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**EU ENVIRONMENTAL ISSUES AND
POLICIES GUIDELINES**

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1 Foreword

Over the last 30 years, European environmental policy has grown from a small group of rather technical measures to one of the best known aspects of the EU. It now covers almost the whole spectrum of environmental issues, with additional topics, such as climate change.

The promotion of sustainable development and of a high level of environmental protection has been included as an important objective in the EC Treaty. European Union environment policy is based on the belief that high environmental standards stimulate innovation and business opportunities.

The cornerstone of European Union (EU) environmental action is the Sixth Environment Action Programme, entitled “Environment 2010: Our Future, Our Choice”. The Community institutions are now obliged to take account of environmental considerations in all their other policies. Since then, this obligation has been taken into account in various Community acts, particularly in the fields of employment, energy, agriculture, development cooperation, single market, industry, fisheries, economic policy and transport.

The range of environmental instruments available has expanded as environmental policy has developed. Not only the Community has adopted framework legislation providing for a high level of environmental protection while guaranteeing the operation of the internal market, but it has introduced financial instruments and technical instruments: eco-labelling, the Community system of environmental management and auditing, etc..

This guide give a description of the main principles and policies that EU has adopted in these years and how they have been translated into concrete provisions and instruments in all environmental sectors.

Many web references in the text help the reader who wants to have more information about specific arguments.

2 UEAPME BSP PROJECT

(paragrafo introduttivo sul progetto da inserire da parte di Confartigianato)

3 Evolution of EU environmental policy

3.1 Summary

In the 1957 **Treaty of Rome**, environmental issues were not a top priority for the public and economic authorities. In the late 1960s, no European country had a clearly defined environmental policy.

Before 1987 environment was not recognised as a legal competence of EC. European Community was formed for economic reasons. However environmental laws were justified as removing barriers to free trade; this was made for single issue focus (such as radiation, vehicle emissions, chemicals packaging and labelling) and making a “creative” use of Treaty articles about the common market (no.s 2, 100 e 235).

Since the Seventies the public interest in environmental issues has grown and the same narrow economic focus of EU were to be rethought.

EC Environmental action began in 1972 with four successive action programmes, based on a vertical and sectorial approach to ecological problems. At the July 1972 **Paris Summit of the Heads of State and Government**, the Commission started working on environmental issues; on that occasion **the first Environmental Action Programme (EAP)** was adopted, covering the period from 1973 to 1976. The base of EU environmental policy was that in the context of economic expansion and improving the quality of life particular attention should be paid to the environment.

In 1973 the Environment & Consumer Protection Committee – DGIII and the Committee on the Environment in the European Parliament were instituted. The First Environmental Action Programme had been followed by the Second in 1977 and the Third in 1983.

During this period a great deal has happened in terms of legislation, chiefly related with limiting pollution by introducing minimum standards. This led to the adoption of a series of directives on waste management, noise abatement, protection of natural resources (air and water) and nature conservation. Lots of new environmental legislation were adopted but by piecemeal interventions, without proper legal basis.

At this purpose, in 1985 the Court of Justice with the Decision 240/35 declared environmental protection one of the “*essential objectives*” of the EC.

In 1981, the reorganisation of the Commission transferred the environmental responsibilities from DG III (Industrial Policy) to **DG XI (Environment, Nuclear Safety and Civil Protection)**.

It was only in 1987 **Single European Act**, that environment protection entered with a specific title (Articles 130r–130t) in the Treaty. It is generally considered the turning-point, giving a legal basis to Community measures relating to the environment, defining objectives and guiding principles. The Treaty also introduced the new idea that “Environmental protection requirements shall be a component of the Community’s other policies”. It also extends qualified majority voting to environmental proposals.

Always in the same year the **Forth European Action Programme** (1987-92) took place and 1987 was proclaimed European Year of the Environment.

In 1988 the series of **Community Environment Funds** have been begun.

In November 1993 the **Treaty on European Union in Maastricht** represented a further step, bringing progress on several fronts. It added the concept of “sustainable and non-inflationary growth respecting the environment” to the Community’s duties and adopted the precautionary principle as issue of European policies (Article 174, ex Article 130r, of the EC Treaty). Environment becomes a core policy goal of the EU.

The entry into force of the **Treaty of Amsterdam** in 1997 enshrines the principle of sustainable development as one of the European Community's aims (Article 2) and has been included a high level of environmental protection as one of its absolute priorities. It reserved the need of integrating environmental protection requirements into the definition and

implementation of other policies. This approach was already introduced by the Commission in its 1998 Communication *for integrating the environment into EU policies* and by the Vienna European Council (on December 11th and 12th, 1998). Since then, this obligation has been taken into account in various Community acts, particularly in the fields of employment, energy, agriculture, development cooperation, single market, industry, fisheries, economic policy and transport. The Treaty also inserts a new article about sustainable development in the Treaty establishing the European Community.

In 1993 the **Fifth Environment Action Programme** had beginning. As the following Sixth Environment Action Program, it focus on sustainable development, not just environment.

The Fifth Environment Action Programme, "Towards Sustainability", established the principles of a European strategy of voluntary action for the period 1992-2000 and marked the beginning of a "horizontal" Community approach which would take account of all the causes of pollution (industry, energy, tourism, transport, agriculture, etc.).

The **Sixth Environment Action Programme** (2001–10) gives a new sense of purpose and direction to the Community's environmental policy. It clearly sets out the priorities for the European Community up to 2010 and determines the actions that will need to be taken within a 5–10 year period if those goals are to be achieved. Four areas are highlighted: climate change, nature and biodiversity, environment and health and the management of natural resources and waste.

Year	Type of Action / Definition of Aims	Legal Base
1957	no environmental competence; regulatory directives with environmental impact guided by internal market objectives	EEC Treaty Articles 2, 100, and 235
1972	EC Summit identifies need for EC-wide co-ordinated measures for environmental protection	
1973	adoption of the First Environmental Action Programme (EAP) which promotes individual activities but no consistent concept of environmental policy	
1976	Second EAP	
1981	reorganisation of the Commission, transfer of environmental responsibilities from DG III (Industrial Policy) to DG XI (Environment, Nuclear Safety and Civil Protection)	
1982	the Third EAP first mentions prevention as an essential principle underlying environmental measures	
1985	decision of the Court of Justice elevates environmental protection to one of the "essential objectives" of the EC	
1986	Single European Act (SEA) introduces new title "Environment" (VII) to the treaty and creates legal competence on environmental matters: environmental policy as an integrated part of other policies	new Title VII (= ECT Art. 130r - t)
1992	Maastricht Treaty on European Union (TEU) formulates sustainable development as a fundamental goal	ECT Art. 2 and 3; Title XVI (= Art. 130r - t)
1992	the Fifth EAP defines the Community's conception of sustainable development and starts a shift from purely regulatory measures to market related (fiscal) steps	
1994	establishment of European Environment Agency (EEA), located in Copenhagen; information and data-research, no policy-making unit	
1997	Treaty of Amsterdam confirms the principle of sustainability;	TEU Art. 2; ECT Art. 2, 3,

	improved decision-making procedure	and 6; Title XIX (= Art. 174 - 176)
2001	Sixth Environmental Action Programme, titled "2010: Our Future, Our Choice"	

Table 1 : Developments in EU Environmental Policy since 1957 (Font: Jörg Waldmann, *Protecting the Environment in the European Union*, modified).

<http://europa.eu.int/scadplus/leg/en/lvb/l28066.htm>

4 Principles and action plans for sustainable development

4.1 Generals

As we have seen, Environmental policy has gradually featured more and more prominently on the Community agenda.

The range of environmental tools available has expanded as environmental policy has developed. The Community has adopted framework legislation providing for a high level of environmental protection, introducing not only *command and control* instruments but also financial (LIFE, R&D, LEADER, etc.) and technical instruments: eco-labelling, the Community system of environmental management and auditing, system for assessment of the effects of public and private projects on the environment and the criteria applicable to environmental inspections in the Member States.

The EU now has more than 200 legal acts covering nearly all areas of the environment. About 40% of all infringement proceedings brought against Member States are concerned with the environment.

4.2 The European Community Environment Programmes

4.2.1 The 1st, 2nd, 3rd and 4th Action Programmes

The **first European Environmental Action Programme (EAP)**, was adopted in November 1973 as a follow-up to the 1972 Stockholm Conference. Its main principles were incorporated into the 1987 amendments to the 1957 Treaty of Rome (the 1987 Single European Act).

The EAP was updated and extended in 1977, 1983, 1987, while the 1992 Fifth edition has given a new approach to the UE environmental policy.

The **first two adopted programmes** had four-year length and included the periods, respectively, 1973-1977 and 1977-1981. The principal aim to reach in this phase had consisted in the determination of the modalities and of the suitable tools to prevent and check the pollution sources. The principle of the prevention as regards the recovery and restore interventions and the principle "who pollutes pays", therefore the costs connected to the prevention and the elimination of the damages must be supported by the person in charge, are sanctioned.

The community is worried in particular to legitimate the intervention in the environmental sector in quality of international subject: in this period CE took part to international organisms, as UNEP, OCSE, FAO, etc. and to important international conventions.

The **third environment programme** (1982-1986) strongly promotes policies of prevention of the environmental damages to support the control and the reduction of pollution. In application of these aims, one of the fundamental directives of all the community environmental protection system is adopted in this period, i.e. the environmental impact evaluation (Directive 85/337/ EC). On the basis of this directive, the activities that can cause changes on the environment, must be planned to verify preliminary the consequences of the interventions. The environmental engagement assumes such an importance that the parliament decides to insert in the balance allocations in favour of environment.

The **Fourth Plan Of Action** covers the years from 1987 to 1992. The commission, relied on the new legitimation obtained with the European Only Act, identifies more punctually the principal sectors of intervention in environmental field, that are

- pollution prevention
- improvement of the natural resources management
- international relationships
- development of the research
- identification of economic tools.

This program is characterized by the big attention placed to the necessity of integrating the environmental politics with the other community policies, as agriculture, competition and development.

4.2.2 The 5th Action Programme

The objective of the Programme is to transform patterns of growth in the Community in such a way as to promote sustainable development. It has its roots firmly anchored in the concept of sustainable development and the broader concept of shared responsibility. The programme continues to tackle environmental problems (such as climate change, aquatic pollution and waste management), but also aims to establish new relations between the actors in the environmental sector.

The Programme is divided into **five target sectors** (industry, energy, transport, agriculture and tourism) and **seven themes** (climate change, acidification/air quality, urban environment, coastal zones, waste management, water resources, and biodiversity). It sets out objectives for each of these areas – divided into Community and global levels - and describes the targets and general actions needed to meet each objective.

It sets out a new approach to Community environment policy based on the following principles:

- integration of the environmental dimension into all major policy areas;

- widening the range of policy instruments (education and information; technological development; incorporation of environmental costs in prices; financial support mechanisms, etc.);
- shared responsibility among all social actors: administration, enterprises, citizens and consumers.

In addition to the regulatory instruments which have generally been used with regard to the environment, the programme provides for the development of a broader mix of instruments:

- **regulatory instruments:** fixing new minimum levels of protection, implementing international agreements and establishing rules and standards with a view to the internal market;
- **financial instruments:** incentives for producers and consumers to protect the environment and use natural resources in a responsible manner (economic, fiscal and civil responsibility measures) and "price corrections" to ensure that products and services which respect the environment are not penalised in terms of cost;
- **horizontal measures:** improving information and environmental statistics (need for comparable nomenclature, standards, criteria and methodologies), promoting scientific research and technological development, improving sectoral and spatial planning, public information (development of databases) and professional training;
- **Financial support mechanisms:** LIFE programme, Structural Funds, Cohesion Fund, EIB loans.

<http://europa.eu.int/scadplus/leg/en/lvb/l28062.htm>

4.2.3 The 6th Action Programme

The sixth action programme for the environment "Our Future, Our Choice", which is currently being adopted, sets out the priorities for the European Community up to 2010. The Programme promotes environmental development using all the instruments available: legislation and penalties, grants for improvements and innovations, research and information.

It proposes five priority avenues of strategic action:

- improving the implementation of existing legislation;
- integrating environmental concerns into other policies;
- working closer with the market;
- empowering people as private citizens and helping them to change behaviour;
- taking account of the environment in land-use planning and management decisions.

Specific action is proposed for each of these avenues.

The programme highlights four areas:

1. **Climate change:** the objective in this area is to reduce greenhouse gases to a level that will not cause unnatural variations of the earth's climate. Under the Kyoto Protocol, the EU has agreed to reduce its emissions of greenhouse gases by 8% compared to 1990 levels by 2008-2012. In order to meet that target, the EU has to make structural changes, in particular in the transports and energy sectors, aiming to a greater efficiency and energy saving. The introduction of a licence negotiable market, the researches in technological field, the awareness of the citizens are strongly stimulated.
2. **Nature and biodiversity:** the objective in this area is to protect and restore the structure and functioning of natural systems and halt the loss of biodiversity both in the European Union and on a global scale. Various new initiatives are announced, in particular for the protection of the soil, the safeguard of the sea environment, the prevention of the industrial and mineral accidents.
3. **Environment and health:** the objective is to achieve a quality of the environment which does not give rise to significant impacts on, or risks to, human health. Since the growing consciousness of the existing interconnection between human health and environmental problems, a wide action in prevention of the risks is necessary, above all with reference to the most sensitive groups of population, that are elders and children. For this, particular attention must be dedicated to the putting into effect of the directives on waters and noise and to the revision of the community management system of the risks of chemistries substance. The EU's new chemical strategy establishes new, stricter rules governing the production and handling of chemical substances.
4. **Management of natural resources and waste:** the objective is to ensure that the consumption of renewable and non-renewable resources does not exceed the carrying capacity of the environment. The Action Programme emphasises we must break the link between economic growth and the production of waste. Special efforts must be made to increase recycling and reduce waste production. With regard to waste, the specific target is to reduce the quantity going to final disposal by 20% by 2010 and 50% by 2050.

<http://www.europa.eu.int/comm/environment/newprg/index.htm>

<http://europa.eu.int/scadplus/leg/en/lvb/l28027.htm>

1st Environmental Action Programme 1973 - 1976
European reaction to increasingly perceptible ecological damages: these damages had to be detected and described/explained scientifically. Secondly technological progress had to be shaped according to ecological necessities; use of immission principle and quality standards to environmental media.
2nd Environmental Action Programme 1977 - 1981
In essence continuation of the first programme: directives and regulations for different environmental media (air, water, and soil); early measures relating to the EC-wide harmonisation of procedural questions.
3rd Environmental Action Programme 1982 - 1986
Introduction of preventive principle and integration of environmental goals in other important sectors: protection of the Mediterranean Sea, noise reduction; regulation of transboundary emissions, hazardous substances, and the transboundary transport of hazardous substances. Shift to emission principle (industrial emissions): reduction of emission at its source; obligatory use of best available technique (BAT).
4th Environmental Action Programme 1987 - 1992

Consolidation of environmental objectives in other policy areas of the Community (especially agriculture, industry, transportation, and energy) by offering economic incentives for ecologically friendly behaviour and introducing the standardised planning instrument Environmental Impact Assessment.
5th Environmental Action Programme 1993 - 2000
Postulation of the principle of sustainable development in order to combine economic and ecological objectives; decentralisation and participation: relocation of competence to national governments and regional authorities (subsidiarity), integration of different actors with various interests into institutional dialogue structures (shared responsibilities); shift from emission standards to environmental quality standards.
6th Environmental Action Programme 2001 - 2010
Implementation of the European Union's sustainable development strategy; the 6th EAP (entitled "Environment 2010: Our future, our choice") "proposes five priority avenues of strategic action: improving the implementation of existing legislation; integrating environmental concerns into other policies; working closer with the market; empowering people as private citizens and helping them to change behaviour; and taking account of the environment in landuse planning and management decisions."

Table 2: Environmental Action Programmes (Font: Jörg Waldmann, *Protecting the Environment in the European Union*).

4.3 The subsidiarity principle

EU environmental legislation respects the important principle of subsidiarity: that wherever possible, action should be taken by the authority as close as possible to the people it affects.

But individual countries acting alone cannot always safeguard the environment. Examples are air pollution, the world-wide impact of climate change, pollution or radiation from a power plant can cause infant effects thousands of kilometres away, etc..

