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**REGIONAL ASSESSMENT ON THE NATIONAL
AND
REGIONAL REGULATIONS FOR RELEASES OF POLLUTANTS FROM
INDUSTRIAL INSTALLATIONS**

TABLE OF CONTENTS

1. Purpose of this document.....	1
2. Methodology.....	1
3. Overview of the regional context.....	1
4. Setting and implementing industrial environmental policies.....	4
4.1 <i>General principles</i>	6
4.2 <i>Legislation</i>	6
<i>Technical standards</i>	7
4.4 <i>Permitting</i>	9
4.5 <i>Compliance & Enforcement</i>	10
4.5.1 <i>Inspection System</i>	11
4.5.2 <i>Inspectorate strategy</i>	11
4.5.3 <i>Non-compliance responses</i>	12
4.6 <i>Information and Monitoring (databases, declarations, inventories)</i>	12
4.7 <i>Economic instruments. Voluntary agreements</i>	12
5. EU environmental standards	14
5.1 <i>Selected industrial EU environmental regulations</i>	18
5.2 <i>Other EU environmental regulations affecting industries</i>	21
6. Non-EU countries environmental standards.....	21
6.1 <i>Overview</i>	22
6.2 <i>Steps to follow</i>	25
6.3 <i>Standards Comparison with EU</i>	27
7. How to improve industrial environmental performance optimizing existing regulations.....	31
8. How Companies can adapt to new standards	34
9. Conclusions /Recommendations	38

Annex I International agreement

Annex II Main EU Directive

Annex II Non EU countries

Annex IV References

Acronyms and definitions

Baseline Budget [BB]: Country total amount of releases for each pollutant targeted on SAP, with reference to the year 2003

BAT: Best Available Technique

BATNEEC: Best Available Technique Not Entailing Excessive Costs

EEA: European Environmental Agency

EU: European Union

EIA: Environmental Impact Assessment

Emission Limit Value (ELV): is the maximum allowable release of a substance from an industrial operation to air, water or land. It may be a concentration limit and/or a maximum load for a given period in the discharge stream. ELV can be derived from BAT or EQS.

Environmental Quality Standards (EQS): value, generally defined by regulation, which specifies the maximum permissible concentration of a potentially hazardous chemical in an environmental sample, generally of air or water. (Sometimes also known as 'ambient standard')¹

Industry Environmental Standards [IES]: The concept of 'industry environmental standards' could have different meanings:

One of the most commonly accepted definition for industrial environmental standards is 'the common and repeated use of rules, conditions, guidelines, or characteristics for products or related processes and production methods, and related management systems practices, established endorsed or adopted by international organisations (like CEN or ISO), sectoral associations or even single organisations'. Even if standardisation is considered² a potential tool for reducing the environmental impacts of products and services, the present document does not consider Industry Environmental Standards as such.

INECE: International Network for Environmental Compliance and Enforcement

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

LBS: Land Based Sources Protocol

LIFE: Financial Instrument for the Environment. Introduced in 1992, is one of the spearheads of the European Union's environmental policy. It co-finances projects in three area (nature, environment and third countries) and it is open to all EU countries, some candidate countries and some third countries bordering the shores of the Mediterranean and the Baltic Sea.

MAP: Mediterranean Action Plan

MED POL: Programme for the Assessment and Control of Pollution in the Mediterranean

RAC: Regional Activity Centre

SAP: Strategic Action Program

UNECE: United Nations Economic Commission for Europe

¹ Environmental quality standard (EQS) is a concept for which there is no uniform definition. This type of rule is used in many different legal systems in the world, but the standards do not have the same definition, criteria or legal effect in them. In some countries it coincides with the Industry Environmental Standards used through out this document as legally binding limits for an environmental status which may not be infringed.

EQS may be expressed numerically as concentrations of substances, but it is also possible to have generalized quality objectives expressed in words relating to the use of the environment. (i.e. saying that water should be suitable for the passage of migratory fish, or suitable for the abstraction of drinking water).

² cf. http://europa.eu.int/eur-lex/en/com/cnc/2004/com2004_0130en01.pdf

1. Purpose of this document

Under the provisions of the implementation of the Strategic Action Programme (SAP) to address Land Based Sources (LBS) of pollution, Mediterranean countries should update or elaborate their national regulations to track the releases of pollutants from industrial sectors and to comply with Baseline Budget and SAP requirements.

To this end, a basic document³ has been requested by MEDPOL in order to review and assess:

- the diverse environmental standards for the industry in the different countries of the Region;
- the differences between EU and non-EU countries;
- the means by which standards have been derived in the European countries;
- the diverse ways of establishing updated environmental standards;
- the methodology that industrialists should use to track pollution reduction and the provisions of SAP and its implementation strategy.

For the purpose of this document, 'industry environmental standards' (IES) will be the emission limits or conditions under which the releases to the environment of the diverse kind of pollutants (air emissions, wastewater, waste, mainly) are allowed. IES almost coincide with ELV definition.

2. Methodology

The methodology followed in this report has been, basically, a search through internet resources, as well as MAP, MEDPOL & RACs documents, followed by the requested interpretation and assessment. MAP/MEDPOL officers have also been consulted.

Out of more than 300 legal acts developed in the EU, including directives, regulations, decisions and recommendations, a limited number of framework directives have been identified and selected to analyse from where and how they derive, the way they interact with standards and how, finally, industries have to fit mandatory limits or procedures for their pollutant emissions or waste.

For non-EU countries several regional and sub regional reports have been used as a basic source of information. Their content has been compared, when possible⁴, with country information, such as reports on the state of the environment, legal pieces or detailed progress reports, issued by international institutions, in order to cross-check the data.

Main consulted sources are incorporated along the text as footnotes, and in Annex IV there is a list of reference documents among which the ones considered as the most relevant are in **bold**.

3. Overview of the regional context

The SAP final purpose is the improvement of the quality of the marine environment by better-shared management of the land-based pollution, as well as the facilitation of the LBS Protocol implementation.

³ See Annex IV for TOR

⁴ Several institutions and reports underline the lack of available, reliable and updated information.

To draw a single picture of environmental capabilities of the different MAP Countries to generate/adopt/update environmental standards becomes a hard task due to the differences in geographical, economic, technical, cultural, social, legislative or administrative conditions among them. The diverse intensity, location, age, size or typologies of industries and the level of economic development⁵, add complexities.

The potential effects of the forthcoming Mediterranean Free Trade Area should be considered, as they strengthen the convenience of seeking ways for industries to reduce their environmental impacts whilst they benefit from an open market. The related country-agreements usually do not include provisions for converging or harmonizing environmental legislation.

Some of the MAP countries are EU members, where a higher degree of coherence on the environmental policies and standards is assumed⁶. The recent incorporation of new members, adds a temporary distortion factor but allows a certain homogeneous approach, which is not possible for most of the other MAP countries.

In addition, the SAP has identified along the basin 111 'hotspots', a significant part of them from industrial direct or indirect origin, which are among its priority objectives.

Scenario gains still more complexity when the different national or sub-national competencies and responsibilities are taken into account.

If we try to track the path followed by a specific environmental industrial standard, until it becomes mandatory for an industrial installation, in many cases we can find several intermediate steps (national, subnational, local, basin, etc.) with competencies to modify it (increasing obligations or imposing stricter limits). This results in contradictory situations among the same market (see

Box 1 Example of Spanish competencies at wastewater emission standards).

In this context, the countries with a decentralised public administration system need further coordination⁷ and connection between the different entities to attain a minimal level of coherence and to make an efficient use of the 'proximity principle'.

⁵ It is still alive the controversy on the GNP as indicator of the possibilities of adopting proactive environmental policies or effectively implement the existing regulations. International support programs and eco-efficient techniques and procedures can ease the process of modernising industries, legislation and institutions without the necessity of equalize economic development to environmental depredation. Some of the consulted reports insist on the economic feasibility of the changes and investments that industries must do to adapt their activities to the new obligations.

⁶ Nevertheless, EU-15 countries cannot be considered as an ideal on implementation of environmental legislation and policies. On 19/08/2004 the 5th annual survey on implementation and enforcement was presented and the following paragraph, extracted from the press release, seems to be enough explicit:

'A report published ... by the European Commission shows serious shortcomings in the implementation of EU environmental law. This deprives citizens of the high level of environmental protection that they expect. The 'Fifth Annual Survey on the implementation and enforcement of EU environmental law' illustrates that Member States are late in transposing environmental Directives: until the end of 2003, there were 88 cases in which environmental Directives were not transposed on time. In 118 cases, the Directives were not correctly transposed, and in 95 cases Member States did not meet 'secondary' obligations under the Directives, for example deadlines for presenting certain plans, submitting data or designating protected areas. Compliance varies from Member State to Member State, with France, Greece, Ireland, Italy and Spain having the worst records. Most shortcomings have been found in the sectors of water, waste, nature protection and environmental impact assessments.'

