum in the growth of the scheme through pressure along the supply chain. For instance, clients with environmental management systems will exert pressure on their suppliers by requesting information about the supplier’s environmental performance. This will stimulate the suppliers to improve their environmental performance and participate in the scheme.

4. Implementation Guidance

This section outlines practical guidance on the implementation of this regulation based on the collective experience of Member States.

- This regulation represents an initiative designed to involve enterprises — on a voluntary basis — in improving their environmental performance. It anticipates that the introduction of an effective and efficient environmental management system (EMS) will provide an enterprise with the opportunity to reduce its costs, reduce its environmental impact, increase its efficiency, and enhance its reputation. Like the Eco-Labelling Regulation (No. 1980/2000/EC) for products, the Eco-Management and Auditing Regulation represents a move towards the philosophy that the market will reward improvements in an enterprise’s environmental performance.

- The regulation has two key features:
  - participation is voluntary; and
  - there is a requirement for accurate and verifiable information to be made available to the public.

Example of Practice in a Member State

In one Member State (UK), the scheme was extended to local authorities and municipalities at an early stage. This reflected a greater environmental awareness being shown by municipalities and other local authorities as illustrated in the so-called green charters prepared by many authorities. The scheme is known as LA-EMAS and is a framework which enables local authorities to address the complex environmental issues arising in local government in a systematic way so that environmental awareness becomes embedded in the work of the authorities. Authorities that comply with the requirements of the scheme need to have their compliance externally validated and may then publicise their participation through use of a special “statement of participation”.
In some Member States, larger companies have been more prominent in the introduction of environmental management practices. This is because they have the resources available to commit to the scheme and often have dedicated environmental staff. Larger organisations can also perceive greater cost savings through EMS due to economies of scale. Although it is important to keep larger enterprises aware of the benefits of schemes like EMAS, it is also important to inform, instruct and support the small and medium-sized enterprises (with less than 250 employees) that often have only limited resources to apply in this area. Therefore, in order to facilitate wider participation in the scheme, some support in the form of grants or soft loans should be considered at national, regional or local governmental levels.

Example of Practice in Member State

In one Member State (UK), the Department of Environment, Transport and the Regions (DETR) has set up a scheme known as SCEEMAS — the Small Company Environmental and Energy Management Assistance Scheme. To be eligible for assistance under the scheme, companies must meet the following criteria: employ fewer than 250 people; not be more than 25% owned by any other business; have an annual turnover of less than £50 million; and be involved in manufacturing, waste disposal, recycling, mining, quarrying or power generation.

The scheme is designed to help smaller businesses establish a recognised EMS under the Eco-Management and Audit Scheme. SCEEMAS provides up to 50% towards the cost of hiring experts to guide companies towards EMAS registration. Technical advice is also available through the government-funded Environmental Technology Best Practice Programme. This has produced some sector-specific guidance documents on environmental management. It is also possible to obtain free advice through an environmental helpline.

For the purposes of verification and validation, the accredited environmental verifiers, who can be individuals or organisations, could be the first point of contact with the scheme participants. However, enterprises deciding to implement EMAS must also liaise with the competent body from the very beginning of the process. The body for accrediting the environmental verifiers could be an existing national accreditation organisation, or the competent authority referred to in Article 5. The competent body (responsible for the registration of sites and legal compliance) could be a government ministry or an independent organisation appointed by a government ministry.

The regulation does not replace, nor does it remove, any obligation to comply with any existing EC environmental legislation. In fact, registration under the EMAS scheme requires that a site should be in compliance with all relevant environmental legislation.

The regulation sets up a regulatory committee chaired by a Commission representative with representatives from each Member State. The main function of the committee is to ensure the compatibility of the scheme between the Member States.

4.1 Action for Companies Participating in the Scheme

If a company or organisation within a Member State has been working towards, or has been certified according to, a standard other than EMAS, it should make an assessment of how its current system compares with the requirements of EMAS.

There is need for commitment to the scheme at the highest management level within the organisation and the recognition that adequate staff resources must be made available and sufficient training given. A pilot study was undertaken to obtain feedback from some of the companies in Europe which were amongst the first to apply for accreditation under the EMAS scheme. The organisations involved in the study reported difficulties in the following areas:

− preparation of the environmental effects register;
SECTION 7 - INDUSTRIAL POLLUTION CONTROL LEGISLATION
THE ECO-MANAGEMENT AND AUDIT SCHEME REGULATION

- the content of the environmental statement and uncertainty as to the distribution requirements;
- how continuous improvement could be measured and assessed;
- lack of senior management support; and
- underestimation of the level of resources required.