These policies must be coordinated at a higher level. The Union's role is to support and coordinate the efforts of Member States, and check that governments are living up to the commitments they have made.

4.4 The precautionary principle

Emerging in European environmental policies in the late 1970s, the precautionary principle has become enshrined in numerous international treaties and declarations. It is, by the Treaty on European Union (1992), the basis for European environmental law, and plays an increasing role in developing environmental health policies as well.

Many measures introduced by EU have been inspired by the precautionary principle, such as measures to protect the ozone layer or concerning climate change. The principle has been recognised in various international agreements, notably in the Sanitary and Phytosanitary Agreement (SPS) concluded in the framework of the World Trade Organisation (WTO).

The Communication from the Commission of 2 February 2000 has developed guidelines for the application of the precautionary principle in EU policies. The objective is to ensure a high level of protection of the environment and of human, animal and plant health whenever the available scientific data do not permit a complete evaluation of the risk.

The precautionary principle is based on two distinct aspects:

- the political decision to act or not to act;
- in the affirmative, how to act.

The response is a function of the level of risk considered "acceptable" by the society on which the risk is imposed.

A decision taken on the basis of the precautionary principle should be based on the fullest possible scientific evaluation and preceded by a risk evaluation of the potential consequences of inaction; once the results of the scientific and risk evaluation are available, all the interested parties have to be informed about the results, while ensuring the greatest possible transparency.

<http://europa.eu.int/scadplus/leg/en/lvb/l32042.htm>

4.5 The “polluter pays” principle and the “preventing pollution at source” principle

Everyone who causes environmental damages, dangers and risks, is responsible to avoid, reduce and combat those damages, dangers and risks. In this way EC environment policy will seek to make those responsible for pollution pay the cost of bringing the environment back to the state it enjoyed before the pollution occurred.

Similarly, it is invariably more efficient to develop policies addressing the underlying causes of pollution, rather than simply devising ‘end-of-pipe’ solutions.

4.6 The “sustainable development” principle

The interest of the European Union in sustainable development grew in parallel with the initiative of the United Nations on the same issue, which culminated in the **World Conference of Rio (1992) on the Protection of Environment and Sustainable Development**.

The principle of integrating the environment into Community policies was confirmed by the Treaty on European Union, which stipulated that "environmental protection requirements must be integrated into the definition and implementation of other Community policies".

The Treaty of Amsterdam (1997) has duly clarified the legal regime of sustainability. Today, sustainable development is a fundamental principle in the Member States.

In June 2001, EU leaders adopted a document about **the European Sustainable Development Strategy**. This put forward a positive, long-term strategy to dovetail policies for economically, socially and environmentally sustainable development.

If policy-makers create the right conditions, and encourage citizens and businesses to integrate environmental and social considerations in all their activities, policies for sustainable development will create many winning situations, good for the economy, employment, and the environment. The Community has stepped up its strategy for integrating sustainable development into the policies on the sectors causing the greatest damage to the environment.

The principal dimensions of the Sustainability are four and can schematically be identified in:

- **Environmental Sustainability**, as the capacity to preserve quality of the natural resources; maintenance of the integrity of the ecosystem to avoid that the set of the elements which the life depends on is adulterated; preservation of the biological diversity.
- **Economic Sustainability**, as the capacity to produce income and job for the maintenance of the population; eco-efficiency of the economy, in particular, as rational and efficient use of the resources, with the reduction of the use of not renewable ones;
- **Social Sustainability**, as the capacity to guarantee human welfare conditions and access to the chances (security, health, education, etc), equitable distributed, in particular between the current communities and the future ones;
- **Institutional Sustainability**, as the capacity to assure conditions of stability, democracy, participation, information, formation and justice.

4.7 Environmental liability

Many states of European Union have recently adopted or are now considering new **Environmental Impairment Liability (EIL)** legislation. These new laws have many common features. In one way or another they all follow the "polluter pays" principle and all of them impose strict liability for environmental damage. Negligence or fault is no longer required, only causation, and there are few statutory defenses available to avoid liability. Polluters must pay for the damage they have caused. This principle acts as a deterrent against the violation of environmental standards.

White Paper on environmental liability was adopted and published by the European Commission on 9 February 2000. On 23 January 2002 a proposal for a Directive of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage has been adopted. The Commission's proposal is a framework Directive that will impose strict liability for both traditional and environmental damage caused by certain hazardous substances and activities.

For the principle of liability to be effective:

- polluters must be identifiable;
- the damage must be quantifiable;
- there must be a link between the polluter and the damage.

Facing to a damage, the competent authority designated by each Member State can act in different ways:

- If there is the danger of an imminent environmental damage, the authority will require the potential polluter to take the necessary preventive measures, or will take such measures itself and recover the costs incurred at a later date.

- If damage has occurred, the authority will require the operator to take the necessary restorative measures, or will take such measures itself and recover the costs incurred at a later date.
- If the operator has insufficient financial means, or if it is not possible to identify the operator, Member States will ensure that the measures are taken anyway.

<http://europa.eu.int/scadplus/leg/en/lvb/l28120.htm>

<http://europa.eu.int/scadplus/leg/en/lvb/l28107.htm>

4.8 Integrated product policy (IPP)

The **Integrated product policy**, or more briefly IPP, is a recent area of the community environmental policy. The concept this area is inspired was for the first time formulated in 1998, within a study commissioned by the European Commission.

The objective of European action in this sector is to strength and refocusing product-related environmental policies with a view to promoting the development of a market for greener products. At this purpose the Commission has presented in 2001 a **Green Paper** about this topic.

According to the Commission's consultation document, the central question is “how the development of greener products and their uptake by consumers can be achieved most efficiently”.

The proposed strategy calls for the involvement of all the parties concerned at all possible levels of action and throughout the life cycle of the products. The integrated product policy (IPP) strategy focuses on the three stages in the decision-making process which strongly influence the life cycle environmental impacts of products:

- **Influencing prices** - through measures such as reduced rates of tax on 'green' products, or state subsidies, or an extension of the 'producer responsibility' concept;
- **Stimulating demand** - giving consumers better information about the products they buy, including the use of ecolabelling, and encouraging large, public-sector organisations to adopt green procurement strategies;
- **Promoting green production** - by encouraging eco-design, promoting life-cycle information about products, and integrating environmental considerations into European product standards.

The Green Paper puts forward ideas on all these aspects of IPP, and poses more than 30 questions on particular aspects.

<http://europa.eu.int/scadplus/leg/en/lvb/l28011.htm>

5 EU structure and organization for Environment

5.1 The Environment DG

The **Environment DG** is one of 36 Directorates-General (DGs) and specialised services which make up the European Commission. Its main role is to initiate and define new environmental legislation and to ensure that measures, which have been agreed, are actually put into practice in the Member States. It is based largely in Brussels and has around 550 staff.

The Mission Statement is :

- To promote Sustainable Development, preserving the rights of future generations to a viable environment.
- To work towards a high level of environmental and health protection and improvement of the quality of life.
- To promote environmental efficiency.
- To encourage the equitable use, as well as the sound and effective management, of common environmental resources.

Each DG and service of the Commission is headed by a director-general, who is equivalent in rank to the top civil servant in a government ministry. The directors-general report to a commissioner, each of whom has the political and operational responsibility for one or more DGs. The present Commissioner for the environment is Margot Wallström.

<http://europa.eu.int/comm/dgs/environment/directory.htm>

5.2 European Parliament Committee on the Environment, Public Health and Consumer Policy

The European Parliament decided to set up an **Environment Committee** in 1973. The Committee of the fifth legislature has 60 Members. It is served by a secretariat of 8 administrators.

The Committee has oversight and political responsibility for the activities of the EC medicines and environment agencies. The Committee draws up three follow-up reports each year, in which it looks at adopted EU legislation in the environment and related fields, examines problems of implementation and evaluates whether the legislation is, or is not, meeting its initial objectives.

http://www.europarl.eu.int/committees/envi_home.htm

5.3 European Environment Agency (EEA)

The **European Environment Agency** was established in Copenhagen by Regulation (EEC) n. 1210/1990, amended by Regulation (EEC) n. 933/1990 in 1993. The EEA aims to support sustainable development, providing reliable scientific data and evaluations for those involved in implementing and developing European environment policy. The Agency processes

data from the member countries to knowledge at European level, and cooperates with the **European environment information and observation network (EIONET)** and other international partners to gather, process and distribute data and information. The EEA does not make or enforce European Union environment policy or legislation. Its tasks include disseminating best practice in environmental protection and technologies, and supporting the European Commission in diffusing information on the results of environmental research. Among its tasks is the production of "State of the Environment" reports.

<http://www.eea.eu.int/>

6 Funding programmes

6.1 Generals

Many European Community funding programmes have environmental or sustainable development goals at their core. Some programmes specifically target actions in the environment sphere. Others also support environmental goals and actions, concerning mainly the energy sector or governing aid to third countries.

In general Projects, which may be eligible for financing, will be in line with one or more of the objectives defined, and fall within the context of a duly approved basis in Community law (Directive, Regulation or Council Decision) or help to promote objectives in specific fields.

6.2 Life

LIFE, the Financial Instrument for the Environment, introduced in 1992, is one of the spearheads of the European Union's environmental policy. LIFE should lead new solutions facing EU environmental problems being explored.

LIFE has been implemented in phases: 400 million euros were allocated for the first phase (1992-1995), approximately 450 million euros were allocated for the second phase (1996-1999), the current phase, "LIFE III" (2000-2004) has a budget of 640 million euros.

Open to all "natural and legal persons", projects financed by LIFE must meet the following general criteria:

- correspond to the priorities established at Community level and contribute to the objectives defined above;
- be submitted by technically and financially sound participants;
- be feasible in terms of technical content, timetable and budget and offer good value for money

It is divided into three sectoral themes - environment, nature, third countries - each with its own distinct objectives:

- **LIFE-Nature** actions aimed at conservation of natural habitats and the wild fauna and flora of European Union interest, according to the Birds and Habitats

directives. They support implementation of the nature conservation policy and the Natura 2000 Network of the European Union.

- **LIFE-Environment** actions which aim to implement the Community policy and legislation on the environment in the European Union and candidate countries. This approach enables demonstration and development of new methods for the protection and the enhancement of the environment.
- **LIFE-Third Countries** actions concerning technical assistance activities for promoting sustainable development in third countries. This component of the programme enables a management capacity of the environment, both for our administrative partners outside the Union as well as within companies and the NGOs of these countries.

<http://www.europa.eu.int/comm/environment/life/home.htm>

<http://europa.eu.int/scadplus/leg/en/lvb/l28021.htm>

6.3 Green solutions to energy problems

Programmes in the energy sphere often have a strong environmental focus. Currently, for example, **ALTENER** is the only Community programme to focus exclusively on the promotion of renewable energy sources. It ended its five-year term at the end of 1997 and has now been succeeded by **ALTENER II**, an initiative that will extend activities in the renewable energies field. It is open to public authorities and public or private enterprises and, depending on the type of action, between 50% and 100% of the total project costs may be met. The need for Community support for renewable energy is clear. While several of the technologies, notably wind energy, small-scale hydro power and energy from biomass, are economically viable and competitive, and others are approaching viability, initial investment costs are high and investors often lack confidence in technologies that are relatively unknown. As a result, development has been limited, and the sector needs help if it is to “take off” in marketing terms.

Likewise, **SAVE** aims at encouraging efficient energy use in the public and private sectors, by industry and in the home. It is the principal focus of the Community's non-technological action on energy efficiency. The first **SAVE** programme was adopted by the Council in October 1991 and lasted until 1995. Its successor programme **SAVE II** was adopted by the Council in December 1996 and ended in 2002. On 9 April 2002 the Commission adopted a proposal for a successor programme to **SAVE** ("Intelligent Energy for Europe", 2003-2006), which is currently under discussion in the Council and in the European Parliament.

http://www.europa.eu.int/comm/energy/en/pfs_altener_en.html

http://www.europa.eu.int/comm/energy/en/pfs_save_en.html

6.4 Environment goals and EU enlargement

In relation to EU enlargement, all of the so-called pre-accession instruments have an environmental dimension. For example, **ISPA** gives financial assistance to large scale projects (minimum budget € 5 million) undertaken in the applicant countries and designed to help meet current EU environmental standards. It should facilitate the implementation by the applicant countries in the field of the environment and improve transport facilities.

Likewise, **SAPARD** provides assistance in the areas of sustainable agriculture and rural development. Safeguarding the environment is one of its three priorities.

http://www.europa.eu.int/comm/enlargement/index_en.html

6.5 Consumers, agriculture and the environment

Other programmes with more limited environmental objectives include **Community Activities in Favour of Consumers** (health and food safety, monitoring green claims on labels, environmentally friendly consumption models) and **LEADER +**, that concerns the sustainable development of rural communities.

7 Environmental issues and EU actions for environmental protection

7.1 Generals

EU environmental policies today comprises more than 300 legal acts, including directives, decisions, regulations and recommendations.

EU environmental legislation covers:

- *Products*: such as control of emissions from motor vehicles, control of hazardous chemicals in some consumer products, control of noise from construction equipment, waste movements, control of hazardous chemicals substances and preparations, etc. Many of these are included in White Papers.
- *Activities or production processes* with environmental impacts or human health effects: industrial plants, construction, waste treatments, nature and biodiversity conservation, etc.
- *Environmental quality protection*: such as controlling dangerous substances in air, water or soil, etc.; natural resources and biodiversity conservation.
- *Procedures and procedural rights* such as impact assessment, access to information and public consultation.

Directives are the form of the greatest number of the European Union environmental legal acts. Otherwise, when EU provisions do not need incorporation into national law, Regulations and Decisions are used.

7.2 “Command and control” and “Polluter pays” approaches

In a "command and control regime", the government enforces regulatory measures and permit requirements to control activities causing environmental pollution. Environmental quality standards prescribe the allowable and acceptable level of pollutants with fines and penalties for noncompliance. Policies are now shifting from this dominant approach to more market-based instruments for economic and technical arguments. The "polluter pays" principle aims at ensuring that the costs of environmental control fall in the first place on the polluters, thereby ensuring that market forces take these costs into account and that resources would be allocated accordingly in production and consumption.

These two principles have inspired, and continue to inspire, EU policies in many environmental sectors.

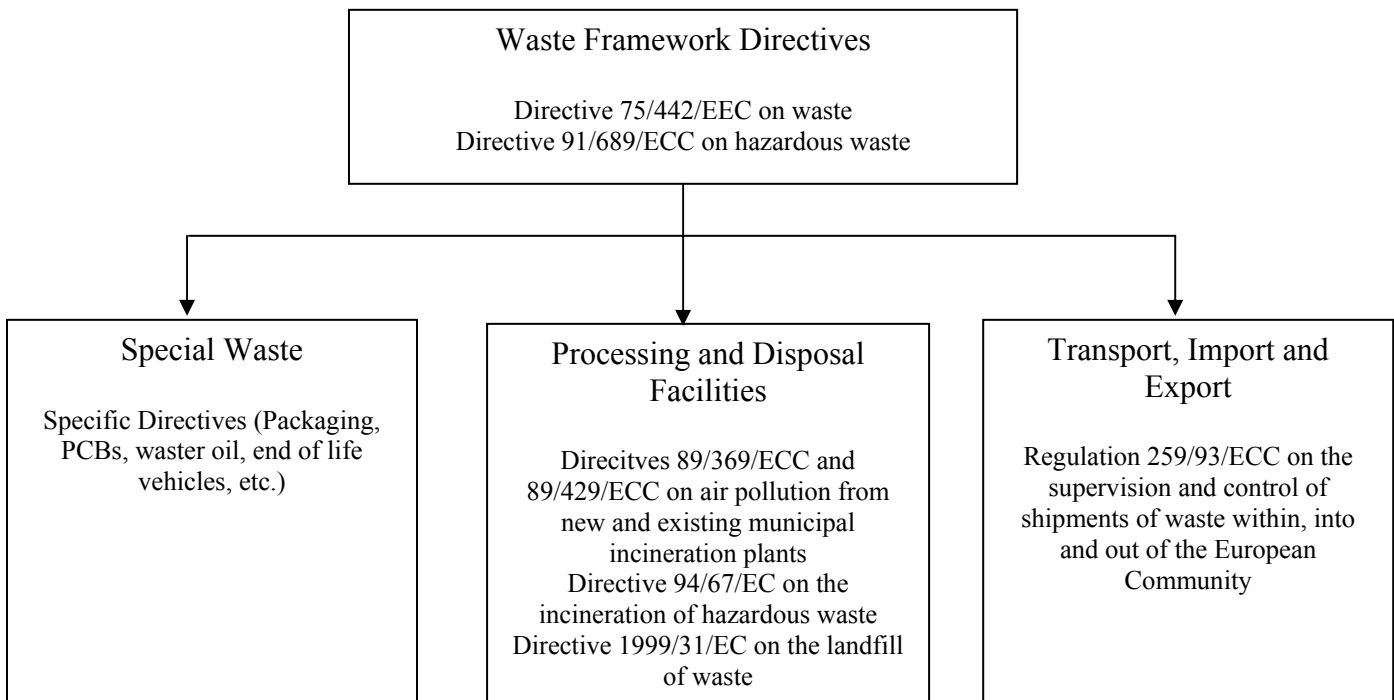
Following, the main sectors of the EU environmental legislation are described.