(Underlined by the author. The full report can be found at http://europa.eu.int/comm/environment/law/5th_en.pdf)

⁷ Some countries suffer from fragmented competencies not always efficiently coordinated. For example, in Bosnia & Herzegovina the environmental management planning suffers from lack of integration due to the complex institutional structure.

Through Directive 2000/60/EC establishing a framework for Community action in the field of water policy, Member States have to define river basin districts and ensure the enforcement of limit values and quality objectives. Although a list of priority substances has been developed by subsequent Decision 2455/2001/EC, standards had been established by former Directives. Member States are required to implement them at national level and to restrict limits if necessary.

In the case of Spain, wastewater emission standards have been developed from Royal Decree 849/1986 concerning the Regulation on Controlled Waters and the subsequent modifications, which define limit values in three different scenarios according to natural dilution of the effluent.

From this Regulation, sub national Autonomous Communities can develop and expand their own standards by establishing stricter limit values if necessary. In addition, River Basin Districts or Local Authorities are required to enforce such standards and, at the same time, are competent to develop ordinances depending on the final destination of the wastewater (pwt, river or sea) generated within their territory.

In conclusion, not all Spanish industry installations are bound to comply with the same discharge limits.

Box 1 Example of Spanish competencies at wastewater emission standards

To reach the objectives of this document, MAP Countries have been classified into four main (but not necessarily homogenous) groups, showing different realities and possibilities to approach the pollution reduction targets established in the SAP and its derived plans & programs:

- 1) Former members of the EU (France, Greece, Italy, [Monaco], Spain)
 - 2) New members of the EU (Cyprus, Slovenia, Malta)
 - 3) Candidates to become EU members (Croatia, Turkey)
 - 4) MAP Countries not included into the precedent groups (Albania, Algeria, Bosnia & Herzegovina, Egypt, Israel, Morocco, Lebanon, Libya, Serbia & Montenegro, Syria, Tunisia)
- As for the groups 1 and 2, a complex network⁸ of legal bodies configures the so-called '*acquis communautaire*', in force for group 1 (and for group 2, sometimes after a transition period of time), through a global procedure that includes as main steps: 'transposition', 'implementation' and 'enforcement'.

For those countries (and their industries), having to follow an extensive, and continuously developing, environmental regulatory framework, it is unlikely that they would accept new standards or obligations not being adopted through EU mechanisms or not affecting all EU members.

Former members of the EU MAP countries concentrate the main industrial activities of the Mediterranean⁹ and, consequently, the contribution to the global environmental impact of the Region is relevant. The existing regulation framework and specially IPPC Directive (see Section # 5.1.), as well as the whole permitting system and instruments available, combined with the improvements made since Baseline Budget was established, could apparently serve to reach SAP purposes and objectives.

⁸ EU environmental legislation has developed around 300 legal acts from which 70 directives and 21 regulations are commonly considered as the nucleus of the '*acquis*'

⁹ cf. EEA., 'State and pressures of the marine and coastal Mediterranean environment'. Environmental issues series No 5, Section 3.5.

New members of the EU countries are immersed into a sometimes-difficult adaptation process. They can make use of the technical and financial support to accommodate into the EU procedures & standards in order to reduce pollution in an eco-efficient way.

- Group 3. Their ‘accession process’ could also be defined as a ‘convergence’ process where national legislation and institutional arrangements are analyzed with the aim of approaching the EU objectives and features in order to become an EU member in a near future.

For those countries, EU rules and procedures should be used as a benchmarking reference. Efforts and resources from the administrations, donors and sectors should facilitate the structural evolution needed to facilitate their future integration.

- Group 4, we find a diversity of situations, not only under an environmental approach but also under that, combining altogether, affecting the environment and the quality of its management by industries and administrations.

The models in use for their industrial environmental management come from diverse sources, some of them product of bi-lateral agreements and programs. They show diversity on the forms and intensity under which obligations and standards are implemented.

The experiences coming from the countries included in the other precedent groups (or from the countries of the same group) can be used as benchmarking tools and, in that sense, the different stages or recommendations could be extremely useful provided they adapt to local conditions.

4. Setting and implementing industrial environmental policies

To achieve an eco-efficient industrial network and, consequently, the reduction of industrial pollution, countries need several coordinated and consequent actions and policies.

The process for setting (updating) environmental policies is developed through various stages (among which standards implementation is included), which are interdependent.

Those steps are summarily shown in Figure 1. Each stage hides diverse complexity on its procedures and implementation and is affected by the efficiency of the precedent, as well as it affects the subsequent ones¹⁰.

¹⁰ i.e. A national plan needs an accurate database of industrial establishments, processes, emissions, management of wastes, water use and wastewater, etc. Without this knowledge is unbelievable to have a efficient permit system or properly monitor the compliance level. In a similar way, compliance & enforcement success relay on a good and efficient permit scheme.

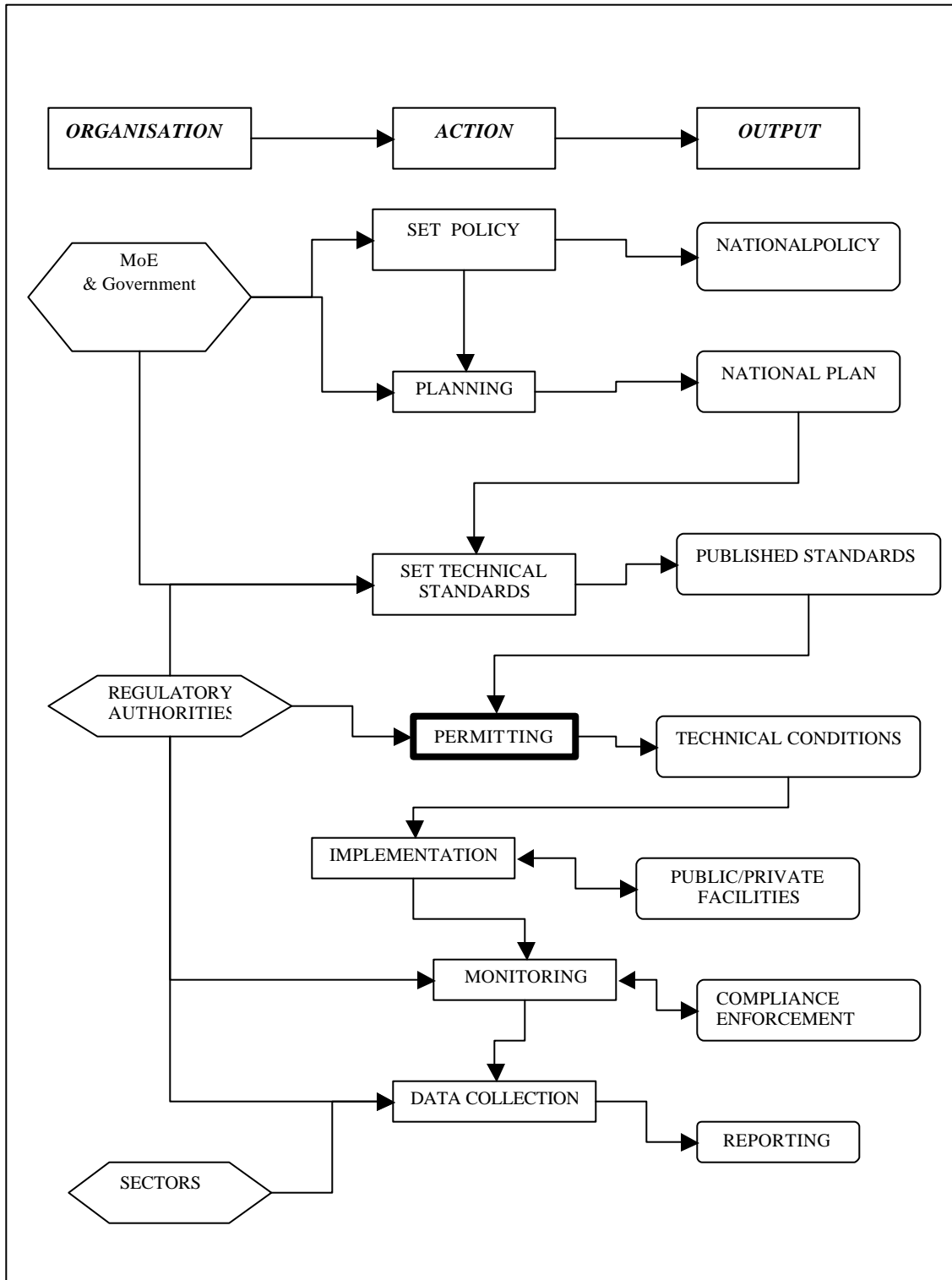


Figure 1 Diagram of environmental policy making process¹¹

¹¹ based on European Commission 'Handbook on the Implementation of EC Environmental Legislation'

4.1 General principles

Several common and well-known principles are widely accepted to be included in any environmental policy: sustainable development, precaution and prevention, substitution, integration, cooperation and responsibility-sharing, public participation, access to information, polluter pays, etc.