There was a general opinion that sector-specific guidance relating to all of the above aspects would be of great benefit in helping sites to become registered. It is clear from other more recent surveys that there have been problems with the comprehensibility and credibility of environmental statements produced under the scheme. This is a key area for companies to concentrate on, so a credible, open and accountable statement can be produced. It is important that technical support and advice is available from the competent body to facilitate the production of statements under the EMAS scheme.

4.2 Regulation

- Seventeen European countries are members of the European Co-operation for Accreditation (EA). The EA brings together the national accreditation systems of each of these counties and has developed guidelines for the accreditation of certification bodies for EMS that are used as a basis for the EMAS verifiers also in most of the Member States. This provides a useful mechanism in helping to ensure consistency in the approach of the appointed accreditation bodies in the Member States.

4.3 Information and Reporting

- The key stakeholders involved are as follows:
  - the national accreditation body;
  - the verification bodies;
  - industries specified in Council Regulation No. 3037/90;
  - environmental regulators;
  - the public; and
  - company shareholders.

- The key area of consultation initially needs to be in the provision of information and the education of industry regarding the benefits of employing environmental management systems. This is key to the success of the scheme. In addition, it is important to highlight the benefits to company image and for companies to demonstrate environmental performance to shareholders and also potentially loan providers and insurance companies.

5. Costs

The main types of costs arising during the implementation of the Eco-Management and Audit Scheme Regulation are shown in the checklist below.

*Checklist of the Types of Cost Incurred to Implement the Regulation*

**Initial set-up costs:**
- establishing competent body;
Prior to the implementation of the regulation the main costs will be the administrative costs of setting up the competent body and the accreditation body. While these may be existing organisations there will nevertheless be costs related to staff deployed in the operation of the scheme and the various reporting functions. For an effective implementation of the scheme there will also need to be expenditure on the production of literature for the promotion and explanation of the scheme and for technical guidance and training. If a grant support facility is to be made available, then further government funds will need to be committed to this. The administrative costs described can, to some extent, be offset by the generation of revenue income from the introduction of a system of fees.

The costs to organisations of implementing the requirements of the scheme will include:
- staff time in the planning, implementation and operation of the system;
- application fees;
- consultants fees, where necessary;
- training; and
- verification costs.

The potential cost savings, environmental benefits and image promotion could far outweigh these initial costs. Implementation costs will be proportional to the size of the site involved. For example, a major chemical works in one Member State (UK) took one and a half person-years to develop its EMS to a level at which the company was confident in gaining certification under EMAS. One survey undertaken in 1995 of 19 small companies showed that on average it takes a minimum of 40 person-days (plus consultancy costs and verification fees) for such companies to achieve registration under EMAS. Also, it took 10 person-days per year for small companies to maintain the EMS. The operational costs ranged from EUR 3,000 to 10,500 per year.
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THE ECO-MANAGEMENT AND AUDIT SCHEME REGULATION
The Eco-Label Regulation


1. Summary of Main Aims and Provisions

The regulation replaces and revises the voluntary scheme for awarding eco-labels to certain products, which was originally established under Regulation (EEC) 880/92. The aim of the scheme is to promote products which have the potential to reduce negative environmental impacts, as compared to other products in the same product group, and to provide consumers with better information about the environmental impact of products. The conditions for awarding the eco-label are determined (for each product group) by a committee of Member State representatives, using a “cradle-to-grave” assessment of the impact of the product throughout its whole life cycle. This committee is known as the European Union Eco-Labelling Board (EUEB).

2. Principal Obligations of Member States

2.1 Planning

- Designate an independent competent body (or bodies) to administer the eco-label scheme (Art. 14).
- Ensure that the competent body (or bodies) carry out the following tasks:
  - process applications from manufacturers, importers, service providers, traders and retailers for the award of an eco-label to their products (Art. 7);
  - assess the environmental performance of products and decide, on the basis of the criteria set by the committee, whether to award an eco-label to the product (Art. 7);
  - if there are no objections from the Commission, implement the eco-label award (Art. 7);
  - conclude contracts with applicants when an eco-label is awarded (Art 10); and
  - fix fees for processing applications for an eco-label (Art. 12).

2.2 Information and Reporting

- Inform consumers and undertakings about the eco-label scheme, including information about how to apply for an eco-label (Art. 10).
2.3 Additional Legal Instruments

Decisions are regularly made setting out ecological criteria for the award of the eco-labels for various product groups. These include:


3. Implementation

3.1 Key Tasks

The key tasks involved in implementing this directive are summarised in the following checklist and organised in chronological order wherever possible.