7.2.1 Waste management

The steadily growing pile of waste is one of the toughest problems facing the EU. Most of what we throw away is either burnt in incinerators, or dumped into landfill sites (67%). Special efforts must be made to increase recycling and reduce waste production. The EU wants to reduce the quantity of waste going to “final disposal” by 20% from 2000 to 2010, and by 50% by 2050, with special emphasis on cutting hazardous waste.

Waste management policy in Europe has always been part of a wider environmental policy. Community policy on waste management involves three complementary strategies:

- **eliminating waste at source** by improving product design;
- encouraging the **recycling and re-use** of waste;
- **reducing pollution** caused by waste incineration.



FRAMEWORK DIRECTIVE

The beginning of the Community's waste law can be determined with the issuance of the Council's Directive of 1975¹ on waste, updated in 1991 by the Directive 91/156/EEC. Directive 75/442/EEC is defined as the **Framework Directive on Waste**. It includes reference to two categories of detailed "daughter" directives: those setting requirements for the permitting and operation of waste disposal facilities, and those dealing with disposal options for specific types of waste. The regulation consisted of a listing of waste management methods and actions qualified as disposal (Annex IIA) and recovery (Annex IIB). Under the Framework Directive on Waste, EU Member States must encourage the prevention or reduction of waste and its harmfulness by encouraging the development of clean technologies, technical product improvements and disposal techniques. In addition to these directives, Regulation 259/93/EEC² establishes a system for controlling the movement of waste within, into and out of the European Union.

The evaluation of waste management measures in respect of whether there is a recovery or a disposal is particularly relevant for the reason that the entire Community waste law provides considerable privileges for measures for recovery. This is also confirmed by jurisdiction of the European Court of Justice (ECJ). In the evaluation of the environmental impact of a product it is therefore necessary to base the entire life cycle on the principle of "from the cradle to the grave".

HAZARDOUS WASTE

Great emphasis is given to the hazardous waste management. The Directive on hazardous waste³ lists wastes that can be classified as hazardous, and includes their constituents and properties. Under the directive, Member States must ensure that hazardous waste is recorded and identified and that different categories of hazardous waste are not mixed and that hazardous waste is not mixed with non-hazardous. When hazardous waste is collected, transported and stored, EU/international labelling standards must be respected.

EUROPEAN WASTE CATALOGUE

In 1994, a comprehensive list of all wastes, hazardous or otherwise, was produced pursuant to the Waste Framework Directive. This list was known as the European Waste Catalogue (EWC 1994). The EC then identified which of the wastes on EWC 1994 were deemed to be hazardous, based on the properties set out in the Directive on hazardous waste. The resulting list of wastes was called the Hazardous Waste List (HWL).

The EWC 1994 and HWL have been updated, combined and significantly extended. This resulted in a revised European Waste Catalogue required for implementation by Member States on 1st Jan 2002 (EWC 2002). Therefore, this new list defines hazardous waste as required by the HWD.

¹ Council Directive 75/442/EEC of 15 July 1975 on waste.

² Council Regulation 259/93/EEC of 1 February 1993 on the supervision and control of shipments of waste within, into and out of the European Community.

³ Council Directive 91/689/EEC of 12 December 1991 on hazardous waste.

WASTE INCINERATION

In 1989 EU issued two Directives⁴ on air pollution from new and existing municipal waste incineration plants. They regulate the permitting, design, equipment, operation and reporting of municipal waste incineration plants. Directive 89/369/EEC relates to new plants where authorisation to operate was granted on or after 1 December 1990. The directives set limits for emissions of dust, certain combinations of heavy metals, hydrochloric acid, hydrofluoric acid and sulphur dioxide from plants that deal exclusively with municipal waste.

The incineration of hazardous waste is regulated by a specific directive⁵, that describes operational standards and emissions limits for new and existing hazardous waste incinerators, which Member States must enforce through permits (listing the type and quantity of hazardous waste being incinerated).

In 2000 new Directive on waste incineration⁶ has been issued. This new directive covers the incineration of the municipal solid waste and, hazardous waste as well as the co-incineration of the waste in industrial plants, as cement works for instance. New installations are required to meet the new emission limit values by no later than 28 December 2002, and existing installations by no later than 28 December 2005.

LANDFILLS

The 1999 Landfill Directive⁷ aims to improve standards of landfilling across Europe, through setting specific requirements for the design, operation and aftercare of landfills, and for the types of waste that can be accepted in landfills. It interdicts landfill disposal of certain hazardous wastes, liquid wastes and tyres. The directive also requires separate sites for hazardous, non-hazardous and inert wastes. The Directive aims to reduce the amount of biodegradable municipal waste sent to landfill. Biodegradable waste is waste which breaks down to produce methane (a greenhouse gas causing global warming).

SPECIFIC WASTE

For some kinds of waste, the Community has developed specific provisions. The main ones are:

1. **Packaging and packaging waste:** the Directive 94/62/EC⁸ aims to harmonise national measures in order to prevent or reduce the impact of packaging and

⁴ Council Directive 89/369/EEC of 8 June 1989 on the prevention of air pollution from new municipal waste incineration plants and Council Directive 89/429/EEC of 21 June 1989 on the reduction of pollution from existing municipal waste-incineration plants.

⁵ Council Directive 94/67/EC of 16 December 1994 on the incineration of hazardous waste.

⁶ Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste.

⁷ Council Directive 99/31/EC of 26 April 1999 on the landfill of waste.

⁸ Council Directive 94/62/EC of 15 December 1994 on packaging and packaging waste

packaging waste on the environment and to ensure the functioning of the Internal Market. It contains provisions on the prevention of packaging waste, on the re-use of packaging and on the recovery and recycling of packaging waste.

2. **Disposal of PCBs and PCTs:** the purpose of the Directive 96/59/EC⁹ is to harmonise laws on the controlled disposal of PCBs and on the decontamination or disposal of equipment containing PCBs, with a view to eliminating them completely. Equipment containing PCBs must be inventoried, labeled and reported to the Commission, and the disposal of PCBs must be licensed and carried out in accordance with conditions and plans. “PCBs” means PCBs, PCTs and similar substances as defined in Article 2 of the Directive.
3. **Disposal of spent batteries and accumulators:** Community legislation¹⁰ on batteries introduces measures for the upgrading and controlled disposal of spent batteries and accumulators. Member States must prohibit the marketing of batteries and accumulators containing a certain percentage of mercury and are required to draw up programmes primarily aimed at reducing the heavy metal content of batteries and accumulators. Under these programmes, Member States must also encourage the separate collection of batteries. Batteries and accumulators must be marked in such a way as to indicate separate collection, recycling requirements and heavy metal content.
4. **Disposal of waste oil:** the purpose of the Directive 75/439/EEC¹¹ 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.
5. **Use of sewage sludge in agriculture:** The Sewage Sludge Directive 86/278/EEC¹² seeks to encourage the use of sewage sludge in agriculture and to regulate its use in such a way as to prevent harmful effects on soil, vegetation, animals and man. To this end, it prohibits the use of untreated sludge on agricultural land unless it is injected or incorporated into the soil. To provide protection against potential health risks from residual pathogens, sludge must not be applied to soil in which fruit and vegetable crops are growing or grown, or less than ten months before fruit and vegetable crops are to be harvested.
6. **End-of-life vehicles:** Waste prevention is the priority objective of the Directive. To this end, it stipulates that vehicle manufacturers and material and equipment manufacturers must endeavour to reduce the use of hazardous substances when

⁹ Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCBs/PCTs).

¹⁰ Council Directive 91/157/EEC of 18 March 1991 on batteries and accumulators containing certain dangerous substances

¹¹ Council Directive 75/439/EEC of 16 June 1975 on the disposal of waste oil.

¹² Council Directive 86/278/EEC of 12 June 1986 on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture.

designing vehicles; design and produce vehicles which facilitate the dismantling, re-use, recovery and recycling of end-of-life vehicles; increase the use of recycled materials in vehicle manufacture; ensure that components of vehicles placed on the market after 1 July 2003 do not contain mercury, hexavalent chromium, cadmium or lead. The Directive also introduces provisions on the collection of all end-of-life vehicles.

7. **Waste electrical and electronic equipment:** the European Commission has adopted a proposal for a Directive on Waste Electrical and Electronic Equipment (WEEE) and a proposal for a Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment¹³. The proposed Directives are designed to tackle the fast increasing waste stream of electrical and electronic equipment and complements European Union measures on landfill and incineration of waste. Increased recycling of electrical and electronic equipment, in accordance with the requirements of the proposal for a WEEE Directive, will limit the total quantity of waste going to final disposal. Producers will be responsible for taking back and recycling electrical and electronic equipment. Consumers will be able to return their equipment free of charge. In order to prevent the generation of hazardous waste, the proposal for a Directive on the restriction of the use of certain hazardous substances requires the substitution of various heavy metals and brominated flame retardants in new electrical and electronic equipment from 1 January 2008 onwards.

INTERNATIONAL CONVENTIONS

The Community is a Party to the Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (the Basel Convention), which has been signed by more than 100 countries. The Community has already ratified the amendment to this Convention, banning exports of hazardous wastes from the OECD countries, the Community and Liechtenstein to non-OECD countries, regardless of whether such waste is for disposal, recycling or use.

<http://europa.eu.int/comm/environment/waste/index.htm>

<http://europa.eu.int/comm/environment/waste/legislation/>

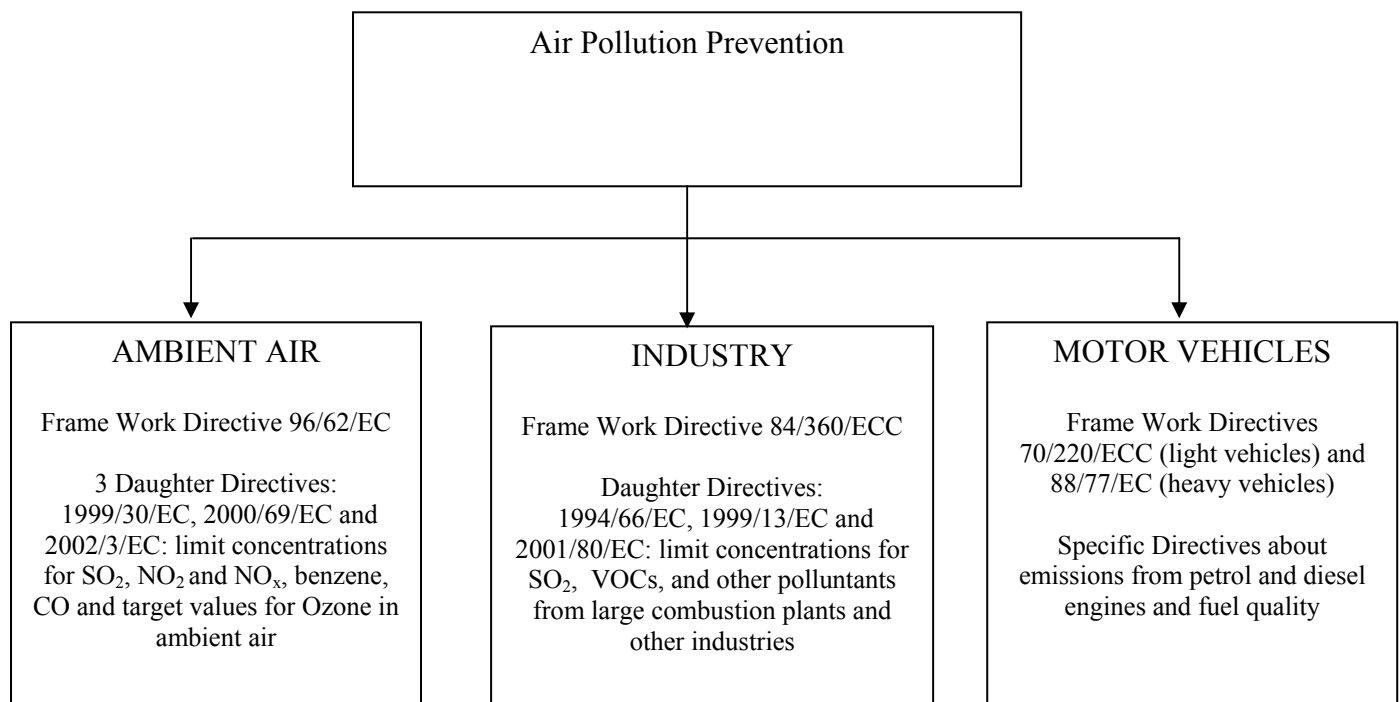
<http://europa.eu.int/scadplus/leg/en/s15002.htm>

7.2.2 Air pollution

Air pollution is one of the areas in which the European Union has been most active. The issue of European policies has been to improve air quality by controlling emissions of harmful substances into the atmosphere, improving fuel quality, and by integrating environmental protection requirements into the transport and energy sectors.

¹³ Proposals for a Directive of the European Parliament and of the Council on waste electrical and electronic equipment [COM(2000)347 final - Official Journal C 365, 19.12.2000] and Proposal for a Directive of the European Parliament and the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment [COM(2000)347 final - Official Journal C 365, 19.12.2000].

The Community is acting at many levels to reduce exposure to air pollution: through EC legislation, through work at the wider international level in order to reduce cross-border pollution, through working with sectors responsible for air pollution and with national, regional authorities and NGOs, and through research.



The UE acts refer to three interveting areas:

AMBIENT AIR QUALITY:

Air Quality is one of the areas in which Europe has been most active in recent years. The EC aim has been to develop an overall strategy through the setting of long-term air quality objectives. A series of Directives has been introduced to control levels of certain pollutants and to monitor their concentrations in the air. In 1996, the Environment Council adopted **Framework Directive 96/62/EC**¹⁴ on ambient air quality assessment and management. This Directive covers the revision of previously existing legislation and the introduction of new air quality standards for previously unregulated air pollutants, setting the timetable for the development of daughter directives on a range of pollutants. The list of atmospheric pollutants to be considered includes sulphur dioxide, nitrogen dioxide, particulate matter, lead and ozone – pollutants governed by already existing ambient air quality objectives- and benzene, carbon monoxide, poly-aromatic hydrocarbons, cadmium, arsenic, nickel and mercury.

The Framework Directive was followed by **daughter directives**, which will set the numerical limit values, or in the case of ozone, target values for each of the identified pollutants. Besides setting air quality limit and alert thresholds, the objectives of the daughter directives are to harmonise monitoring strategies, measuring methods, calibration and quality

¹⁴ Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management.

assessment methods to arrive at comparable measurements throughout the EU and to provide for good public information.

The main daughter directives are:

- 1. The first Daughter Directive 1999/30/EC¹⁵**, that introduces measures to maintain or improve the quality of the ambient air by establishing limit values for the concentrations of sulphur dioxide, nitrogen dioxide and nitrogen oxides, particulates and lead, together with alert thresholds for concentrations of sulphur dioxide and nitrogen dioxide in the ambient air by evaluating those concentrations on the basis of common methods and criteria, and by bringing together suitable information on such concentrations in order to keep the public informed.
- 2. The second Daughter Directive 2000/69/EC¹⁶**, that establishes limit values for concentrations of benzene and carbon monoxide in ambient air, and requires to assess concentrations of those pollutants in ambient air on the basis of common methods and criteria, as well as to obtain adequate information on concentrations of benzene and carbon monoxide and ensure that it is made available to the public. The limit value for carbon monoxide must be met by 2005. The limit value for benzene must be met by 2010 unless an extension is granted. As with the first daughter Directive, Member States will have to prepare attainment programmes for those areas where attainments cannot be assumed without further changes.
- 3. The third Daughter Directive 2002/3/EC** relating to ozone was adopted on 12 February 2002. The directive sets long-term objectives equivalent to the World Health Organisation's new guideline values and target values for ozone in ambient air to be attained where possible by 2010. These targets follow Directive 2001/81/EC on national emission ceilings. Non-compliance requires Member States to work out reduction plans and programmes to be reported to the Commission and to be made available to the public so as to allow citizens to trace progress towards meeting the ozone standards. The directive includes also improved and more detailed requirements to monitor and assess ozone concentrations and to inform citizens about the actual pollution load.