The approach to reduce and control industrial pollution has to give priority to the possibilities of elimination or reduction at source before the recycling or the correct disposal, following the sequence:

Prevention/Reduction ? Re-use & Recycling ? External recycling & Valorisation ? Treatment & Disposal
--

Environmental legislations usually include those priorities, but in most cases they are not yet reflected in the different tools used to manage industrial environment¹². Sometimes the rigidity on discharge or emissions permits could give little room for prevention/reduction measures.

4.2 Legislation

Although the aim of this report is not to discuss the need of environmental legislation and regulatory frames, a few some comments on this subject are incorporated:

- Without a regulatory framework, efficiently implemented, it is not possible to achieve environmental targets. Even those industries aiming to follow the path towards environmental excellence need (at least in a short time basis) to be protected against market/prices distortions from the ones not properly managing their environmental impact.
- A legislative process is quite a long procedure¹³ along which the draft project can lose effectiveness or even disappear. Using the possibilities of a parallel optimisation of the existing tools (see Section # 7) is highly advisable.
- Competent authorities to ensure the future practical implementation have to be identified/created
- In order to become effective, it is advisable to prepare legislation timetable, administrative instructions and procedures, enforcement tools, staff training schemes and the appropriate resources.
- When initiating a process of creating/updating/implementing environmental legislation/regulations, several potential barriers¹⁴ may be faced, such as:
 - Conflicts between national laws/ministries combined with a traditional weakness of environment authorities compared with industry, economy or development ones.
 - Lack of clarity on the allocation of responsibilities/competencies
 - Low government priority/awareness

¹² For example, when according grants or loans, or in the permitting systems. The introduction of BATs concept could move this situation towards more eco-efficient issues. Similar comments can be done when considering waste and effluents treatment or disposal.

¹³ Some reports estimate on one year the average time needed. It seems to be an optimistic figure when examples of near-to-4-years can easily be identified

¹⁴ Cf. DG Environment <http://europa.eu.int/comm/environment/enlarg/med/index.htm>

- Low level of consultation with stakeholders

The existence of a legislative ‘umbrella’ (as Directives and Recommendations are for EU countries) obviously eases the process of elaborating/updating national legislation. In this sense, a more legally binding MAP Protocols would help¹⁵ to update the legal framework at a country level.

Environmental regulation is usually characterised by two approaches: environmental quality regulation and technology regulation. The environmental quality approach attempts to regulate on the basis of the assimilative/carrying capacity of an ecosystem while the technology strategy focuses on minimising emissions. The two approaches are not mutually excluding; they are rather used simultaneously by governments when establishing standards.

Technical standards¹⁶

Environmental policies involve making judgements about the acceptability of the modifications to the environment resulting from human activities. Standards are the most tangible and precise expression of the judgements that underlie environmental policies.

Emission standards may be set individually for each discharge, or uniformly for a particular type of discharge within a whole area or country.

They may be set numerically (either in legislation or administratively) as parts of a substance per million of effluent or per unit of output. Alternatively an obligation may be placed on the discharger to use the ‘best available techniques’ for reducing emissions or ‘to attempt the waste minimization’.

Feasible environmental standards will determine the effectiveness of regulations. To this end, the process of establishing environmental standards is essential as an appropriately designed procedure ensures the legitimacy of the requirements and their acceptance by the regulated community. It is therefore important that environmental standards are established through a process of deliberation which seeks to meet a multiplicity of constraints and viewpoints.

The main stages of the environmental standard setting process are illustrated in Figure 2. The flowchart outlines at a conceptual level the broad principles of the standard setting procedure and the way the various elements required in making a practical judgement interact. The sequence is logical and not necessarily chronological.

¹⁵ Including provisions for non-compliance

¹⁶ Among other institutions, OECD has various documents and reports that have been used in this section.

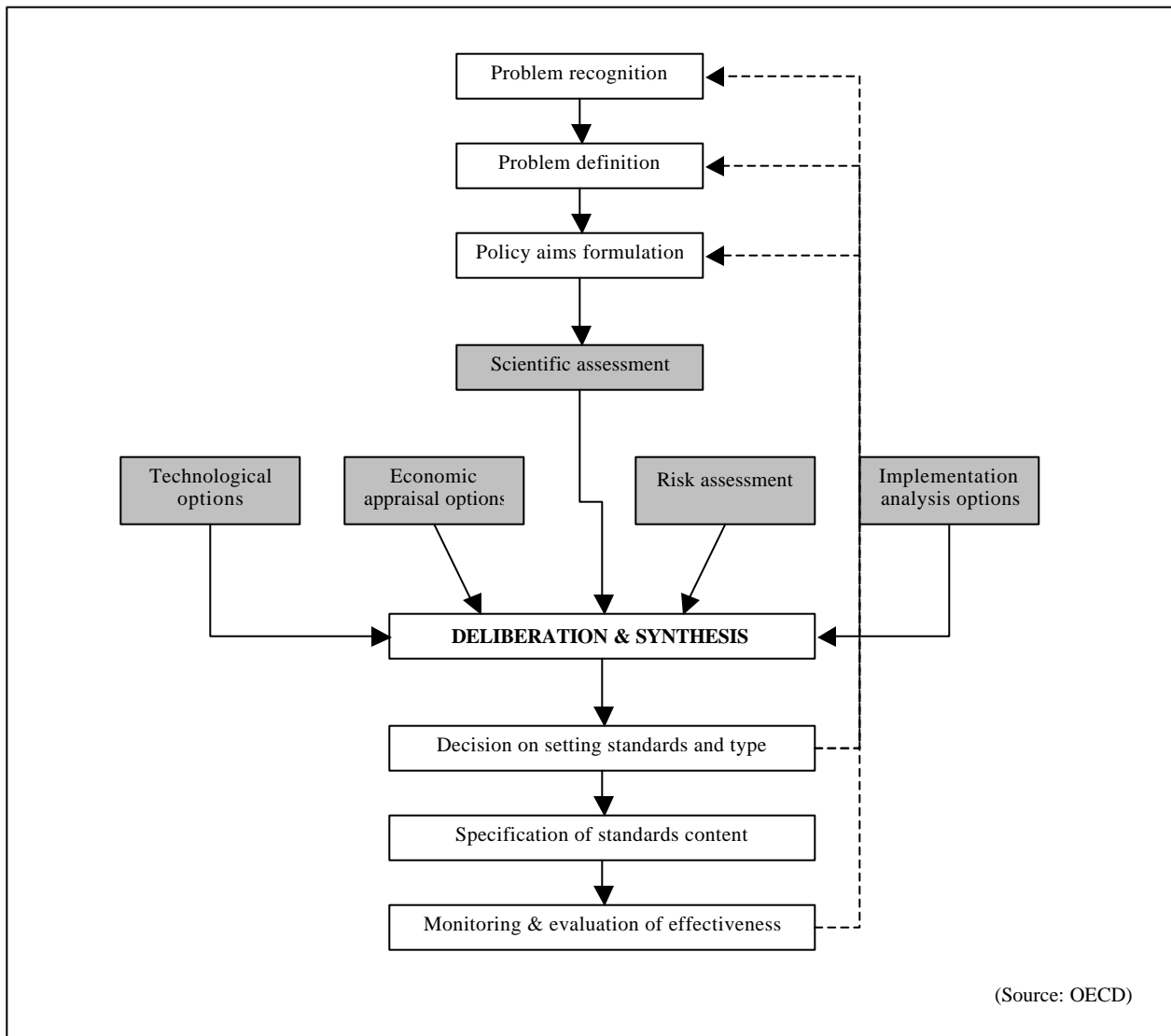


Figure 2 Major steps on the environmental standards making process

Many environmental standards in industrialised countries have been based on what is feasible in the context of a particular industrial process (see Box 2 Example of regulators requirements on quality standards in U.S.). This approach implies the use of the best available and economically feasible technology with the best overall environmental performance.

The **United States** regulatory quality standards require regulators to:

- Identify the need for and consequences of regulation
- Identify and assess alternatives for action
- Set regulatory priorities among various problems
- Design regulations in the most cost-effective way
- Adopt a regulation only if benefits justify costs
- Base decisions on best reasonably obtainable scientific, economic, and other information
- Take into account the costs of cumulative regulations

Box 2 Example of regulators requirements on quality standards in U.S.