<table>
<thead>
<tr>
<th>ECO-LABEL REGULATION – KEY IMPLEMENTATION TASKS</th>
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<tbody>
<tr>
<td>1 Planning</td>
</tr>
<tr>
<td>1.1 Appoint a competent body to implement the regulation. The Member State must take steps to ensure that the competent body is independent and neutral.</td>
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</tbody>
</table>
1.2 The competent body should appoint a representative to the committee which advises the Commission.

1.3 The competent body should note the product groups and eco-criteria laid down by the Commission.

1.4 Establish a scale of fees to be paid by applicants for the award of an eco-label. The scheme should be self-financing, so ensure that fees are sufficient to cover the costs of operating the scheme.

2 Operation and Regulation

2.1 Receive applications for the award of an eco-label from organisations producing or marketing the product in the territory, or importing it from a third country.

2.2 Consult the Commission’s register of past applications and the outcome of these.

2.3 The competent body should decide if the application falls within a product group for which criteria have been established.

2.4 Assess the data submitted for conformity with eco-criteria determined by the committee. Eco-criteria will include life-cycle analysis involving the means of dealing with or preventing waste, soil pollution and degradation, water and air contamination, noise pollution, energy consumption, consumption of natural resources and effects on ecosystems. The criteria must be applied at all stages of the product’s life, including pre-production, production, distribution, utilisation and disposal.

2.5 Decide whether or not an eco-label should be awarded.

2.6 If it is decided to issue an eco-label, a contract using the standard form agreed by Member States under Council Decision 93/517, setting out the rights and conditions of use of the label, must be issued and signed by the competent body and the producer.

2.7 Establish a compliance monitoring regime, including inspections of premises, to ensure that the conditions under which the eco-label is issued continue to be met for the period of issue.

2.8 Ensure that operators are obliged to allow inspections of their premises.

2.9 Establish an enforcement procedure under which eco-labels are withdrawn if conditions specified in the contract fail to be observed.

2.10 Establish a system for renewal of eco-labels at three-yearly intervals.

3 Information and Reporting

3.1 Establish an information and publicity system to inform the public and industrial producers about the scheme, its benefits and the procedures for applying for eco-labels.

3.2 Inform the Commission:
   - of any product for which an eco-label is awarded and supply the Commission with the full results, and a summary in standard format, of the assessment; and
   - of any product for which an eco-label is refused.

3.2 Phasing Considerations

The regulation is currently being revised. Consequently, candidate countries should bear in mind the requirements of the proposed revisions in implementing this regulation.

There are two phasing considerations:

Phase one:
4. Implementation Guidance

4.1 Planning

An important aspect of the eco-labelling scheme is the establishment and involvement of a national competent body in the development of criteria and in assessing the compliance of products with the criteria. The competent body should be an independent body.

The original regulation (1999/468/EC) led to the award of a limited number of eco-labels. Due to the environmental stringency of criteria and taking into account its voluntary nature, the Commission proposed an amendment of the regulation in order to attract more companies to the scheme. The new regulation includes the use of a private sector organisation to produce the eco-criteria. This body will create a network, including the competent bodies that currently carry out this work. It also introduces a cap to fees. It also reduces the royalty charge to small and medium-sized businesses and to developing countries (the maximum fee will be reduced by at least 25%). In a further attempt to increase the interest of companies in participating in the scheme, efforts are to be made to inform the public about the merits of the eco-label.

Examples of Practice in Member States

The Commission recently reached a political agreement on a revision of the scheme, extending the right to apply for eco-labels to retailers and service providers. Product criteria will be drafted by an EU eco-labelling board comprising national competent authorities, representatives of industry, consumers and environmental groups.

4.2 Information and Reporting

There are four specific shareholder groups, namely consumers, producers, retailers and environmental groups. In each case, representative bodies need to be consulted and informed about implementation. The general public should be recognised as a fifth and more diffuse group which should be informed about implementation via the media in its various formats.

5. Costs

The following checklist summarises the types of costs which are likely to be incurred to implement the regulation.

Checklist of the Types of Cost Incurred to Implement the Regulation

Initial set-up costs:

- establishment of competent body(ies);
- devising systems and procedures;
- publicity costs;
<table>
<thead>
<tr>
<th><strong>Capital expenditure:</strong></th>
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<tr>
<td>expenditure by producers to ensure compliance of products with eco-criteria.</td>
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<th><strong>Ongoing running costs:</strong></th>
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<tr>
<td>continuing publicity;</td>
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<tr>
<td>collecting data for reporting to the Commission.</td>
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