INDUSTRY

Depositions of sulphur, nitrogen compounds and other air pollutants are having profound effects on the European environment and the various countries economies, and a large part of the pollution emanates from power stations and other large combustion plants. In 1990 these were emitting more than 10 million tons of sulphur dioxide and nearly 3 million tons of nitrogen oxides, or 63 and 21 per cent respectively of all SO₂ and NO_x that were being let out in the present fifteen member countries of the European Union.

¹⁵ Council Directive 1999/30/EC of 22 April 1999 laying down limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulates and lead in the ambient air.

¹⁶ Council Directive 2000/69/EC relating to limit values for benzene and carbon monoxide in ambient air.

The effects on the environment that are due, directly or indirectly, to these pollutants are various and include the acidification of soil and water, damage to forests, eutrophying of terrestrial and coastal ecosystems, impairment of the natural diversity of flora and fauna, corroding of the materials in cultural edifices and structures in general, and harm to human health. Emissions of nitrogen oxides is a main precursor to the formation of ground-level ozone, a pollutant that has been shown to cause damage to human health as well as to vegetation and materials. Currently, the ozone threshold levels set for the protection of human health and the environment are frequently being exceeded in the EU. Moreover, emissions of both sulphur and nitrogen oxides give rise to increased levels of sulphate and nitrate aerosols, small airborne particles that are damaging to human health.

Directive 84/360/EEC¹⁷ was a **framework Directive** which established certain measures and procedures aimed at controlling and reducing emissions from industrial plants. Under the Directive, proposed industrial developments listed in Annex I had to obtain prior authorisation from designated national or regional authorities. This authorisation is subject to the proposed plant meeting specified requirements regarding air emissions:

- the authorising body must be satisfied that all appropriate measures have been taken against air pollution (including the application of BATNEEC Best Available Technologies Not Entailing Excessive Costs);
- that the use of the plant will not cause significant air pollution (especially of substances listed in Annex II of the Directive);
- that no emission limit values are exceeded, and that all relevant air quality values are taken into account.

On 24 November 1988, the “**Large Combustion Plant**” Directive 88/609/EEC¹⁸ was adopted by Member States. This was the first Directive to be adopted under the framework Directive 84/360/EEC. The Directive imposed limits on emissions of sulphur dioxide, nitrogen oxides and dust from existing and new plants with a rated thermal input greater than 50 megawatts. This Directive is no longer in force.

Directive 94/66/EC¹⁹ on the limitation of emissions of sulphur dioxide from large combustion plants amended Directive 88/609/EEC and set limit values for SO₂ emissions from smaller combustion plants using solid fuels, in particular, coal. It established limit values of 2,000 milligrams of SO₂ per cubic metre for some existing facilities and all new facilities with a capacity of between 50 and 100 thermal megawatts.

¹⁷ Council Directive 88/609/EEC of 24 November 1988 on the limitation of emissions of certain pollutants into the air from large combustion plants.

¹⁸ Council Directive of 24 November 1988 on the limitation of emissions of certain pollutants into the air from large combustion plants (88/609/EEC).

¹⁹ European Parliament and Council Directive 94/63/EC of 20 December 1994 on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations.

Directive 1999/13/EC²⁰ on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations, issued to prevent or reduce the direct and indirect effects of emissions of volatile organic compounds (VOCs) in the environment and on human health, by setting emission limits for such compounds and laying down operating conditions for industrial installations using organic solvents.

Directive 2001/80/EC²¹ on the limitation of emissions of certain pollutants into the air from large combustion plants was published in the Official Journal on 27 November 2001. Large combustion plants play a decisive role in the Community's efforts to combat acidification, eutrophication and ground-level ozone as part of the overall strategy to reduce air pollution. The overall aim of the Directive is to reduce the emissions of acidifying pollutants and ozone precursors, which are carried over very long distances and damage human health, leading to ground level ozone episodes and deposits in the form of "acid rain".

MOTOR VEHICLES

Motor vehicle emissions are regulated by Directive 70/220/EEC²² (light vehicles) and 88/77/EC (heavy vehicles) and amendments to those directives, that establish limit values for emissions from petrol and diesel engine passenger cars and commercial vehicles. These values are regularly lowered and adapted to technical progress.

The Auto-Oil Programme aims to improve air quality in European cities. It focused on the emissions of carbon monoxide (CO), Volatile Organic Compounds (VOC), nitrogen oxides (NO_x) and particles. By the programme stricter limit values will be implemented for light vehicles 2005 (Directive 98/69/EC²³) and for heavy duty vehicles 2005 and 2008 (Directive 1999/96/EC²⁴).

Also for vehicle in use there is legislation on periodic inspections at which the vehicle owners maintenance of the vehicle is checked (Directive 96/96/EC²⁵).

²⁰ Council Directive 1999/13/EC of 11 March 1999 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations.

²¹ Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants.

²² Council Directive 70/220/EEC of 20 March 1970 on the approximation of the laws of the Member States relating to measures to be taken against air pollution by emissions from motor vehicles.

²³ Council Directive 98/69/EC relating to measures to be taken against air pollution by emissions from motor vehicles.

²⁴ Directive 1999/96/EC of the European Parliament and of the Council of 13 December 1999 on the approximation of the laws of the Member States relating to measures to be taken against the emission of gaseous and particulate pollutants from compression ignition engines for use in vehicles, and the emission of gaseous pollutants from positive ignition engines fuelled with natural gas or liquefied petroleum gas for use in vehicles and amending Council Directive 88/77/EEC

²⁵ Council Directive 96/96/EC of 20 December 1996 on the approximation of the laws of the Member States relating to roadworthiness tests for motor vehicles and their trailers.

Directive 98/70²⁶ contains the environmental fuel quality specifications for petrol and diesel fuels in the Community with the main focus on sulphur and for petrol on lead and aromatics. There are two distinct specifications. The first enters into effect on 1st January 2000 and the second on 1st January 2005. This latter specification is still incomplete as it only sets limits for the sulphur content of petrol and diesel (50 ppm) and the aromatics content of petrol (35% by volume).

By the Auto-Oil Programme leaded petrol has been phased out in Europe. From 1 January 2002 all petrol sold in the Member States is unleaded.

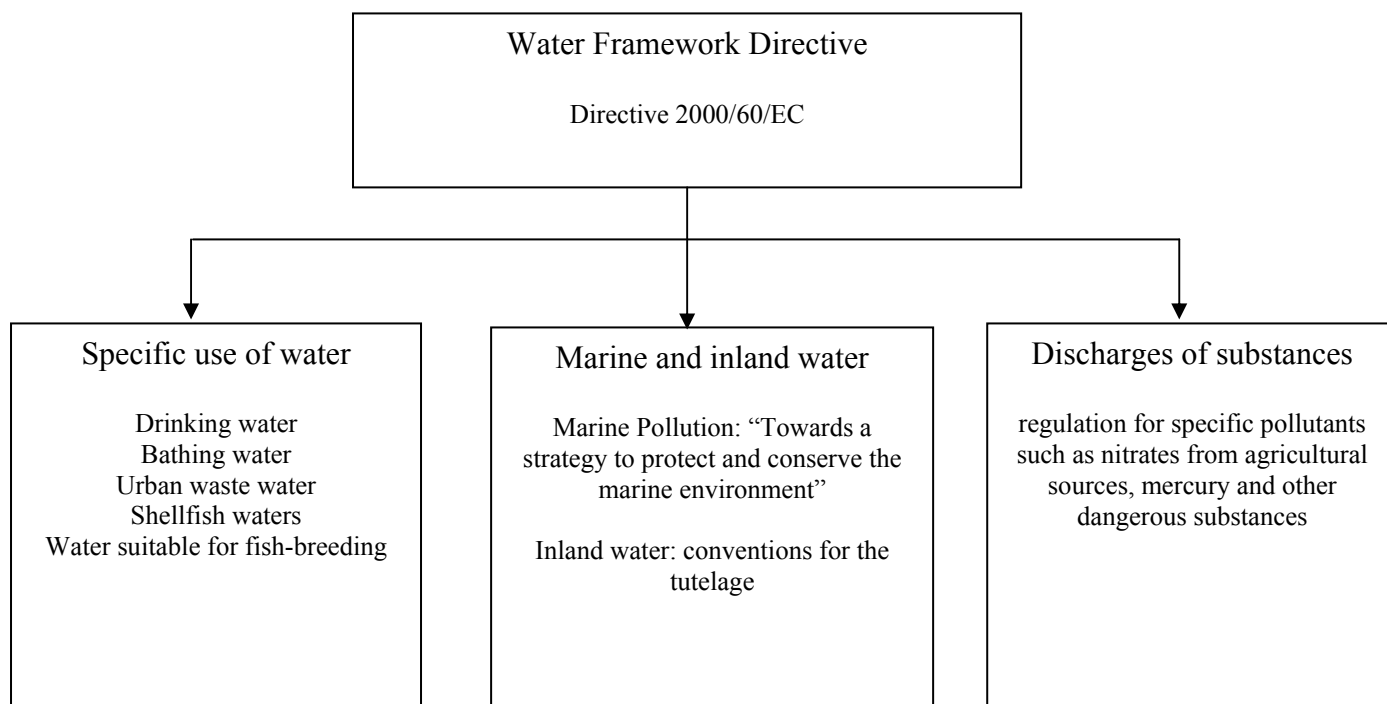
http://europa.eu.int/comm/environment/air_en.htm

<http://europa.eu.int/scadplus/leg/en/s15004.htm>

7.2.3 Water protection and management

A number of Directives have been adopted by the Member States to introduce water quality standards: drinking water, bathing water, water for fish farms and shellfish culture.

Community measures in the 80s and early 90s were based more on the principle of emission limits. The treatment of urban waste water and measures to combat pollution from



nitrates are examples of this.

²⁶ Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC.

FRAMEWORK DIRECTIVE

From 1995, the Community began to adopt a more global approach to water management. This has led to the **Framework Directive**²⁷ for a policy on water which seeks to promote sustainable use of water resources and to ensure the coherence of policy in this area.

This Directive integrates economic concepts and approaches into water policies and makes compulsory an adequate recovery of the costs of water services for each economic sector, i.e. households, industry and agriculture. As specified in the Water Framework Directive, for example, water pricing policies will need to act as incentives in order to achieve environmental improvements in the status of water bodies. The Commission, in its Communication to the Council, European Parliament and Economic and Social Committee, has described the questions and options in connection with defining water pricing policies enabling the sustainability of water resources to be boosted.

The Decision of November 2001²⁸ has established a list of priority substances in the field of water policy, for which quality standards and measurements for the reduction of emission controls will be set at Community level.

SPECIFIC PROVISIONS

Specific interventions of Community policies concern:

1. **Specific uses of water**, such as drinking water²⁹, bathing water³⁰, urban waste water³¹, shellfish waters³², water suitable for fish-breeding³³.
2. **Marine pollution**: EU has formulated, with the Communication from the Commission to the Council and the European Parliament of 2 October 2002 "Towards a strategy to protect and conserve the marine environment", a thematic strategy to promote sustainable use of the seas and oceans and to conserve marine ecosystems all over the world and stipulating various

²⁷ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000, establishing a framework for Community action in the field of water policy [Official Journal L 327, 22.12.2001].

²⁸ Decision 2455/2001/EC of the European Parliament and of the Council of 20 November 2001, establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC [Official Journal L331 of 15.12.2001].

²⁹ Council Directive 80/778/EEC of 15 July 1980 and Council Directive 98/83/EC of 3 November 1998 that define the essential quality and control standards which water intended for human consumption must meet. Council Directive 75/440/EEC of 16 June 1975 concerning the quality required of surface water intended for the abstraction of drinking water in the Member States.

³⁰ Council Directive 76/160/EEC of 8 December 1975 concerning the quality of bathing water.

³¹ Council Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment.

³² Council Directive 79/923/EEC of 30 October 1979 on the quality required of shellfish waters.

³³ Council Directive 78/659/EEC of 18 July 1978 on the quality of fresh waters needing protection or improvement in order to support fish life.

international conventions for the protection of marine environment, i.e. Convention on the protection of the Mediterranean Sea, Helsinki Convention on the protection of the Baltic Sea, Paris Convention on the protection of the marine environment of the North-East Atlantic. After the recent marine accidents new restrictive policies are being introduced³⁴.

3. **Inland water:** EU has established a framework for the prevention and control of pollution of inland watercourses, defining international policies of cooperation, such as Helsinki Convention on transboundary watercourses and international lakes, Convention for the Protection of the Rhine and Communication from the Commission on Environmental cooperation in the Danube - Black Sea region.
4. **Discharges of substances:** EU has introduced particular regulation for some specific pollutants producing serious water pollution, such as nitrates from agricultural sources³⁵, mercury³⁶ and other dangerous substances³⁷

<http://europa.eu.int/comm/environment/water/index.html>

<http://europa.eu.int/scadplus/leg/en/s15005.htm>

http://europa.eu.int/comm/research/water-initiative/index_en.html

7.2.4 Noise pollution

In the European Union about 40% of the population is exposed to road traffic noise with an equivalent sound pressure level exceeding 55 dBA daytime; and 20% is exposed to levels exceeding 65 dBA. Main sources of noise include road, rail and air traffic, industries, construction and public work, and the neighbourhood.

The main thrust of Community strategy has long been to adopt **maximum permissible levels for noise from certain types of machine** (motorvehicles³⁸ and motorcycles³⁹ or, more recently, aircraft⁴⁰, equipment used on the outside of buildings⁴¹, etc.).

³⁴ Decision No 2850/2000/EC of the European Parliament and of the Council of 20 December 2000 setting up a Community framework for cooperation in the field of accidental or deliberate marine pollution, and Proposal for a regulation of the European Parliament and of the Council on the establishment of a fund for the compensation of oil pollution damage in European waters and related measures [COM (2000) 802 final - Official Journal C 120 E, 24 April 2001.

³⁵ Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources.

³⁶ Council Directive 82/176/EEC of 22 March 1982 on limit values and quality objectives for mercury discharges by the chlor-alkali electrolysis industry.

³⁷ Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community and Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances.

³⁸ Council Directive 70/157/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the permissible sound level and the exhaust system of motor vehicles.

In its 1996 **Green Paper**⁴², the European Commission developed a new framework for noise policy, based on shared responsibility between the EU, national and local level, and extending this strategy by reducing noise emissions at source.

A **proposal for a new Directive**⁴³ was introduced in 2000. It wants to establish a common approach to the management of environmental noise, with a view to protecting the public against the harmful effects of exposure to noise in the domestic environment.

<http://europa.eu.int/comm/environment/noise/home.htm>

<http://europa.eu.int/scadplus/leg/en/s15003.htm>

7.2.5 Chemical dangerous products

In the early days of the European Community it was recognised that there was a need to protect the general public and the environment from certain dangerous substances and preparations and to create common standards to protect consumers in order to ensure the free circulation of goods among the Member States.