The availability and reliability of data is crucial for the process of standards setting. A statistical extrapolation method is then used for the derivation of a standard based on the assumption that the sensitivities of species in ecosystems can be described by a statistical frequency distribution. From the estimated distribution a concentration is derived which is assumed to be safe for ecosystems.

4.4 Permitting

For an industrialist the environmental permitting systems could easily be considered as a labyrinth where he becomes lost among requirements, diversity of competencies involved and, sometimes, contradictory situations.

In spite of this perception, permits constitute (together with monitoring and enforcement) a critical element in the process of reducing pollution from industrial sources and the way standards reach industries (see Figure 3).

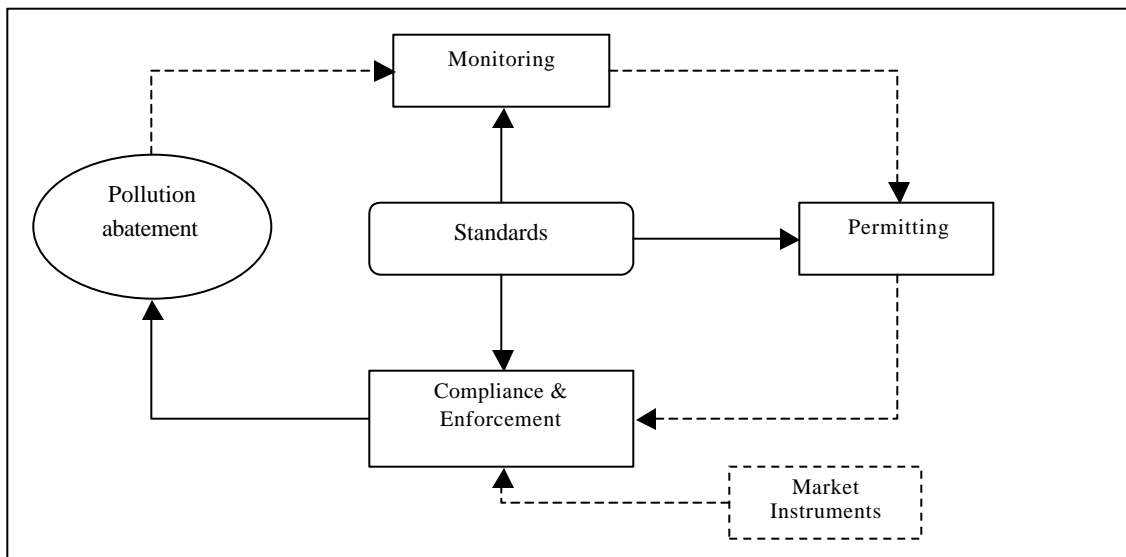


Figure 3 The core loop

When discussing about integrated permits there is a tendency to look at EU IPPC Directive as the benchmarking target. Integrated permit systems do not necessarily mean IPPC schemes.

It should be highlighted that IPPC approach (mandatory for EU accession candidates or included in several country agreements for the Free Trade Area) applies only to certain (potentially large pollutant) industries. Widely using IPPC model could drive countries towards an undesirable end, as IPPC has proven to be a difficult concept to implement even within EU countries¹⁷, and that it is institutionally and economically costly.

On the other hand, if the environmental industrial standards or emission limits have to be cost-effective in terms of the wealth of each country, the most advanced techniques would not always be feasible or appropriate.

Some experts¹⁸ state that permits themselves do not necessarily need to be integrated but they must have a strong coordination among the permitting institutions. Integrated permits are advisable when they do not generate overlapping procedures or increase bureaucracy and extra costs.

Lessons learned from IPPC experiences allow launching some other recommendations on permitting procedures, such as:

- Be flexible and not only rely on end of pipe solutions. Promote pollution prevention.
- Include not only emission limits but also other conditions related to self-monitoring, reporting, efficiency on the use of raw materials and energies, etc.
- Limits for each installation based upon cost effective BATs and environmental standards.
- Let a gate open to the request of specific improvements
- Choose strategic and significant pollutants to control
- Available for public review
- Limited on time

4.5 Compliance & Enforcement¹⁹

Compliance is the full implementation of environmental requirements. Compliance occurs when requirements are met and desired changes are achieved.

Enforcement is the set of actions taken to achieve compliance (inspections, negotiations, legal actions, promotion activities [e.g., technical assistance], non-compliance response policies) Enforcing the law is sometimes more difficult than making it.

There is a direct and interdependent relation between the quality of permitting schemes and the control/inspectorate activities and effectiveness.

Enforcement bodies must be aware of regulatory requirements and permits contents in order to check if compliance fits particular conditions or to suggest others to be imposed.

Those factors affecting compliance are the following:

- Deterrence

¹⁷ About effective implementation of IPPC Directive, see the above-mentioned '5th annual survey ...' pg. #21. The final report of the IMPEL workshop on integrated permitting (<http://europa.eu.int/comm/environment/impel/pdf/intpermit.pdf>) is also explanatory about IPPC discordances.

¹⁸ For example in http://www.rec.org/REC/Programs/REREP/BERCEN/BERCEN_Book.html

¹⁹ An interesting document on enforcement and inspectorate, covering some MAP countries, can be found at the previous BERCEN reference. From the same source another document useful for benchmarking can be found at <http://www.rec.org/REC/Programs/REREP/BERCEN/TrainingManual.html>. Another source of information on <http://www.inece.org/enforcementprinciples.html>

- Economics
- Institutional Credibility
- Social Factors
- Knowledge and Technical Feasibility

To become effective, enforcement strategies need, among others:

- good legal base²⁰
- combine routine inspections with unannounced ones
- clear strategies in case of non-compliance
- training on technical and managerial aspects related to inspection
- agile procedures from inspection to its consequences (economic sanctions, closure, legal implications)
- performance indicators related to the environment improvement rather than number of inspections/fines

4.5.1 Inspection System

Inspection system includes two types of activities:

Normal or standard activities of compliance checking: regulatory requirements, permits, non-compliance response policy

Adjustment activities, resulting from feedback of normal activities: feedback to non-compliance response policy, feedback to the permitting process, feedback to environmental regulations

4.5.2 Inspectorate strategy

Strategies are essential in order to make an effective use of inspectorate's resources. Several factors should be considered when developing strategies, the relative weigh of these factors varies greatly from one country to the other and may lead to diverging inspectorate strategies:

- Clear mandate
- Human, financial and material resources
- Institutional context
- National development plan

Inspectorate strategy should result in an inspection plan which sets inspection priorities according to:

- Quantity of pollution generated
- Industrial sector
- The nature of the pollutant
- Type of receiving media

²⁰ cf. http://europa.eu.int/comm/environment/impel/pdf/better_legislation_report.pdf

- Nature of the area
- Size of the establishments
- Intensity of natural resources consumed
- Special or new environmental laws
- Number of inspections

4.5.3 Non-compliance responses

Non-compliance responses must be addressed to achieve compliance, thus, enforceability will depend on the following factors:

- Authority
- Institutional framework
- Balance between authorities and facility rights
- Environmental requirements
- Compatibility

4.6 Information and Monitoring (databases, declarations, inventories)

It is commonly accepted that what is unknown or unmeasured cannot be properly managed. The relation between monitoring and standards appears to be evident. Technical resources and capacity building become the critical points to obtain useful data.

In this sense, declarations of raw materials used, waste typologies and management procedures, wastewater and treatment, emissions, etc. will constitute the databases needed to improve planning, management and control, and to complement global monitoring data.

The integration of the data from the diverse levels (national to local) and the standardisation of the information required are advisable.

4.7 Economic instruments. Voluntary agreements

'Command & Control' effectiveness has an inflexion point from which the marginal social cost to reach a better environmental performance could be higher or less-effective than the marginal environmental and social benefits obtained. To go beyond this situation the 'economic' or 'market' instruments could be a useful environmental policy tool to complement regulations, under a certain effectiveness conditions²¹, among which:

- previous studies on its effectiveness, cost, benefit and equity
- participation of economic authorities
- public consultation
- gradual implementation
- benefits reverting to the environment

²¹ Source: European Environmental Agency. More details on economic instruments can be found in the document UNEP(DEC)/MED..WG.245/6 and on <http://www1.oecd.org/scripts/env/ecoInst/index.htm> or <http://www.pap-sapei.org/>

Economic instruments can also generate increased effects (i.e. through an increasing on 'real-prices' or the reduction on subsidies) but also difficulties or obstacles, like:

- short term lose of competitiveness
- potential conflict with national taxes, existing grants to industry or free-trade regulations
- potential conflict with economic authorities
- potential effects on low-income groups

Economic instruments try to transfer environmental externalities to its origin, leaving to the decision of the industries the choice of the most cost-effective or eco-efficient way to deal with them. They can be classified into two big groups:

- suasive
- dissuasive

Among the criteria to qualify an economic instrument, the following issues need to be considered:

- environmental effectiveness
- provide correct incentives
- answering to a cost-benefit analysis
- compatible with existing legislation, avoiding market distortion
- monitoring mechanisms
- institutional support

Economic instruments can be classified as:

- Property rights
- Market creation (Tradable permits, Consume incentives)
- Taxes, Charges & Financial (Subsidized prices reduction/elimination, Eco-labeling taxes reduction, Taxes on products, substances, emissions. User's taxes. Levies. Taxes rebates. Grants. Soft loans. Accelerated depreciations, etc.)
- Others (Mandatory insurances, Deposit-refund systems, Warrants, etc.)

The impact of economic instruments is strongly influenced by the economic and social context in which they are introduced.

'Voluntary agreements' are not properly economic instruments but, under circumstances and conditions can ease the adaptation of companies to environmental requirements or promote industrial behaviour going beyond legal requirements²².

²² cf. EEA 'Environmental agreements – Environmental effectiveness' (1999). See also as an example, Maria della Costa & Stefania Fusani 'Overview of environmental voluntary agreements in Italy' on CP/RAC Technical Publication #2

Similar to 'voluntary agreements', but drastically different, the 'behaviour voluntary codes' should be considered. They are promoted by several institutions to show a proactive compromise on environmental and sustainability matters by the signatories.

5. EU environmental standards

Widely speaking, an Industry Environmental Standard (in the sense used through this document) is the final result of a process initiated because of one or several reasons/institutions²³ that, after having passed diverse and variable communitarian and national administrative, social and scientific steps (among which consultation with experts and stakeholders), becomes mandatory at industry level. This process is likely to be long, variable and complex; the followed pathway and the relationship between the different social pressures, institutional initiatives and the resulting legal acts are not always easy or understandable.

At EU level, the border between preparatory phases and implementation is the approval of a related legal act.

Legal Acts of the EU are in the form of¹:

Regulations, which have general effect and are directly applicable in the member states; that is, the individual countries do not need to pass local laws to bring them into effect, and indeed any local laws contrary to the regulation are overruled.

Directives, which are addressed to the member states and are binding as to the result, but the members may choose the form and methods for adaptation into their national legal systems. In practice, with the exception of directives related to the common agricultural policy, the Union 'addresses' directives to all member states, and specifies a date by which the states must have put the directive into effect.

Decisions, which are binding on those to whom they are addressed.

Recommendations and Opinions, which have no binding force.

European Council Guidelines and Decisions (sometimes referred to as 'soft law'),

Joint Actions, and Common Positions adopted by the Council.

Box 3 Types of EU Legal Acts

Directives are the EU most common environmental legal instrument. A typical EU directive starts life as a proposal from the European Commission²⁴. It is then passed to the Council of Ministers and most directives go to the European Parliament. Afterwards, it goes to the Member States for adoption before it takes effect as European law.

It is not easy to follow from its beginning the path that ends in the implementation of an emission level assigned to an industry or installation in the EU.

The process usually has a definite direction but, generally speaking, it is not linear or sequential. The crossing of the diverse actions carried by different institutions (international, supranational, national, private, etc.), combined with the previous existing legislations, multiplies the specific situations.

²³ Among them: environmental incidents, social pressure, scientific improvements, international conventions, etc., or proposals coming from a Member State

²⁴ For the legislative process, see http://europa.eu.int/eur-lex/en/about/abc/abc_21.html In the preliminary process sometimes there is a 'green paper' [consultation and debate papers published by the Commission on a specific policy area, addressed to interested parties who are invited to participate] followed by a 'white paper' [documents containing Commission proposals for Community action in a specific area]

As an example, Box 4 aims to partially summarize the long trail since the first alarm signals about the potential environmental and health dangers of sulphur emissions published on the '60, until the updating of a National legislation (Spain in this case) in 2002 that will affect the emission limits of large combustion plants.

1960s Scientists alerted about the interrelationship between sulphur emissions in continental Europe and the acidification of Scandinavian lakes

1972 UN Conference on human environment in Stockholm signalled the start for active international cooperation to combat acidification

1972 - 1977 several studies confirmed the hypothesis that air pollutants could travel several thousands of kilometres before deposition and damage occurred. This also implied that cooperation at the international level was necessary to solve problems such as acidification

1979 High-level Meeting on the Protection of the Environment was held in Geneva. It resulted in the signature of the Convention on Long-range Transboundary Air Pollution

1983 The Geneva Convention on Long-range Transboundary Air Pollution entered into force. It derives in eight successive specific Protocols concerning: financing EMEP, reduction of **sulphur emissions** (two protocols), nitrogen oxides, volatile organic compounds, heavy metals, persistent organic pollutants and acidification, eutrophication and ground-level ozone.

[1984 Directive 84/360/EEC of 28 June 1984 to combat pollution from industrial plants. *Not deriving directly from any Convention or Protocol, on its introductory part, the fact of EU being part of Geneva Convention on Long-range Transboundary Air Pollution is mentioned as one of the reasons to be produced*]

1985 Helsinki Protocol on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30 per cent

1987 Protocol on the Reduction of Sulphur Emissions entered into force

1994 Aarhus Protocol on Further Reduction of Sulphur Emissions

1996 Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management (framework)

1998 Protocol on Further Reduction of Sulphur Emissions entered into force

1998 Council Decision 98/686/EC of 23 March 1998 on the conclusion by the European Community of the Protocol to the 1979 Convention on long-range transboundary air pollution on further reductions of sulphur emissions

1999 Council Directive 1999/30/EC of 22 April 1999 relating to limit values for NO_x, SO₂, Pb and PM₁₀

2001 Directive 2001/80/EC of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants

2001 Directive 2001/81/EC of 23 October 2001 on national emission ceilings for certain atmospheric pollutants

2002 Real Decreto (Spain) 1073/2002 on the assessment and ambient air quality concerning sulphur dioxide, nitrogen dioxide, particles, lead, benzene and carbon monoxide (Spanish transposition of Directive 1999/30/EC). [*This legal piece modifies previous national legislation and includes ELV . It will enter into force January, 1st 2005*]

Box 4 Example of pathway followed to implement sulphur dioxide EU standards²⁵

Not all EU Directives include standards. They usually bind all Member States to an *overall objective* to be achieved but leave the question of *how* to achieve this goal for national authorities to decide, allowing flexibility to adapt to the very different environmental conditions in different parts of the Community.

Some Directives derive into 'daughter' ones for specific sectors, products, substances or emissions, fixing allowance limits or conditions to be followed at country level.

Once at a Country level, it depends on the decentralisation degree and the distribution of competencies, how or where the IES are established or complemented (see Figure 4 for an overview of the process)

²⁵ To have a most extensive overview, see: http://europa.eu.int/eur-lex/en/lif/reg/en_register_15102030.html or <http://europa.eu.int/scadplus/leg/en/lvb/l28098.htm>. For the Spanish piece of legislation, see http://noticias.juridicas.com/base_datos/Admin/rd1073-2002.html#anexo1