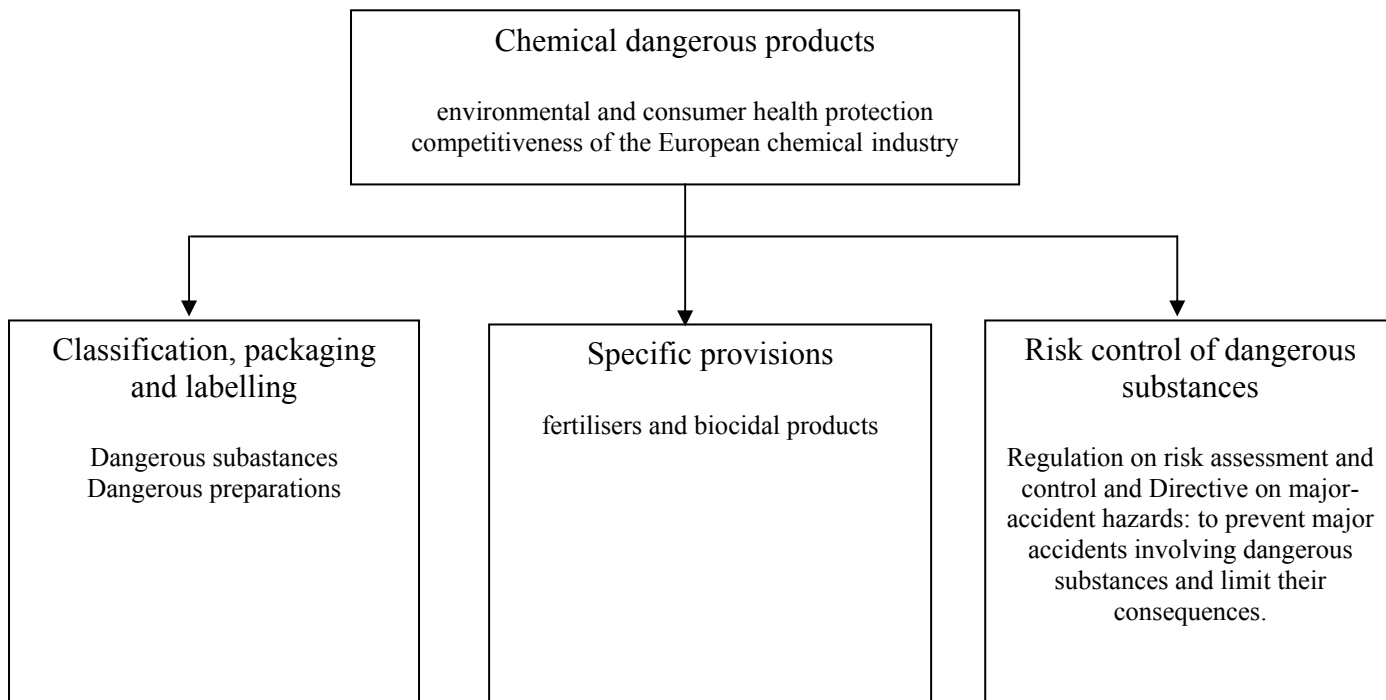
³⁹ Council Directive 78/1015/EEC of 23 November 1978 on the approximation of the laws of the Member States on the permissible sound level and exhaust system of motorcycles.

⁴⁰ Council Regulation (EC) No 925/1999 on the registration and operation within the Community of certain types of civil subsonic jet aeroplanes which have been modified and recertified as meeting the standards of Volume I, Part II, Chapter 3 of Annex 16 to the Convention on International Civil Aviation (third edition, July 1993)..

⁴¹ Directive 2000/140/EC of the European Parliament and of the Council of 8 May 2000 on the approximation of the laws of the Member States relating to the noise emission in the environment by equipment for use outdoors.

⁴² Commission Green Paper, of 4 November 1996, on future noise policy.

⁴³ Proposal for a Directive of the European Parliament and of the Council relating to the assessment and management of environmental noise [COM(2000) 468 final - not published in the Official Journal].



The Community measures are based on the principle that a fair balance needs to be struck between, on the one hand, environmental and consumer health protection and, on the other, the competitiveness of the European chemical industry.

The first Directive, which is concerned with the classification, packaging and labelling of **dangerous substances**, dates back to 1967⁴⁴. This Directive, together with the one about **dangerous preparations**⁴⁵, have imposed strict measures on classification, packaging and labelling with a view to protecting human and animal health and the environment.

Subsequently, **specific provisions** were adopted with regard to fertilisers⁴⁶ and biocidal products⁴⁷ which are covered by separate directives seeking.

Therefore two directives involve **risk control of dangerous substances**: the regulation on risk assessment and control⁴⁸, and the directive on major-accident hazards⁴⁹, that want to

⁴⁴ Council Directive 1967/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

⁴⁵ Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

⁴⁶ Council Directive 76/116/EEC of 18 December 1975 on the approximation of the laws of the Member States relating to fertilisers.

⁴⁷ Directive 98/8/EC of the European Parliament and the Council of 16 February 1998 concerning the placing of biocidal products on the market.

⁴⁸ Council Regulation (EEC) No 793/93 of 23 March 1993 on the evaluation and control of the risks of existing substances

prevent major accidents involving dangerous substances and limit their consequences for man and the environment.

Although Community legislation already prohibits some harmful chemicals (asbestos, for example), there are gaps in the Community legislation with regard to existing chemical substances. There is a lack of information on the effects of many existing substances placed on the market prior to 1981, when the requirement for the testing and notification of new substances was introduced.

7.2.6 Soil protection

Soil is defined as the top layer of the earth's crust, formed by mineral particles, organic matter, water, air and living organisms. The main threats to soil in Europe are: erosion, decline in organic matter, soil contamination, soil sealing (caused by the covering of soil for housing, roads and other infrastructure), soil compaction (caused by mechanical pressure through the use of heavy machinery, overgrazing or sporting activities), decline in soil biodiversity, salinisation (excessive accumulation of soluble salts of sodium, magnesium and calcium) and floods and landslides. All these processes are either driven or exacerbated by human activity and some degradation processes have increased over recent decades. The economic consequences and restoration costs linked to the threats to soil are huge.

In response to concerns about **the degradation of soils in the EU**, the European Commission, in its Communication of 16 April 2002⁵⁰, has outlined the first steps in a strategy to protect soils. The objective is to formulate a plan with a view to developing a Community strategy for soil protection.

<http://europa.eu.int/comm/environment/soil/index.htm>

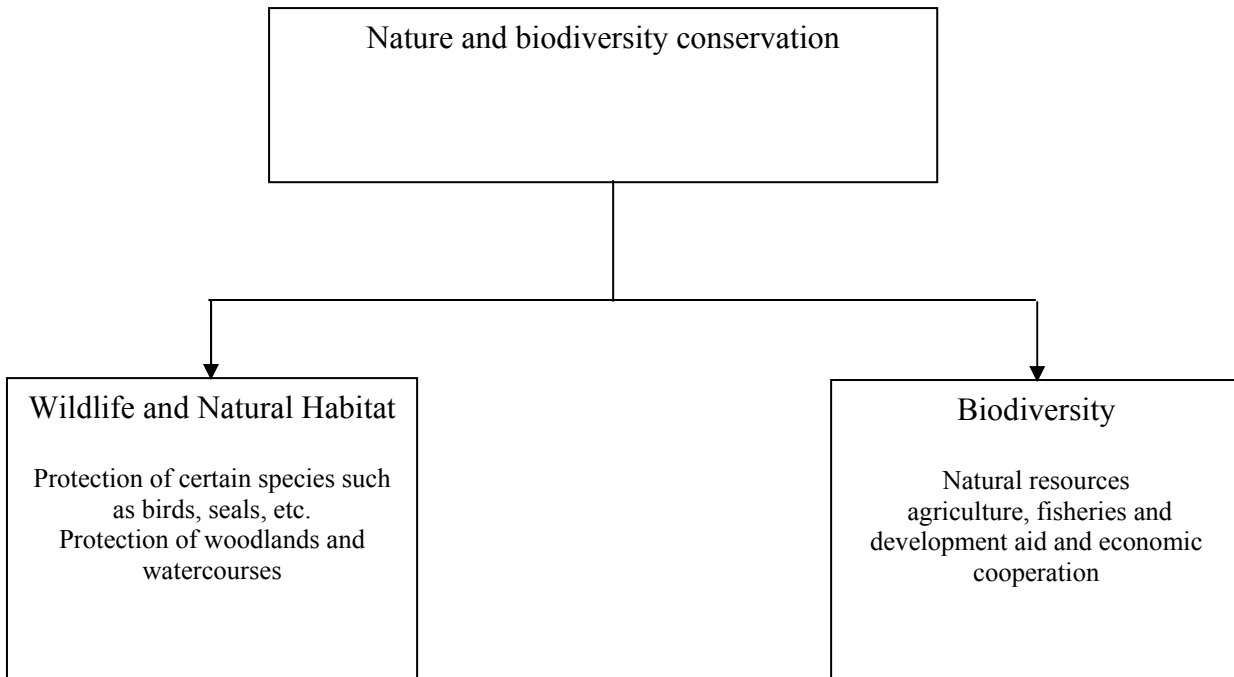
<http://europa.eu.int/scadplus/leg/en/s15010.htm>

7.2.7 Nature and biodiversity conservation

The European Union's cover an area of over 3 million km² stretching from the Arctic Circle in the north to the warm Mediterranean waters in the south, with circa 1 000 plant species and more than 150 species of birds severely threatened or on the brink of extinction.

⁴⁹ Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances

⁵⁰ Communication of 16 April 2002 from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions - Towards a Thematic Strategy for Soil Protection [COM (2002) 179 final - Not published in the Official Journal.



The aim of EU policy is to stop the loss of biodiversity, both in Member States and internationally, and to include nature protection into other policy areas, such as farming and industry.

Community legislation has introduced a number of measures to **conserve wildlife** (protection of certain species such as birds⁵¹, seals⁵², etc) and **natural habitats**⁵³ (protection of woodlands and watercourses).

More recently, the Community has published action plans to promote **biodiversity** in the areas of natural resources⁵⁴, agriculture⁵⁵, fisheries⁵⁶, and development aid and economic cooperation⁵⁷.

⁵¹ Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds

⁵² Council Directive 83/129/EEC of 28 March 1983 concerning the importation into the Member States of skins of certain seal pups and products derived therefrom.

⁵³ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

⁵⁴ Commission Communication of 27 March 2001 to the Council and the European Parliament: Biodiversity Action Plan for the Conservation of Natural Resources (Volume II).

⁵⁵ Commission Communication of 27 March 2001 to the Council and the European Parliament: Biodiversity Action Plan for Agriculture (Volume III).

⁵⁶ Commission Communication of 27 March 2001 to the Council and the European Parliament: Biodiversity Action Plan for Fisheries (Volume IV).

⁵⁷ Communication of 27 March 2001 from the Commission to the Council and the European Parliament: Biodiversity Action Plan for Economic and Development Co-operation (volume V).

http://europa.eu.int/comm/environment/nature_biodiversity/index_en.htm

<http://europa.eu.int/scadplus/leg/en/s15006.htm>

7.2.8 Accident prevention, preparedness and response

Increasing industrialisation after the Second World War led to a significant increase of accidents involving dangerous substances. Following severe chemical accidents in the 1970's, such as the "Flixborough explosion" and the "Seveso dioxin release", European legislation aiming at the prevention of such accidents and the limitation of their consequences for man and the environment was developed.

SEVESO DIRECTIVES

The original **Seveso Directive** of 1982 entered into application in 1984 and was replaced by the Seveso II Directive in 1996⁵⁸. The Directive introduced important changes and new concepts. It focuses on protection of the environment, and was the first to cover (aquatotoxic) substances considered dangerous for the environment. Likewise it introduced new requirements relating to safety management systems, emergency plans and land-use planning and tightened up the provisions on inspections and public information.

Two important requirements of the Seveso II legislation relate to the establishment of on- and offsite emergency plans and the information to the public. Emergency plans are measures that aim at controlling and containing incidents so as to minimise the effects. *Internal Emergency Plans* for response measures to be taken inside establishments have to be drawn up by the operator and to be supplied to the local authorities to enable them to draw up *External Emergency Plans*. Emergency Plans have to be reviewed, revised and updated, where necessary. The Seveso II Directive gives more rights to the public in terms of access to information as well as in terms of consultation. Operators as well as public authorities have obligations to inform the public about behaviours in the event of an accident. Also passive information that the interested public can be obtained from the plant operator and/or the public authorities upon request.

<http://europa.eu.int/comm/environment/seveso/index.htm>

<http://europa.eu.int/scadplus/leg/en/lvb/l21215.htm>

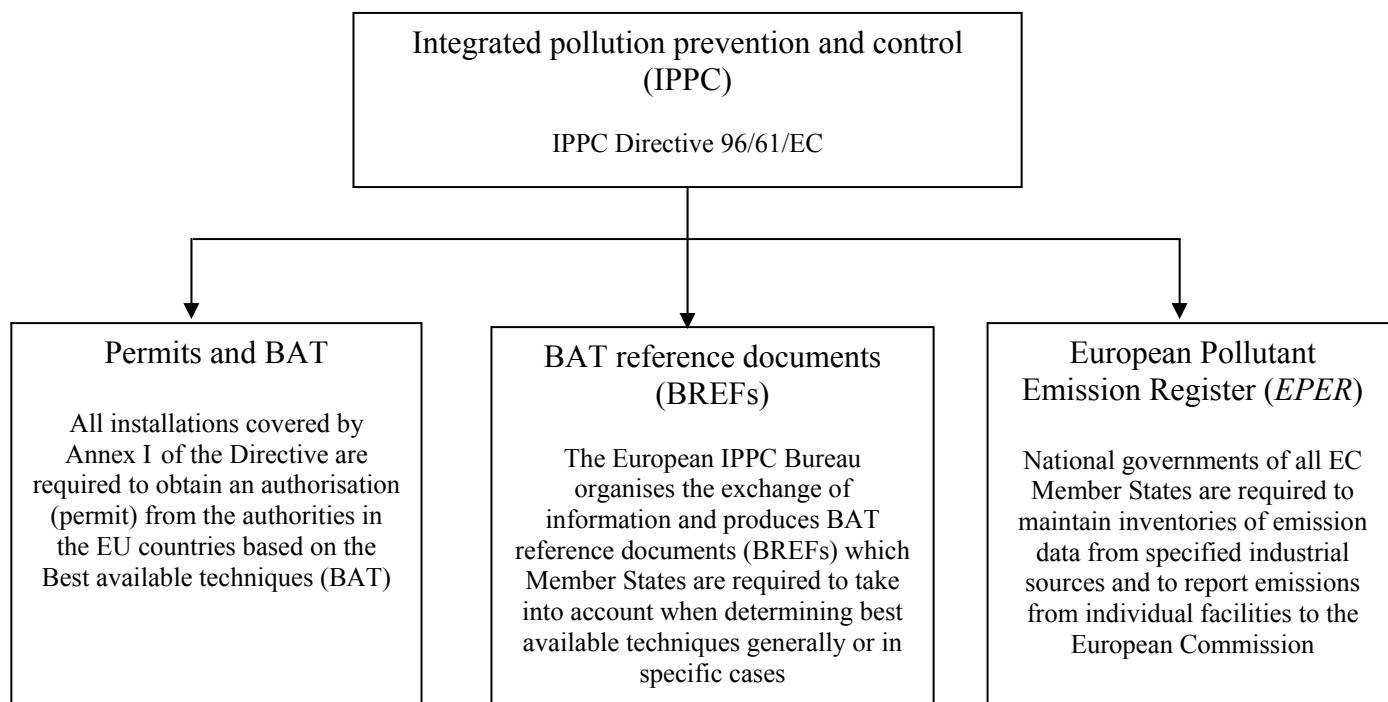
7.2.9 Integrated pollution prevention and control (IPPC)

The **IPPC Directive**⁵⁹ lays down a framework requiring Member States to issue operating permits for certain installations carrying on industrial activities described in its Annex 1.

⁵⁸ Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances

⁵⁹ Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control.

The Directive applies to new or substantially changed installations with effect from October 1999 and no later than October 2007 for existing installations.



All installations covered by Annex I of the Directive are required to obtain an authorisation (permit) from the authorities in the EU countries. These permits must contain conditions based on **best available techniques (BAT)**, to achieve a high level of protection of the environment as a whole.

The **European IPPC Bureau** organises the exchange of information and produces **BAT reference documents (BREFs)** which Member States are required to take into account when determining best available techniques generally or in specific cases. The Bureau is settled in Sivilla and carries on its work through Technical Working Groups (TWGs) comprising nominated experts from EU Member States, EFTA countries, Accession countries, industry and environmental NGOs. These experts provide information and data and then review the draft documents the Bureau produces.

Therefore, the Directive provides for the setting up of a **European Pollutant Emission Register (also known as EPER)**. National governments of all EC Member States are required to maintain inventories of emission data from specified industrial sources and to report emissions from individual facilities to the European Commission. The reported data will be made accessible in a public register (EPER), which is intended to provide environmental information on major industrial activities.