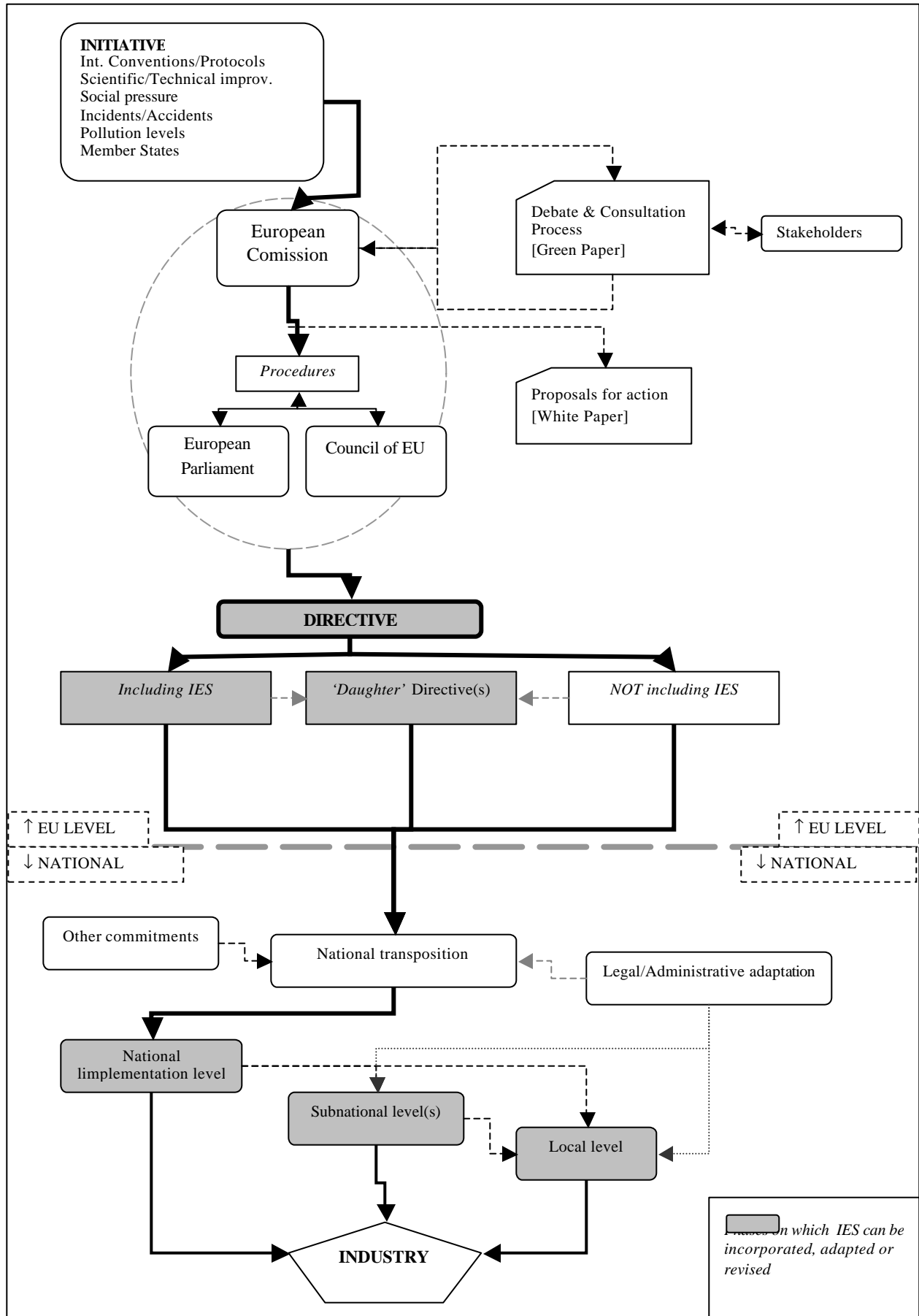


Figure 4 EU Environmental legislation development process

The basic rule of EU environmental legislation has been to require industries or potentially pollutant activities to be licensed in some manner and to make pollution control a condition of that licence. This is normally expressed in terms of 'emission controls' setting limits on how much pollutant may be discharged into the environment. The details vary from country to country.

Questions begin to arise when trying to establish the required level of emission control. This has led to debates in which the two extreme viewpoints might be described as the 'environmental quality objectives approach' and the 'emission limit values approach'²⁶.

In practical terms, the existence of environmental quality objectives allows authorities to judge the effectiveness or otherwise of the emission limit values adopted and whether they need to be tightened. Conversely, controls on emissions are the key element of any strategy to ensure compliance with environmental quality objectives. The two approaches are therefore complementary and not contradictory²⁷.

It should be underlined that quality objectives can be expressed in different ways. One approach, which has been generally followed by EC legislation in the past, is to set common values at a Community level, which are implemented by all the Member States. The second approach is to set common criteria to be used for the establishment of parameters and values at a national and local level.

5.1 Selected industrial EU environmental regulations

Some EU environmental legal acts and subsequent amendments affecting industry standards have been collected and classified according to the main environmental vector or topic they cover (see Annex II).

EU environmental legislation does not follow a particular structure; earlier EU Directives were aimed at the protection against certain substances by establishing environmental standards, for example Council Directive 85/203/EEC on air quality standards for nitrogen dioxide²⁸.

However, most of the later basic EU environmental legal acts, do not develop environmental standards by themselves but they provide concepts, principles and approaches to remedy the problems in environmental management and present proposals for further legislation. They are the so-called Framework Directives, from which daughter Directives often derive. Daughter Directives usually develop specific environmental requirements, emission levels or standards.

Although EU Directives or daughter Directives establish environmental standards, as they are required to be implemented by national legislation in State Members, environmental standards are not effective until the law is 'transposed' at national level.

Out of the selected dispositions, the following Framework Directives are considered to be the more significant:

- Waste Framework Directive (75/442/EEC)
- Hazardous Waste Directive (91/689/EEC)

²⁶ In practice, neither of the two extremes offer an ideal solution. Environmental quality objectives alone are often insufficient to tackle serious pollution problems and can be abused as a 'licence to pollute' up to a defined level. Likewise, a strict emission limit values approach based on BAT can in some circumstances lead to unnecessary investment without significant benefits to the environment

²⁷ The Integrated Pollution Prevention and Control Directive require the competent authorities to establish emission limit values for the concerned industries 'based on the best available techniques.' However, 'additional measures shall be required' when these are not sufficient to meet environmental quality standards.

²⁸ Repealed by Directive 1999/30/EC

- EIA Directive (85/337/EEC)
- Water Framework Directive (90/2000/EC)
- IPPC Directive (96/61/EC)
- Air Quality Framework Directive (96/62/EC)

A relevant example is Air Quality Framework Directive (96/62/EC), from which 'Daughter Directives' have derived concerning limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air (1999/30/EC), on limit values for benzene and carbon monoxide (2000/69/EC), and on ozone in ambient air (2002/3/EC). Further proposals on arsenic, cadmium and nickel as well as on poly-aromatic hydrocarbons and on mercury are in preparation.

However, not all Directives on limitation of emissions in ambient air have been developed from Air Quality Framework Directive. Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants and Council Directive 1999/13/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations, represent two examples of environmental legal acts establishing environmental standards for specific industrial sectors.

As for Water Framework Directive (90/2000/EC), Decision 2455/2001/EC on the list of priority substances in the field of water policy has been derived from. In this case, limit values and quality standards have to be set at Community level but Member States may restrict them if necessary. In addition, limit values developed by former Directives such as Directive 76/464/EC on pollution caused by certain dangerous substances discharged into the aquatic environment and Directives on Mercury (82/176/ECC, 84/156/ECC), cadmium (83/513/ECC), hexachlorocyclohexane (84/491/ECC) and dangerous substances Directive (86/280/ECC) still remain valid.

The following EU Directives establish other type of environmental standards such as permitting and waste management, which affect industrial activities:

- Directive 85/337/EEC, concerning environmental impact assessments;
- Directive 96/61/EC on Integrated Pollution Prevention and Control It is an installation-oriented Directive referring to a set of sectors and production capacity installations. Member States may issue a single permit for releases to air, water and waste from an industrial facility, or issue multiple permits that are integrated through a co-operation procedure involving several permitting authorities²⁹. As well as imposing emission limits in environmental permits, Member States must ensure that the permits contain measures designed to meet the following basic requirements:
 - all appropriate preventive measures are taken against pollution, in particular through the application of Best Available Techniques (BAT)³⁰
 - no significant pollution is caused

²⁹ IPPC Directive interacts with several other legal pieces. An interesting article on this subject can be found at <http://www.ecologic.de/download/projekte/850-899/890/in-depth/ippc.pdf>. About IPPC see also <http://europa.eu.int/comm/environment/impel/pdf/changes.pdf> discussing on 'substantial changes' and their crucial relation with permits

³⁰ The essence of BAT is that the selection of techniques to protect the environment should achieve an appropriate balance between realising environmental benefits and costs incurred by Operators

- waste production is avoided; where waste is produced it should be recovered or, where that is technically and economically impossible, disposed of while avoiding or reducing any impact on the environment
- energy is used efficiently
- the necessary measures are taken to prevent accidents and limit their consequences
- the necessary measures are taken upon definite cessation of activities to avoid any pollution risk and return the site of operation to a satisfactory state.

Permits must include emission limit values based on BAT, taking into consideration the potential for transfer of pollution from one medium to another. Other requirements to protect soil and groundwater and concerning waste management must be laid down if necessary. In addition, permits must contain the supplementary requirements necessary to prevent breaches of any environmental quality standard³¹.

EU working groups have developed a number of BAT reference documents, the so called BREFs, for the sectors to be covered by an Integrated Permit. The BREFs are very comprehensive and give details of techniques considered to be the best currently, they include emission and production input levels which are feasible to achieve by the use of BAT. Attention should be paid to the fact that although the BREFs are only guidance documents, they will always have to be taken into account by the Operator and by the permit issuer.

Waste Framework Directive (75/442/EEC) and Hazardous Waste Directive (91/689/EEC), establishing procedures concerning waste and hazardous waste management and disposal. Other relevant EU environmental legal acts can derive from the application of International Conventions and Protocols, i.e.:

- Council Decision 2004/259/EC of 19 February 2004 concerning the conclusion, on behalf of the European Community, of the Protocol to the 1979 Convention on Long-Range Transboundary on Persistent Organic Pollution
- Council Decision 2003/507/EC of 13 June 2003 on the accession of the European Community, to the Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution to abate Acidification, Eutrophication and Ground-Level Ozone
- Council Decision 2001/379/EC of 4 April 2001 on the approval, on behalf of the European Community, of the Protocol to the 1979 Convention on Long-range Transboundary Air Pollution on Heavy Metals. It stipulates the reduction of total annual emissions into the atmosphere of cadmium, lead and mercury, specifies emission limit values and the application of product control measures.
- Regulation 2037/2000 on substances that deplete the ozone layer was adopted in line with the changes made, in 1995, 1997 and 1999, to the Montreal Protocol on Substances that Deplete the Ozone Layer, it bans the use, placing on the market, production and importation of CFCs, halons, carbon tetrachloride, 1,1,1-trichloroethane and hydrobromofluorocarbons and provides phased restriction on virgin HCFCs, with deadlines for final elimination.
- Regulation 850/2004 on persistent organic pollutants concerns implementation of Stockholm Convention on Persistent Organic Pollutants, or the 1998 Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Persistent Organic Pollutants. It aims to eliminate where feasible as soon as possible, releases of such substances, and to establish

³¹IPPC Directive implementation requirements to be taken into consideration by countries are developed in <http://europa.eu.int/comm/environment/guide/part2f.htm>

provisions regarding waste consisting of, containing or contaminated by any of these substances.

- Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC. This scheme should enable the Community and the Member States to meet the commitments to reduce greenhouse gas emissions made in the context of the Kyoto Protocol. Installations operating in the energy sector, iron and steel production and processing, the mineral industry and the paper and card industry will automatically be subject to the emission trading scheme.

5.2 Other EU environmental regulations affecting industries

Some Directives apply indirectly to industry. For example, Water Framework Directive (2000/60/EC) implies the establishment of requirements and quality standards for some specific uses of water³² with provisions affecting industrial activities.

In addition several Directives and national laws develop the protection of nature and biodiversity and define sensitive areas. Consequently, depending on the uses and sensitivity of a particular water resource or area, nearby industries are required to comply with more or less restricted Emission Limit Values.

In this sense, local authorities have generally competencies to establish emission limit values and to issue correspondence permits for industrial activities as they ensure the enforcement of appropriate standards.

As it has been said at the beginning of this section, once a Directive is approved and transposed to national legislation, their provisions can be adapted to national or local conditions (without lowering the ELV when included in the Directive) or, in some cases, must convert what is expressed in the Directive by words or targets, into measurable units.

In any case, it is desirable that the process that will finish with a mandatory ELV or technical conditions for the industry, follows the rigour explained through Section # 4.3 trying not to provoke unrealistic differences between requirements for similar industries (always taking into consideration the specific needs of local environment).

6. Non-EU countries environmental standards

As it has been said in Section # 4, IES are part of a complex flow of interrelated actions. Consequently it has no sense to study standards as isolated from the other components and assess about the way they can be updated, without taking into consideration (even though briefly) the whole process.

In Annex III, information extracted from official institutions of the Non-EU countries has been classified into five main fields: existing Environmental Institutions, their functions, main environmental laws, their scope and, if they exist, which standards have been developed.

As it can be observed, for the Non-EU MAP countries, it is not easy to identify a common pattern in relation with industry and the environment or with environmental standards.

³² i.e., drinking water (Directive 98/83/EC), surface freshwater (Directive 75/440/EEC), bathing water (Directive 76/160/EEC), urban waste water treatment (Directive 91/271/EEC), shellfish waters (Directive 79/923/EEC) and water suitable for fish-breeding (Directive 78/659/EEC).

Among those Non-EU countries, Croatia and Turkey are involved in a process of adaptation to EU requirements (with different levels of success) as they are candidates³³ to become members. Albania, Bosnia & Herzegovina and Serbia & Montenegro are moving towards the EU under diverse agreements & instruments³⁴ bearing in mind the target of becoming a potential candidate.

Under the framework of the future Free Trade Area and the Euro-Mediterranean Partnership, several of the association agreements³⁵ (with Algeria, Israel, Lebanon, Morocco, Tunisia) have explicit references to industrial pollution. For the other two remaining countries, the agreement with Egypt does not seem to include provisions related to industrial pollution³⁶, whereas with Syria the negotiations are less advanced but a technical agreement was reached in December 2003.

No agreement has been identified between EU and Libya on the subject of this document.

6.1 Overview

There is a majority of countries that, for any of the above-mentioned reasons, are pursuing a certain approximation or convergence to the EU environmental procedures, standards or legislation. Due to that, updating standards process recommendations will consider EU as benchmarking target.

In spite of differences among all Non-EU countries, Table 1 summarizes their general situation with regard to some of the stages on which we have divided the previous Section # 4 '*Setting and implementing industrial environmental policies*'.

³³ <http://europa.eu.int/comm/enlargement/candidate.htm>

³⁴ http://europa.eu.int/comm/external_relations/see/region/index.htm, and also

http://europa.eu.int/comm/external_relations/see/sap/rep3/index.htm or http://europa.eu.int/comm/external_relations/see/actions/sap.htm

³⁵ http://europa.eu.int/comm/external_relations/euomed/med_ass_agreemnts.htm

³⁶ Article 48 just says: The Parties shall use their best endeavours to approximate their respective laws in order to facilitate the implementation of this Agreement.

Table 1 Environmental regulatory system in Non-EU countries (n.a. = not available)

	Framework legislation	Regulations & Bylaws	Competencies	Monitoring	Enforcement	Inspectorate	Permitting	Standards	Databases / Inventories	Economic Instr.	Comments
Albania	Yes	Few Developing	Fragmented	Weak	Weak & Fragmented	Weak	Weak & Fragmented (various competencies)	Gaseous emissions (2002) Not for Water EU for new 1974 for existing	Very poor	Weak	EU oriented Lack of capacity building
Algeria	Yes	Partial	n.a.	Weak	Nb	n.a.	No	Partial (liquid discharges)	n.a.	n.a.	
Bosnia & Herzegovina	Yes (2002) NEAP (2003)	In process	Fragmented	Weak	Very poor	Not a state level. Lack of staff	Water Fragmented	Nb	Weak	Weak	New laws EU oriented Need harmonisation
Croatia	Yes (need to be revised - Aarhus)	Partial & developing	Fragmented (water)	Yes (air, water) Optimizable (improvement, harmonisation)	Weak	Limited	Optimizable Local conditions	Optimizable EU, USA, D	Few	Dissuasive Fines (not paid as unfeasible) Taxes (water)	EU oriented Lack of county and local inspectors Not gov. Priority Lack of coordination Overlapping
Egypt	Yes	Yes	Fragmented	In progress	Poor	Yes	Optimizable Fragmented	Basics	n.a.	n.a.	
Israel	Yes	Yes	Centralized	Yes	Poor	Yes	Yes	Yes	n.a. but supposed	n.a.	
Lebanon	Nb	Partial non implemented	Fragmented overlapping	Poor	Poor	Lacking staff	No, Developing	Yes	Poor (Mol)	n.a.	Practical guidelines for industry and standards. Framework law is lacking at the moment.

	Framework legislation	Regulations & Bylaws	Competencies	Monitoring	Enforcement	Inspectorate	Permitting	Standards	Databases / Inventories	Economic Instr.	Comments
Morocco	Yes	Yes or in progress	Fragmented	Developing	Weak	Partial	Optimizable	Partial Developing	n.a.	n.a.	
Libya	Yes	Very poor	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Serbia & Montenegro	Yes at federal & republican level	Developing	Fragmented & overlapped	Few	Yes	Yes	Optimizable Serbia fragmented	Yes	Poor	Few (charges on water, fines on air)	EU oriented Few resources Lack of inspectors
Syria	Yes	Nb	Probably fragmented	In progress	Nb	n.a.	In progress	Apparently not	n.a.	n.a.	Lack federal coordination Lack inspectorate staff & capacity building
Tunisia	Yes	Yes	Fragmented	Yes	Partial	Yes	In progress	Partial	Yes	n.a.	
Turkey	Yes	Yes	New Ministry (2003)	Poor	Poor	Yes	In progress	Yes	Poor	n.a.	EU oriented few advances Lack of trained staff

Almost all non EU countries show a lack of means (human, economic & technical) to develop the needed tasks. This is reasonable given the recent history³⁷ of some of the countries or the development/situation of their economies, a clear signal of the difficulties of introducing/implementing updated standards effectively.