<http://europa.eu.int/comm/environment/ippc/index.htm>

<http://europa.eu.int/scadplus/leg/en/lvb/l28045.htm>

<http://europa.eu.int/comm/environment/ippc/eper/index.htm>

<http://eippcb.jrc.es/>

7.2.10 Climate change

The Earth's average surface temperature rose by around 0.6 °C during the 20th century and evidence is getting stronger that most of the global warming over the last 50 years is attributable to human activities, such as burning fossil fuels and deforestation, which cause emissions of carbon dioxide (CO₂) and other "greenhouse" gases. To achieve a significant reduction in air pollution, which is the main cause of global warming, national and international measures must be combined to reduce emissions of the gases responsible.

To this end the **United Nations Framework Convention on Climate Change** (1992) and the **Kyoto Protocol** (1997) were adopted. The Parties have undertaken to **reduce their emissions of greenhouse gases by at least 5% of their 1990 levels during the period 2008-2012**. At the Marrakech Conference (COP7, 29 October to 9 November 2001), the Parties reached an agreement translating the procedures for implementing the Kyoto Protocol into a legally binding text. In April 2002 the European Union has ratified the Kyoto Protocol⁶⁰.

In order to make progress towards the target it has set itself under the Kyoto Protocol, the Community has approved a programme on climate change and a communication on its implementation. The programme combat climate change by means of various cross-cutting measures in the fields of energy, industry and transport. The Commission has also published a **Green Paper**⁶¹ on greenhouse gas emissions trading within the EU.

In March 2000 the Commission launched the **European Climate Change Programme (ECCP)**⁶² to prepare additional policies and measures, as well as an **emissions trading scheme**⁶³, to ensure that the EU achieves the 8% cut in emissions by 2008-2012 to which it is committed under the Kyoto Protocol.

http://europa.eu.int/comm/environment/climat/home_en.htm

<http://europa.eu.int/scadplus/leg/en/lvb/l28044.htm>

⁶⁰ Council Decision 2002/358/EC of 25 April 2002 concerning the approval, on behalf of the European Community, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder.

⁶¹ Green Paper on greenhouse gas emissions trading within the European Union.

⁶² Communication from the Commission to the Council and the European Parliament on EU policies and measures to reduce greenhouse gas emissions: Towards a European Climate Change Programme (ECCP).

⁶³ Proposal for a Directive of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC [COM (2001) 581 final - Official Journal C 75 E of 26.03.2002].

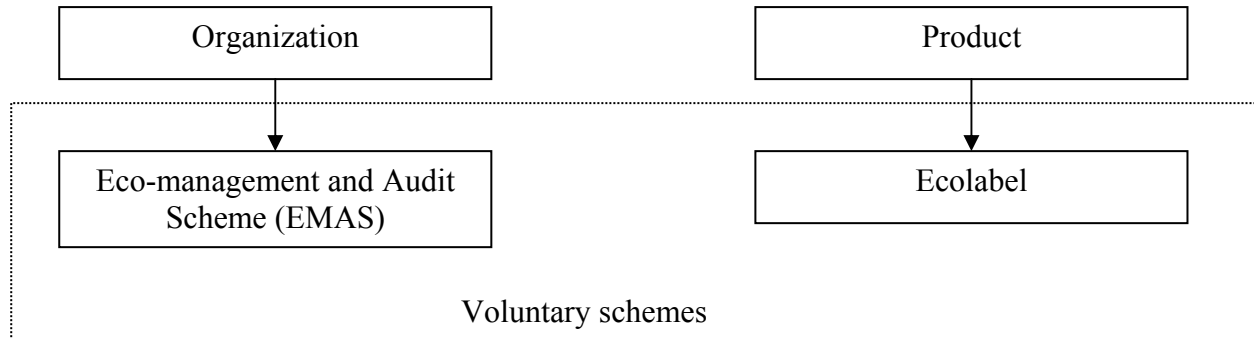
7.3 Voluntary schemes

7.3.1 Generals

As stated before, a formal recognition of the **role of the economic operators** is done in the programme "Towards Sustainability" presented by the Commission. Indeed, it underlines the dynamic nature of organisations' role and their responsibilities, both to reinforce the economy and **to protect the environment**.

Moreover, being aware that in recent years consumers around the world have become "green", the same programme called for broadening the range of instruments in the field of environmental protection and for using **market-mechanisms** to commit organisations to adopt a pro-active approach in this field beyond compliance with all relevant regulatory requirements regarding the environment.

In fact, through their governments and their spending habits, consumers everywhere are forcing companies to shoulder the environmental consequences of their activities. As citizens and consumers, people expect the companies they buy from to meet their clean-environment obligations in ways that go well beyond advertising and public relations. These attitude, as well as the need to actually reduce environmental pollution, has forced the Community to focus on new schemes, particularly voluntary schemes, able to distinguish products and/or companies (organizations) within the market.



7.3.2 EMAS Ecomanagement and Audit Scheme

7.3.2.1 Introduction

In June 1993 was approved the Council Regulation (EEC) No 1836/93 which gives origin to the European eco-management and audit scheme and allowed the voluntary participation of companies in the industrial sector as considered in sections C and D of NACE classification (Rev.1). Moreover, companies from specific sectors such as energy production, gas production and activities related to waste management, were also allowed to participate to EMAS in consideration of the importance of their environmental impacts.

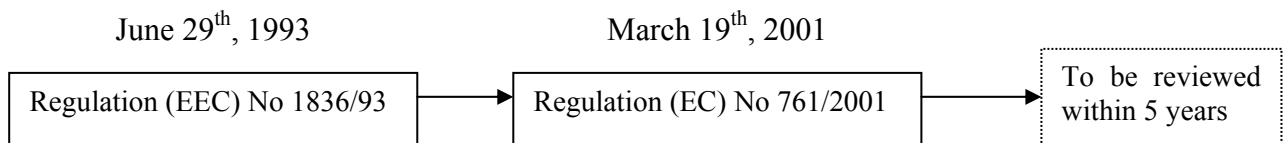
As the legal instrument chosen by the European authorities to state and promote EMAS has been a Regulation, it has been bound in its entirety and by direct application in all Member States without the need of developing a legislation at national level.

The EU Members have implemented the scheme following the common rules, procedures and essential requirements provided by the Community in order to guarantee a harmonised application of EMAS in the whole European Union. Eventhough, the Regulation itself recognises that there are measures that can be adequately performed at national level and these are left to the authonomy of the Member States.

The EMAS has been reviewed by the Commission in the light of the experience gained and in March 2002, a new version has been approved: the Regulation (EC) n. 761/2001.

The experience gathered from the implementation of the previous regulation has enlightened many improvement opportunities, as well as the advantage to enhance the applicability of EMAS to other sectors. Currently, the Regulation (EC) No 761/2001 of 19 March 2001 allows the participation to EMAS to all kind of organizations (primary, second and third sector). Through the enlargement on the application of EMAS, the EU made available to all organisations having environmental impacts, a tool to manage these impacts and to improve their overall environmental performance.

As stated in art.15 of Regulation (EC) No 761/2001, EMAS will be reviewed within five years after its entry into force, and if necessary, the appropriate amendments will be adopted. This cycle of revision reflects the principle of continual improvement of EMAS and should ensure its adequacy and effectiveness in a long-term basis.



7.3.2.2 Objectives

As stated on article n. 1 of the EMAS regulation, the objectives of adopting an eco-management and audit scheme in Europe are to promote continual improvements in the environmental performance of organisations and to provide relevant information to the public and other interested parties. These objectives are to be reached by:

- (a) the establishment and implementation of environmental management systems by organisations;
- (b) the systematic, objective and periodic evaluation of the performance of such systems;
- (c) the provision of information on environmental performance and an open dialogue with the public and other interested parties;
- (d) the active involvement of employees in the organisation and appropriate initial and advanced training.

It's essential to underline that EMAS is based on a **voluntary participation** by organisations, therefore it does not exist any European legal provision which imposes the compulsory implementation of an Environmental Management System accordingly to EMAS.

By the way, the Regulation itself emphasizes the importance to encourage organisations to participate in EMAS and to let them gain added value in terms of regulatory control, cost savings and public image through specific mechanisms developed at national levels by the Members States.

7.3.2.3 The parties involved in the implementation of EMAS and their roles.

In order to guarantee the efficient implementation of EMAS and its reliability, the Regulation defines specific roles and responsibilities for each party involved in the scheme:

- the Organizations;
- the Auditors;
- the Accredited Environmental Verifier;
- the Accreditation Bodies;
- the Forum of Accreditation Bodies;
- the Competent Bodies;
- the “Article 14” Committee;
- the Competent Bodies responsible of the application of environmental legal requirements in each Member State;
- the EU Members States;
- the European Commission.

The Organizations

The Regulation defines an "organisation" as “a company, 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” (see art. 2, lett. n).

With the new Regulation, participation to EMAS is open to any kind of organisation (industrial sector, agriculture, services). Once an organisation has decided to participate to EMAS, its main functions are:

- to conduct an environmental review of its activities, products and services in accordance with EMAS regulation;
- to implement an Environmental Management System⁶⁴ (EMS) accordingly to EMAS regulation;
- to prepare an Environmental Statement⁶⁵;
- to carry out an internal environmental audit to ensure that all the EMAS requirements are fulfilled without prejudice to the environmental regulatory requirements defined by the Member States;
- to be object of an external audit and to have the environmental statement validated by the accredited environmental verifier;

⁶⁴ "shall mean the part of the overall management system that includes the organisational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy” (Reg. EC n. 761/2001, art. 2).

⁶⁵ Detailed information prepared by the organisation in order to provide environmental information to the public and other interested parties regarding its environmental impact and performance and the continual improvement of environmental performance.

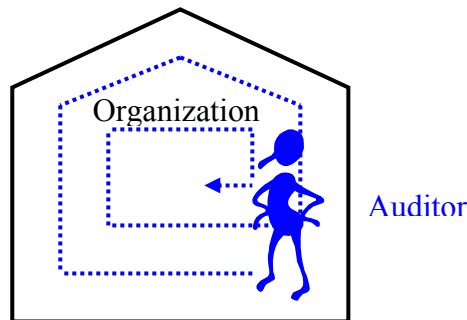
- to forward the validated environmental statement to the competent body of the Member State in which the organisation is located;
- to make the environmental statement publicly available (after registration).

If an organisation fulfills all the EMAS requirements, it can achieve the **registration** which is a formal and impartial recognition of conformance of the organisation with the EMAS regulation.

Auditor

The auditor is the individual or team, belonging to the organisation personnel or external to the organisation, which, acting on behalf of the organisation's top management, carries out the audit of the organisations' Environmental Management System. The auditor(s) must:

- be in posses, individually or collectively, of the competences referred to in Annex II, point 2.4 of the Regulation;
- be sufficiently independent of the activities he(they) audit to make an objective judgment.



Accredited Environmental Verifier

The transparency and credibility of organisations implementing environmental management systems are enhanced when their management system, is examined to verify that they meet the requirements of the Regulation and when the environmental statement and its subsequent updates are validated by an independent party. Therefore, an external party named “Accredited Environmental Verifier”, has the function to check:

- (a) the compliance of an organisation with all the requirements of the EMAS Regulation;
- (b) the reliability, credibility and correctness of the data and information provided by an organisation in the environmental statement and in any other environmental information to be validated.

One of the main responsibilities of the environmental verifier is to investigate the technical validity of the initial environmental review, the audit or other procedures carried out by the organisation.

At the time of the first verification, the environmental verifier has to check that the following requirements are met by the organisation:

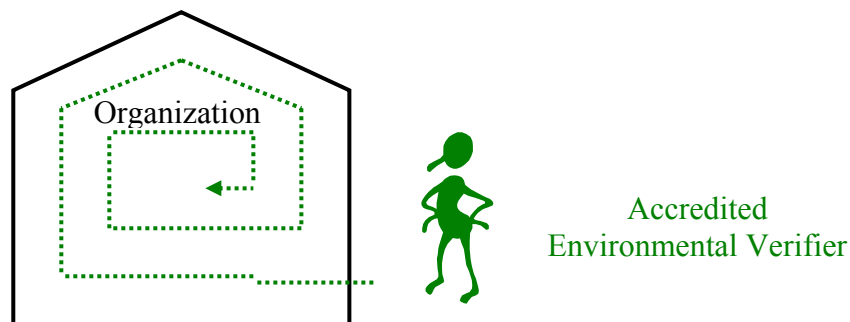
- (a) a fully operational environmental management system in accordance with Annex I (which actually corresponds to the section n. 4 of the international standard ISO 14001:1996);

- (b) a fully planned audit programme, which had already begun in accordance with Annex II so that at least areas with the most significant environmental impact have been covered;
- (c) the completion of one management review;
- (d) the preparation of an environmental statement in accordance with Annex III, point 3.2 of the Regulation.

Moreover, the environmental verifier must ensure that an organisation has procedures in place to control those aspects of its operations subject to relevant Community or national laws and that these procedures are capable of delivering compliance. The audit, shall in particular, provide for evidence of the capability of the procedures in place to deliver legal compliance. As for that, the environmental verifier can not validate the environmental statement, if during the verification process legal nonconformances are observed.

An accredited environmental verifier can be any person or organisation **independent** of the organisation being verified, **who has obtained accreditation**, in accordance with the conditions and procedures referred to in the EMAS Regulation. In fact, a neutral accreditation system has been designed within the Regulation in order to ensure the overall credibility of EMAS itself through accreditation procedures and through the supervision of verifiers' activities.

Environmental verifiers accredited in one Member State are allowed to perform verification activities in any other Member States in accordance with the requirements specified in Annex V. The start of the verification activity shall be notified to the Member State in which it is being performed and the activity shall be subject to supervision by the latter's accreditation system.



Accreditation Bodies and accreditation systems

As stated before, the regulation requires an accreditation system in order to guarantee the transparency and credibility of EMAS. To this end, at national level, each Member State has the responsibility to designate an accreditation body, this either by using existing accreditation institutions or by setting up a new one with the appropriate status. A third option is offered by the regulation to the Member States: they can also make use of the “Competent Bodies” - another involved party cited further by the regulation – and therefore integrate the functions of these two bodies. In any case, the **independence** of the accreditation bodies and the **neutrality in the execution of their tasks** must be ensured by the Member States.

The accreditation of environmental verifiers and the supervision of their activities in each Member State, must be consistent with the requirements set by the Regulation in Annex V, these, in order to guarantee the **homogeneous application of EMAS** within the EU. This aspect

is relevant if considering that an environmental verifier accredited in one country may perform verification activities in any other Member State.

The following are the main duties of the Accreditation Bodies:

- to establish, revise and update a list of environmental verifiers and their scope of accreditation in their Member State;
- to communicate each month directly, or via the national authorities as decided by the Member State concerned, any changes in this list to the Commission and to the competent body;

to adopt regularly, within at least on a 24 months basis, all the necessary actions in order to ensure that accredited environmental verifiers continue to fulfill the accreditation requirements and to control the quality of their working activities.

In all Member States, the scope of the accreditation of environmental verifiers is defined on the basis of the classification of economic activities (NACE codes) established by the Regulation (CEE) n° 3037/90, and is limited by the competence of the environmental verifier. This means that environmental verifiers can operate only in the sectors in which they have been accredited.

All the accreditation bodies joined a forum.

Forum of Accreditation Bodies

The Forum is constituted of all accreditation bodies with the aim of providing the European Commission with the elements and means to allow the Commission itself promoting the collaboration among the Member States. The Forum meets at least yearly and a representative of the Commission attends to all meetings.

The Forum:

- develops guidance on issues in the field of accreditation, competence and supervision of environmental verifiers;
- develops procedures for a peer review process to ensure that the accreditation systems of Member States meet the requirements of the Regulation and to ensure a harmonised development of the functioning of accreditation bodies and the verification process in all the Member States;
- transmits a report of the peer review activities to the Commission.

Competent Bodies

The Competent Bodies are the organizations designated at national, regional or local level by each Member State to carry out the following activities:

- to establish and maintain a list of registered organisations in their Member State;
- to update the list of registered organisations on a monthly basis;
- to communicate changes in this list each month to the Commission (directly, or via the national authorities as decided by the Member State concerned);

- to meet at least once per year for the purpose of guaranteeing the consistency with EMAS requirements of registration procedures as well as the consistency of criteria to be applied in the cases of suspending or refusing a registration;
- to put in place a procedure for a peer review process with the aim of developing a common understanding of their practical approach towards registration;
- to transmit to the Commission a report of the peer review activities;
- to inquire the competent enforcement authority regarding the compliance, of organisations aiming to be registered, with the relevant environmental legislation;
- to register the applicant organisation and give it a registration number;
- to inform the organisation's management that the organisation appears on the register;
- to enquire the appropriate interested parties whenever the registration of an organisation is refused, suspended or deleted in order to have the necessary elements to take a decision;
- to inform the organisation's management of the reasons for the measures taken in case of a refused, suspended or deleted registration.

Competent bodies must have procedures for:

- considering observations from interested parties concerning registered organisations, and
- refusal of registration, deletion or suspension of organisations from registration.

Article 14 Committee.

It's a committee created with the purpose of assisting the European Commission and which operates on the basis of procedures and rules approved by the Committee itself.

Competent enforcement Authority for the environmental legislation

The Regulation underlines that existing bodies in the Members States and having the responsibility of controlling the fulfillment of legal requirements at national level, have an important role within EMAS. They are responsible to inform the Competent Bodies in relation to the conformance or nonconformance of applicants organisations with legal environmental provisions.

Member States

Their main duties are:

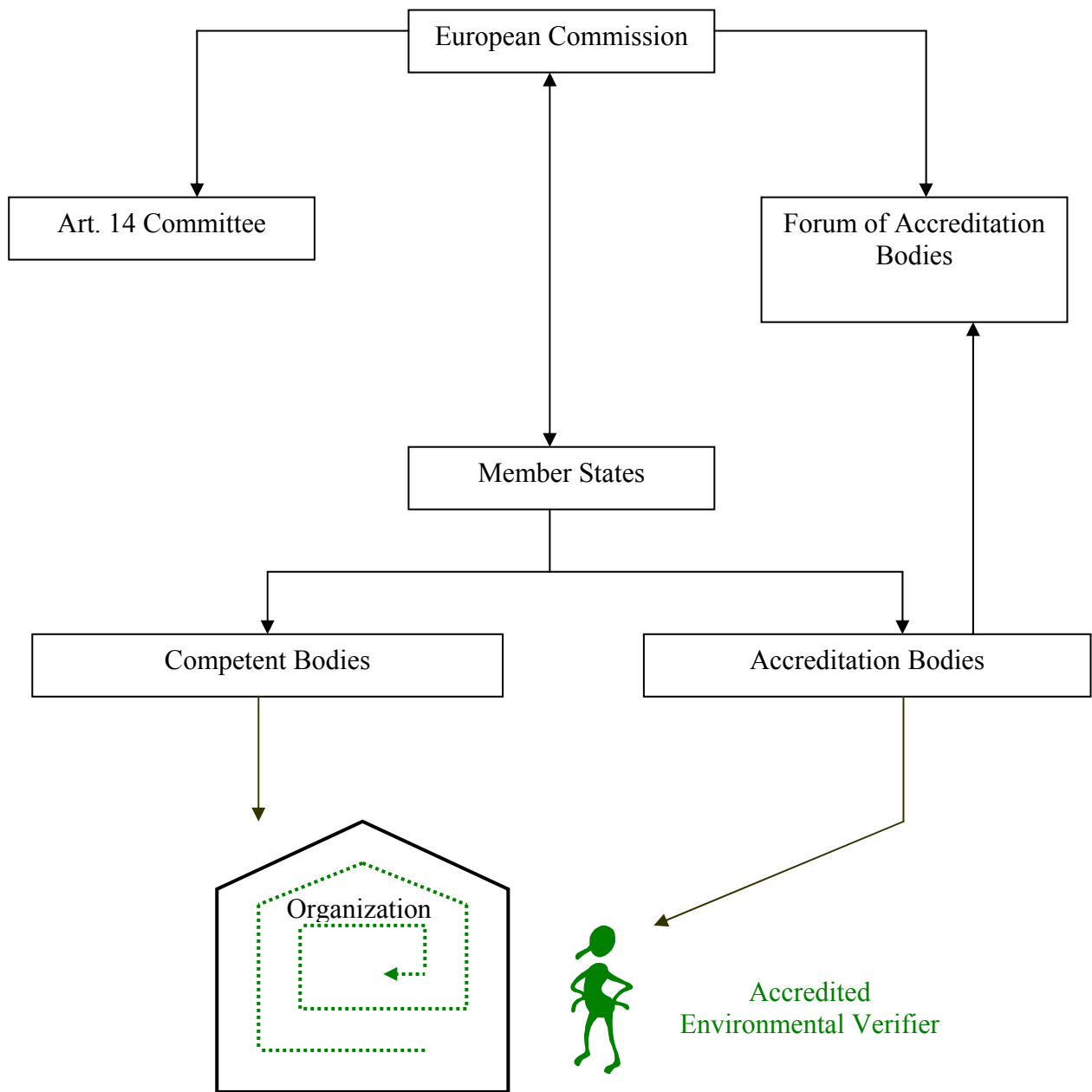
- to designate or to create the accreditation bodies (within 12 months of the date of enter into force of the Regulation);
- to inform the Commission about the measures adopted in relation to the accreditation system and to inform about any relevant changes in relation to its structure or its procedures;
- to designate the competent body (within 3 months of the date of enter into force of the Regulation);
- to adopt appropriate legal and administrative measures in the case of noncompliance with the provisions of EMAS Regulation and to communicate such measures to the Commission;
- to ensure the independence and neutrality of the competent body;
- to ensure that the competent body fulfills the EMAS Regulation;
- to provide the competent body with guidelines in relation to the cases of refusing or suspending a registration;

- to take appropriate measures to ensure that organisations are informed of the content of the Regulation and that the public is informed of the objectives and principal components of EMAS;
- to promote general awareness of EMAS, in cooperation with industrial associations, consumer organisations, environmental organisations, trade unions and local institutions, amongst others, and particularly through the use of professional publications, local journals, promotion campaigns or any other functional means as appropriate;
- to inform the Commission of the measures taken in order to promote EMAS at national level.

European Commission

It's involved within EMAS in the following activities:

- promotes the collaboration among the Member States, particularly in order to ensure the homogeneous application of criteria, conditions and procedures foreseen by EMAS;
- participates, by the means of a representative, to the forum of accreditation Bodies;
- participates, by the means of a representative, to the meetings of the Competent Bodies;
- transmits the reports on the peer reviews to the Article 14 Committee and it makes them publicly available,
- promotes EMAS at Community level;
- examines, in consultation with the members of the Committee referred to in Article 14, the possibility of disseminating best practices by appropriate ways and means;
- maintains a European register of environmental verifiers and EMAS registered organisations and make them publicly available.



7.3.2.4 Advantages of the implementation of EMAS.

Many European companies started trying to improve their environmental performances primarily in response to government mandates due to the adoption of the EU Directives and following a market demand on “greener” products.

Even if an organisation can certainly obtain advantages in terms of public image, the reached results have demonstrated that pollution is often a certain sign of poor management and hides inefficiencies, inadequate operational conditions, useless consumptions and a low level of personnel satisfaction. This experience has envisaged in many sectors that further improvements could be carried out and that they would lead to advantages for the organisations well beyond a public-relations gloss.

The adoption of a voluntarily based standard as EMAS must be seen as a better organization, better management and better products.

Generally speaking, by developing synergies an organisation can obtain many advantages by participating to EMAS in terms of:

- reduction of resources consumption (energy and natural resources) by avoiding or reducing inefficiencies, abnormal situations, etc;
- a better internal efficiency from processes, resources and means optimization and harmonization;
- professional growth and personnel motivation thanks to the development of competences and continuous awareness activities;
- reduction of risks due to an appropriate management of emergency situations starting from prevention;
- competitive advantages, in terms of image and opportunities on accessing to new markets, by proposing alternative products/services;
- a better knowledge of environmental legislation thanks to the tools provided by the EMS and by the internal and external audits;
- a stronger control of processes in order to be sure of being operating in compliance with environmental authorizations;
- reductions of cost from emergency or abnormal situations due to a preventive approach;
- prevention and management of conflicts with interested parties (neighbourhood, environmental associations, etc);
- reduction of insurance's costs;
- consolidation of a good relationship with Public Authorities;
- advantages foreseen at national level by Public Authorities (for example: fundings, enlargement of licenses/permissions terms, etc.);
- valorization of technological innovation;
- valorization of the investments regarding the environmental policy and objectives;
- increase of sales by attracting aware customers;
- answering to specific customers' requirements;
- consolidation of a leadership.

From the environmental point of view, the benefits are for the whole community can be summarized in terms of a:

- reduced demand for natural resources;
- lower consumption of hazardous substances;
- reduced impact on water resources, soil and air due to a strongest control's capacity (environmental technologies, innovative technologies, etc.);
- lower waste production thanks to process's optimization, better choices on packaging materials, etc;
- better quality of life for human been.

7.3.3 ECOLABEL

7.3.3.1 Introduction

As the environmental policy based on the principle “who pollutes pays” was not able to reach the expected results therefore the European Community was forced to enlarge its area of intervention and to develop policies in favor of “clean” products and pollution prevention at the beginning of the cycle. As a result, on May 5th 1990, the European Council invited the Commission to prepare a proposal on an environmental label to be adopted within the European Community.

Moreover, many companies started to increase the “green content” of their products to appeal to consumers, eliminating toxic ingredients and excess packaging, as well as making them more energy efficient, recyclable, returnable. Companies understood that environmental friendly products would have a bright future as a demand was growing, and a market opportunity was envisaged. But selling to the environmental concerns of consumers could help move products only if done judiciously, otherwise the whole market would suffer the effects of a nonreliable system and consumers would soon lose their trust on “green products”.

A clear answer to this need was given by European Regulation n. 880/92 of March 23rd: the Community Ecolabel Award Scheme. Anyway, it is important to underline that many initiatives were developed in order to create labels at national level and a vast selection of “environmental” labels were already adopted by European States by the time of the Regulation’s approval.

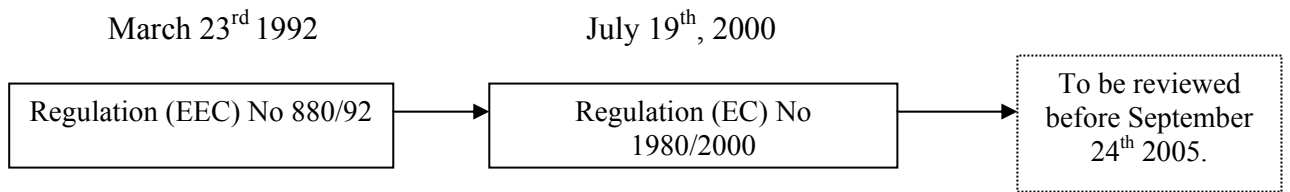
The European Eco-label is a **voluntary** scheme:

- enabling European consumers including public and private purchasers to easily identify **officially approved green products** across the European Union;
- allowing producers to show and communicate to their customers that their products respect the environment as they have a low impact compared with other products of the same category.

The added value of Ecolabel is that awarded products provide the consumer with the guarantee that they have been checked by independent bodies for complying with strict ecological and performance criteria. Moreover, the transparency and widespread participation are further enhanced by the considerable input of representatives of industry, commerce, environmental and consumer organisations and trade unions involved within the process of definition of the criteria. Thus, the final consumer will increasingly recognise that behind the “Flower”, he or she will find a product or service meeting ecological criteria established accordingly to scientific and technical guidelines with widespread participation from independent and neutral bodies.

This trend has been confirmed over the past ten years, Ecolabel has become a European-wide symbol for products, providing simple and accurate guidance to consumers even if much more can be done in order to promote it both at producers’ and consumers’ level.

As EMAS, the Eco-label scheme is an ongoing process and existing procedures and guidelines are constantly updated and reviewed; new procedures and guidelines are developed as well as its legal foundation. As an output of this process, the current version of the Community Ecolabel scheme is based on Regulation (EC) n. 1980/2000 of July 19th 2000.



As a result of the new regulation, the EU Eco-label scheme has been extended to **services**. This will open up a new and major area of opportunity in the wider context of sustainable consumption. The first outcome of these extension has been the definition of criteria for the tourist accommodation service that have been published and are valid from May 1st 2003 until April 30th 2007. This has been an interesting challenge considering the highly complexity of the tourism area.

As stated before, the Ecolabel or “Flower” scheme, as commonly called because of the logo, is part of a broader strategy aimed at promoting sustainable production and consumption. This aim can be achieved in the context of a "framework for an integrated life-cycle oriented product policy", as indicated in the new Environmental Action Programme “Environment 2010: Our Future Our Choice”.

The information and communication flows considered by the Ecolabel, are one of the key characteristics of a market-based scheme. The widely dissemination of information about the environmental effects of a product or service during its whole life-cycle is essential in order to support sustainable consumption patterns.

Eco-label offers to manufacturers, retailers and service providers a european dimension. Awarded products and services can be marketed throughout the 15 EU Member States and in those counties which are signatories to the EEA Agreement particularly, Norway, Iceland and Liechtenstein.

7.3.3.2 Objectives and principles

Being a **market-based instrument**, the primary function of the Eco-label is to stimulate both the supply and demand of products with a reduced environmental impact. With respect to supply, the scheme has the objective of **encouraging business to market greener products** in order to ensure the efficient use of resources and a high level of environmental protection. On the other hand, in relation to the demand, the “Flower” gives European consumers the means to make informed environmental choices when purchasing as the logo is an assurance of European green authenticity.

As well as EMAS, Eco-label is **voluntary**, it does not establish ecological standards which must be met by all manufacturers. It does not exist any European legal provision which imposes the compulsory adoption of Eco-label; it’s up to the producer, retailer or service provider to decide whether or not to apply once the criteria are published in the Official Journal.

The Eco-label is a “**selective**” scheme as products bearing the “Flower” are only those with the lowest environmental impact in a product category.

The voluntary and selective nature of the scheme does not mean that it can create barriers to trade. Foreign and Community producers may apply for the Eco-label if they meet

the criteria and want to market their products in the EU/EEA. If they don't, they can sell their products within the EU/EEA without the flower.

The Eco-label is based on a **multi-criteria approach**. This means that it analyses and considers the impact on the environment of the product or service throughout its life-cycle, starting from raw material extraction in the pre-production stage, through production, distribution and disposal of the product or service.

7.3.3.3 The parties involved in the implementation of Ecolabel and their roles.

European Commission

The Commission has an important role within the Eco-label scheme, it:

- establishes the European Union Eco-Label Board (EUEB);
- defines the rules and procedures of the EUEB;
- begins the procedure for setting eco-label criteria on its own initiative or at the request of the EUEB;
- gives mandates to the EUEB to develop and periodically review the eco-label criteria and to review the assessment and verification requirements;
- defines a deadline for the completion of the EUEB works;
- determines, on the basis of the draft criteria prepared by the EUEB, if the EUEB itself has fulfilled the mandate or not;
- publishes the Eco-label criteria and related updates in the Official Journal of the EC;
- promotes the Eco-label in cooperation with the members of the EUEB through awareness actions and information campaigns for consumers, producers, traders, retailers and other interested parties;
- ensures the coordination between Eco-label and other labelling schemes at national level.

Moreover, the Commission must consult before September 24th 2005 the national consumer associations represented in the Consumer Committee, in order to assess how effectively the Eco-label criteria and the additional information meets the information needs of consumers. In the light of this consultation, the Commission must introduce the appropriate modifications in relation to the information included in the Eco-label.

European Union Eco-Label Board (EUEB)

The EUEB is composed by the Competent Bodies for Eco-Label in each Member State and by the Consultation Forum. It has the responsibility of:

- developing and drafting the Eco-label criteria in respect of the product group and of the assessment and verification requirements referred to in article n. 4 of the Regulation;
- reviewing the Eco-label criteria;
- defining and reviewing the assessment and verification requirements;
- informing the Commission about the draft criteria;
- promoting the Eco-label in cooperation with the Member States and the Commission through awareness actions and information campaigns for consumers, producers, traders, retailers and other interested parties.

The development of the eco-label criteria as well as the assessment and verification requirements is carried out by the EUEB by applying the following principles:

Interested parties involvement	<p>Establishment of an ad hoc working Group (WG) involving:</p> <ul style="list-style-type: none"> - industry and service providers; - SMEs; - crafts and their business organisations; - trade unions; - traders; - retailers; - importers; - environmental protection groups; - consumer organisations and - the Competent Bodies.
	<p>The above mentioned interested parties are involved in the identification and selection of key environmental aspects of a given product/service during the following phases:</p> <ul style="list-style-type: none"> - feasibility and market study; - life cycle considerations; - improvement analysis; - proposal of the criteria.
	<p>A working paper summarising the main findings of each phase is issued and distributed in good time to the participants before the meeting of the ad hoc working group.</p>
Open consultation and transparency	<p>A final report is issued and published. Interim documents of different stages of work are available to those interested and comments on them are considered.</p>
	<p>Open consultation on the final report. A period of at least 60 days is opened in order to receive comments on the draft criteria. Any observations are taken into consideration.</p>
	<p>The report includes an executive summary and annexes with detailed inventory computations.</p>
Confidentiality	<p>The EUEB must ensure the confidentiality of the information provided by individuals, public organisations, private companies, interest groups, interested parties or other sources.</p>

Member States

The Member States must:

- promote the Eco-label in cooperation with the members of the EUEB through awareness actions and information campaigns for consumers, producers, traders, retailers and other interested parties;
- ensure coordination between Eco-label and other label schemes at national level within the EU;
- designate the Competent Body for Eco-label (if more than one Competent Body is designated at national level, respective powers and coordination requirements must be stated);
- ensure that the above mentioned Competent Body is operational and able to carry out the task provided in the Regulation;
- ensure that the composition of the Competent Bodies is such as to guarantee their independence and neutrality;

- ensure that the rules of procedure of the Competent Bodies effectively involve, at national level, all interested parties and that they guarantee an appropriate level of transparency;
- ensure that the Competent Bodies apply correctly the provisions included in the Regulation;
- take appropriate legal or administrative measures in case of non-compliance with the provisions of the Regulation and communicate them to the Commission.

Competent Bodies

All Competent Bodies designated by the Member States are responsible of:

- taking the decision to award or not a product/service with the label;
- verifying that the product complies with the criteria;
- verifying that the application conforms with the assessment and verification requirements;
- consulting other Competent Bodies when applicable;
- collaborating in the effective and consistent implementation of the assessment and verification procedures;
- concluding a contract with the applicant for the Eco-label covering the terms of use of the label;
- reconsidering the authorisation to use the label;
- reviewing or terminating the contract with the applicant, as appropriate, in the light of any revision of the criteria applicable to a given product/service;
- implementing the active involvement of interested parties at national level and ensuring an appropriate level of transparency;
- participating to the ad hoc Working Group for the development of the Eco-label criteria;
- applying correctly the provisions of the Regulation.

Consultation Forum

Industry and service providers, SMEs, crafts and their business associations, trade unions, traders, retailers, importers, environmental protection groups and consumer organisations meet in a consultation forum.

The main objective of the Forum is to ensure a balanced participation of all relevant interested parties concerned with a given product or service. The rules of procedures of the Forum are established by the Commission.

Committee Article 17

It's a committee created with the purpose of assisting the European Commission and which operates on the basis of procedures and rules approved by the Committee itself.

Manufacturers, importers, service providers, traders and retailers

They must:

- submit an application if they want their products to be awarded with the Flower;
- fulfill all the requirements and provisions of the Regulation;
- fulfill all the provisions established by the Competent Body in the contract;

- use the Eco-label logo accordingly to the Regulation provisions and to the terms of use of the label included in the contract.

7.3.3.4 Current categories and product groups

The environmental criteria are developed to cover everyday consumer goods and, recently, its application has been extended to services. **Food, drinks and medicines are not suitable to be awarded with the Eco-label.**

At present, there have been set criteria for 21 product groups. All product categories are carefully defined so that all products that have direct equivalence of use are included in the same product group.

Category	Product Groups
1. Bedding	Mattresses
2. Footwear	Shoes
3. Do-it-yourself	Hard Floor coverings Paints and varnishes Light bulbs
4. Gardening	Soil improvers
5. Household Appliances	Dishwashers Refrigerators Vacuum cleaners Washing mashines
6. Cleaning	All purpose cleaners Dishwashing detergents Hand dishwashing detergents Laundry detergents
7. Electronic equipment	Personal computers Portable computers Televisions
8. Textiles	Clothing, bed linen and indoor textiles
9. Paper	Tissue paper Copying and graphic paper
10. Services	Tourist accomodation service

Criteria for the “Furniture” category is currently under development.

7.3.3.5 Advantages

The advantages of adopting an Eco-label at Community level can be summarized as follows:

- it contributes to **reduce the environmental impact** of european families;
- avoids having to make an application in each country and thus **avoids time-consuming and costly procedures**;
- an advantage in terms of “**visibility**” as the same logo is used regardless of the product group in question, thereby eliminating consumer confusion prevalent at the moment given the numerous self claims and green logos in existence;

- the success of the scheme will offer a considerable **pull effect** for retailers, SMEs and manufacturers to better promote and market their products and contribute to the European IPP as green manufacturers and public purchasers are encouraged;
- in relation to **information flows**, it reduces costs **for consumers** by lowering the time and effort needed to obtain reliable information on life-cycle considerations, green products and specific European know-how on IPP;
- in relation to **information flows**, it reduces costs **for manufacturers and retailers** by lowering the time and effort needed to provide reliable information on life-cycle considerations, green products and specific European know-how on IPP;
- it pushes manufacturers and service providers to **rethink the production/service provision processes** and set new and better standards in manufacturing/service providing;
- it contributes to **enhance the corporate image** of companies with awarded products.

8 Glossary

EU LEGAL TERMS

Approximation of laws: a means provided for in Art 95 (ex Art. 100a) of the Treaty of Rome to achieve progressive harmonization of the national laws of the Member States according to standards set by EC law. Directives are the preferred legislative method for achieving approximation or harmonization of Member States laws.

Commission: the main executive and administrative organ of the EU composed of 20 Commissioners whose "portfolios" are organized into Directorates-General. The primary functions of the Commission are initiation and preparation of legislation, implementation and supervision of application of legislation.

Council of the European Union: the primary and most powerful legislative institution of the EU consisting of ministerial level representatives of the Member States.

Court of Justice of the EU: The higher court of the EU, it is commonly called the European Court of Justice (ECJ); consists of 15 judges and 8 Advocates-General appointed by the Member States for staggered six year terms. The ECJ ensures consistent and uniform interpretation of EU law. ECJ decisions are final.

Decision: a type of EU legislation enacted by the Council or the Commission addressed to Member States, companies and/or private individuals; binding only on the Member States or persons to whom they are addressed. They are less common in the environmental field.

Directive: the most common type of EU legislation, not directly applicable, but may have direct effect; binding upon Member States as to the objectives to be achieved but leaving to the Member States the choice of form and method; preferred means of harmonization of laws; usually enacted by the Commission. **Framework directives** set out general principles, procedures, and requirements for legislation in different sectors. So far they have been adopted for the air and waste sectors, and a proposal has been made for the water sector. Other "daughter" directives in each sector must conform to the general requirements of the framework directive.

European Council: meetings of heads of state or government of Member States, also often referred to as EU summits.

Recommendation: a non-binding act of the EU which explains current EU policy and recommends further Member State actions.

Regulation: an act of the Council or joint act of the Council and the Parliament which has direct and general application in Member States. The Commission may also issue regulations limited to certain sectors. Regulations usually have a precise purpose, and are used where it is important that in the Member States precisely the same requirements are applied.

Rule of reason: in the absence of EU (EC) law, a Member State can regulate a matter by imposing rules (even prohibitory) relating to the marketing of products, but they must be

necessary in order to satisfy mandatory requirements relating in particular to effectiveness of fiscal supervision, the protection of public health, the fairness of commercial transactions and the defence of the consumer.

Sources of EU law: the Treaties, regulations, directives, decisions, international agreements and international treaties entered into by the EC, EURATOM, ECSC and EU, general principles of law and customary law, conventions between the Member States and the ECJ case law.

ENVIRONMENTAL TERMS⁶⁶

Acidification: change in an environmental natural chemical balance caused by an increase in the concentration of acidic elements.

Best available techniques: 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 impact on the environment as a whole.

Biodiversity: assemblage of living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part.

Chlorofluorocarbon (CFC): gases formed of chlorine, fluorine and carbon whose molecules normally do not react with other substances; they are therefore used as spray can propellants because they do not alter the material being sprayed.

Climate change: climate change refers to any change in climate over time, whether due to natural variability or as a result of human activity. This usage differs from that in the United Nations Framework Convention on Climate Change (UNFCCC), which defines 'climate change' as: 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.'

Conservation: the management of human use of the biosphere so that many yield the greatest sustainable benefit to current generations while maintaining its potential to meet the needs and aspirations of future generations: Thus conservation in positive, embracing preservation, maintenance, sustainable utilisation, restoration and enhancement of the natural environment.

Diesel fuel: heavy oil residue used as fuel for certain types of diesel engines.

Drinking water: water intended for human consumption. According to the drinking water Directive it shall mean: (a) all water either in its original state or after treatment, intended for drinking, cooking, food preparation or other domestic purposes, regardless of its origin and whether it is supplied from a distribution network, from a tanker, or in bottles or containers; (b) all water used in any food-production undertaking for the manufacture, processing, preservation

⁶⁶ font: EEA multilingual environmental glossary - <http://glossary.eea.eu.int/EEAGlossary>

or marketing of products or substances intended for human consumption unless the competent national authorities are satisfied that the quality of the water cannot affect the wholesomeness of the foodstuff in its finished form.

Ecosystem: a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.

EMAS (Eco-Management and Auditing Scheme): a Community scheme allowing voluntary participation by companies performing industrial activities, established for the evaluation and improvement of the environmental performance of industrial activities and the provision of the relevant information to the public. The objective of the scheme is to promote continuous improvements in the environmental performance of industrial activities by:(a) the establishment and implementation of environmental policies, programmes and management systems by companies, in relation to their sites;(b) the systematic, objective and periodic evaluation of the performance of such elements;(c) the provision of information of environmental performance to the public.

Emission trading: the Kyoto Protocol allows Parties listed in Annex B to participate in trading of their assigned amounts for the purposes of fulfilling their emissions commitments. Parties buying parts of assigned amounts can add these to their assigned amounts under the Protocol, while Parties selling must deduct them. Such trading must be supplemental to domestic actions. The Conference of the Parties is to define the rules and modalities for trading.

End-of-pipe: technologies such as scrubbers on smokestacks and catalytic convertors on automobile tailpipes that reduce emissions of pollutants after they have formed.

Environmental audit: a management tool comprising a systematic, documented, periodic and objective evaluation of how well a project, organisation or equipment is performing with the aim of helping to safeguard the environment. The audit should facilitate management control of environmental practices and assess compliance with policy objectives and regulatory requirements.

Environmental impact assessment (EIA): a technique used for identifying the environmental effects of development projects. As a result of Directive 85/337/EEC (as amended 1997), this is now a legislative procedure to be applied to the assessment of the environmental effects of certain public and private projects which are likely to have significant effects on the environment. An EIA requires a scoping study to be undertaken in order to focus the assessment. This can be carried out in the field or as a desk study depending on the nature/scale of the project.

Environmental impact study: survey conducted to ascertain the conditions of a site prior to the realisation of a project, to analyse its possible impacts and compensative measures.

Environmental indicator: a parameter or a value derived from parameters that describe the state of the environment and its impact on human beings, ecosystems and materials, the pressures on the environment, the driving forces and the responses steering that system. An indicator has gone through a selection and/or aggregation process to enable it to steer action.

Environmental liability: liability for damage to nature and environment. Environmental liability makes the causer of environmental damage pay for remedying the damage that he has caused.

Environmental risk: likelihood, or probability, of injury, disease, or death resulting from exposure to a potential environmental hazard.

Emission standard: the maximum amount of discharge legally allowed from a single source, mobile or stationary.

European Waste Catalogue (EWC): a source and process-based listing of wastes. The European waste catalogue was established in December 1993 by Commission Decision 94/3/EC and includes 645 waste types.

Global warming: changes in the surface-air temperature, referred to as the global temperature, brought about by the greenhouse effect which is induced by emission of greenhouse gases into the air.

Greenhouse effect: warming of the atmosphere due to the reduction in outgoing solar radiation resulting from concentrations of gases such as carbon dioxide.

Greenhouse gases: a gas that contributes to the natural greenhouse effect. The Kyoto Protocol covers a basket of six greenhouse gases (GHGs) produced by human activities: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Annex I Parties emissions of these gases taken together are to be measured in terms of carbon dioxide equivalents on the basis of the gases global warming potential. An important natural GHG that is not covered by the protocol is water vapour.

Habitat: (1) The place or type of site where an organism or population naturally occurs. (2) Terrestrial or aquatic areas distinguished by geographic, abiotic and biotic features, whether entirely natural or semi-natural.

Hazardous waste: A term applied to those wastes that because of their chemical reactivity, toxic, explosive, corrosive, radioactive or other characteristics, cause danger, or are likely to cause danger, to health or the environment.

Incineration (of waste): the process of burning solid waste under controlled conditions to reduce its weight and volume, and often to produce energy.

Incinerator: a furnace in which wastes are burned.

Industrial waste: solid, liquid and gaseous wastes originating from the industrial manufacture of products.

Inland water: all standing or flowing water on the surface of the land, and all groundwater on the landward side of the baseline from which the breadth of territorial waters is measured.

Land consumption: consumption of land cover means: (a) The expansion of built-up area which can be directly measured; (b) the absolute extent of land that is subject to exploitation by agriculture, forestry or other economic activities; and (c) the over-intensive exploitation of land that is used for agriculture and forestry.

Life cycle: consecutive and interlinked stages of a product system, from raw material acquisition or generation of natural resources to the final disposal.

Life cycle analysis: a system-oriented approach estimating the environmental inventories (i.e. waste generation, emissions and discharges) and energy and resource usage associated with a product, process or operation throughout all stages of the life cycle.

Municipal waste: consecutive and interlinked stages of a product system, from raw material acquisition or generation of natural resources to the final disposal.

Municipal wastewater: discharge of effluent from wastewater treatment plants which receive wastewater from households, commercial establishments, and industries. Combined sewer/separate storm overflows are included in this category.

Noise pollution: harmful or unwanted sounds in the environment, which in specific locals, can be measured and averaged over a period of time.

Ozone: Ozone, the triatomic form of oxygen (O₃), is a gaseous atmospheric constituent. In the troposphere, it is created both naturally and by photochemical reactions involving gases resulting from human activities (photochemical smog). In high concentrations, tropospheric ozone can be harmful to a wide range of living organisms. Tropospheric ozone acts as a greenhouse gas. In the stratosphere, ozone is created by the interaction between solar ultraviolet radiation and molecular oxygen (O₂). Stratospheric ozone plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric ozone, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet (UV-) B radiation.

Packaging waste: waste comprised of materials, or items, used to protect, contain or transport a commodity or product and usually considered a type of consumer waste.

Recycling: (1) a resource recovery method involving the collection and treatment of a waste product for use as raw material in the manufacture of the same or a similar product. (2) the EU waste strategy distinguishes between: reuse meant as a material reuse without any structural changes in materials; recycling meant as a material recycling, only, and with a reference to structural changes in products; and recovery meant as an energy recovery only.

Stakeholder: an institution, organisation, or group that has some interest in a particular sector or system.

Waste: materials that are not prime products (that is, products produced for the market) for which the generator has no further use in terms of his/her own purposes of production, transformation or consumption, and of which he/she wants to dispose. Wastes may be generated during the extraction of raw materials, the processing of raw materials into intermediate and final products, the consumption of final products, and other human activities. Residuals recycled or reused at the place of generation are excluded.

Waste disposal: the collection, sorting, transport and treatment of waste as well as its storage and tipping above or under ground.

Waste management: the collection, transport, treatment and disposal of waste (including after-care of disposal sites).

Water pollution: presence in water of harmful and objectionable material — obtained from sewers, industrial wastes and rainwater run-off — in sufficient concentrations to make it unfit for use.

Water quality: physical, chemical, biological and organoleptic (taste-related) properties of water.

Wild species: Organisms captive or living in the wild that have not been subject to breeding to alter them from their native state.

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