Framework legislation and bylaws: Practically all the countries have framework legislation and national plan(s). In some cases they have to be reviewed either to fit EU requirements or because they are old and inadequate to meet new challenges.

Generally speaking and for the purpose of this document, bylaws and regulations seem to be few, in some cases poorly implemented, not covering all vectors (water is the outstanding one), but in most cases they are in process of improvement.

Competencies: In most cases, the environmental competencies are fragmented and distributed among several authorities and subnational or local entities. A common lack of clarity with respect to responsibilities, and of coordination between country institutions, are reported. The result is not only inefficient and difficult procedures, but also a barrier for incorporating new regulations.

Monitoring/Information: With few exceptions, monitoring and inventories/databases are reported as 'weak' or 'optimizable'. There is a common requirement of technical resources (from measuring instruments to laptops or basic software).

Permitting: Suffering from fragmented responsibilities. In some cases such as Croatia, permitting is too complex and excessive. Sometimes integrated with EIA.

Enforcement/Inspectorate: Same comments as the ones for monitoring, with the added obstacles arising from the fragmentation of competencies. The tasks carried out by inspectors differ from country to country.

Standards: There are several and varied situations from the identified sources. In case they exist, they are usually limited to one vector and fixed by permit procedure. Examples of adopting EU ones (Albania for air, Croatia for water) or from EU countries (Croatia for Sulphur) are present. As for wastes, consulted reports underline the lacking of standards in the southern rim (except Israel and Tunisia).

Economic instruments: Not so much used or insufficiently developed/implemented. Some taxes on water. Fines (sometimes unpaid) when limits are exceeded. Lack of suasive instruments (probably due to economic constraints).

6.2 Steps to follow

Complementary to what has been said along Section # 4, when a country decides to undertake either global or partial environmental regulatory process (i.e. standards) the advisable previous steps are³⁸:

- To obtain the political commitment.
Several reports coincide on the difficulties that environmental authorities have to face when introducing/developing/updating regulations. Those difficulties arise from certain stakeholders, but also from other ministries which still consider that environmental protection is a barrier for the economic development. The existence of fragmented competencies adds even more difficulties.

³⁷ It is really hurting to see in some reports that 'situation has improved' due to the destruction of industrial network.

³⁸ For all this section it could become really useful the 'Handbook on the implementation of EC environmental legislation' downloadable at <http://europa.eu.int/comm/environment/enlarg/handbook/handbook.htm>

- To refer to international agreements which incorporate related obligations³⁹
- To prioritize targets and means
- To analyze the legislative gaps and incompatibilities among the items to be converged/harmonised, choosing the provisions useful for benchmarking. Not just Directives but also the other legal acts related to the desired objective.
To this end, the use of Tables of convergence/concordance methodology is recommended. The differences between legislations are detailed provision by provision⁴⁰ and the needed changes can be identified in a detailed form.
- To analyze the related national legislation with which it can interact
- To be realistic but not conformist
Instead of just copying other environmental standards, some reports underline⁴¹ that these have to be used as benchmarks, by striking a balance between what is desirable from an environmental viewpoint and what is realistic in terms of feasibility and enforcement capabilities.
- To analyze the possible technical barriers or the negative effects of subsidized prices for water and energy⁴²
- To analyze the characteristics of the affected groups
- To analyze the needed institutional issues
 - Administrative restructuring
 - Co-ordinating mechanisms between ministries, sub-national & local authorities, etc.
 - Training needed for the new concepts and requirements
 - Additional resources needed (human, equipment) for implementation, follow-up, monitoring, etc.
- To analyze the cost-benefit of the implementation
As it is stated in some reports, non-candidate countries can choose to implement part of the EU legislation (the most cost-effective) while candidates are obliged to fully align with the *acquis communautaire*. In that sense consider the appropriateness of a piece of EU legislation in relation with the level of development, but also analyze the cost-of-not-to-do.
- To establish a calendar with transitory periods
- To search possible financial support for administrative restructuring and companies support.
- To support the project with scientific/economical reports about its feasibility and opportunity

³⁹ See Annex I for status of ratification of main international agreements. It is hard to understand how countries that had not yet ratified the international agreements (see for example Stockholm Convention), can act in a proactive and efficient manner on the subject treated by such legal act.

⁴⁰ See for example http://www.mei.hr/DOWNLOAD/2003/01/14/Usporedni_prikaz_podudaranja_odredbi_eng.doc

⁴¹ In spite of referring to a different scenario, EU, Convergence guide for NIS countries, downloadable at http://europa.eu.int/comm/environment/enlarg/pdf/convergence_guide_en.pdf, could be another useful benchmarking material

⁴² A report from the World Bank underlines the advantages issued on energy efficiency as a result of the reduction of subsidies on energy consumption.

- Involve the stakeholders and inform about the reasons for the introduction of reforms

6.3 Standards Comparison with EU

To compare particular standards between MED countries and EU is a hard task due to the difficulty of identifying through internet, available, reliable, specific and updated information for many countries⁴³.

Even when standards can be identified, the amount of particular cases (sectors, company-size, vector, conditions, etc.) makes it difficult to find useful comparisons. The same can be said about the complexity of EU ones.

For the purposes of this assessment, two cases have been studied: Air quality (in Lebanon, Egypt and EU Directive for Large Combustion Plants), and discharges to surface waters (for Algeria, Lebanon and Spain)

Main considerations extracted are as follows:

Air quality

Egypt, Lebanon and EU air emission limits are shown in Table 2. Comparisons are difficult due to the fact that Egypt has only developed general standards for industrial establishments and specified some of them for certain industrial activities, while both EU and Lebanon have specific standards for large combustion plants. In addition, EU standards depend on the type of fuel and thermal input while Lebanon does not specify the type of fuel. For this reason, EU standards show a range which responds to the different thermal inputs interval.

However, the available information indicates the following:

- Although comparison is not very precise, EU standards are clearly more restrictive than Egypt's and Lebanon's ones.
- EU tends to establish quality objectives in ambient air rather than emission limit values (which are often set at national level), defined according to different factors: exposure period, implementation deadline, tolerance and protection to be met (human health, vegetables, etc)
- EU has defined only emission limit values on sulphur dioxide, nitrogen oxide and dust for large combustion plants and on volatile organic compounds for certain activities.
- Emission Limit Values either at EU level or at national level have to be defined for each specific industrial sector and its particularities and specific for new and existing installations.
- Lebanon has structured limit emission values according to EU model as a result of the LIFE project concerning Standards for Environmental Quality. The country is in process of effective implementation

⁴³ Those difficulties are stated in several reports, i.e. <http://unstats.un.org/unsd/ENVIRONMENT/escwaassess.pdf>

Table 2 Air Emission Limit Values in Egypt, Lebanon and EU

	Egypt	Lebanon			EU Large Combustion Plants			
		Industrial Establishments	Combustion Plants >1 MW and <50 MW	Combustion Plants >50 MW	General emission limit values	Solid Fuels	Liquid fuels	Gasous fuels
O2 Correction		5% Existing 3% New	5% Existing 3% New			6%	3%	3%
Dust (mg/m3)		500 Existing 150 New	250 Existing 50 New	500 Existing 200 New	50 - 100 (New, existing)	50 (New, existing)	5 (New, existing)	
Aldehydes (measured as Formaldehyde) (mg/m3)	20			20				
Antimony (mg/m3)	20			30				
Carbon Monoxide (mg/m3)	500 Existing 250 New	1000 Existing 250 New	1000 Existing 250 New					
Sulphur Dioxide (mg/m3)	1500 - 4000			500	200 - 850 (New)	200 - 850 (New)	5 - 400 (New)	
Hydrogen Chloride (mg/m3)	100			30				
Hydrogen Fluoride (mg/m3)	15			5				
Lead (mg/m3)	20			30				
Mercury (mg/m3)	15			1				
Arsenic (mg/m3)	20			10				
Heavy elements (total) (mg/m3)	25		15 Existing 5 New					
Silicon Fluoride (mg/m3)	10							
Fluorine (mg/m3)	20			30				
Tar (mg/m3)	50 (Graphite electrodes industry)							

	Egypt	Lebanon			EU Large Combustion Plants		
Cadmium (mg/m3)	10			1			
Hydrogen Sulphide (mg/m3)	10			5			
Chlorine (mg/m3)	20			5			
Carbon (mg/m3)	50 - 250						
Organic Compounds (mg/m3)	50 0.04% of crude (oil refining)						
Copper (mg/m3)	20			30			
Nickel (mg/m3)	20			10			
Nitrogen Oxides (mg/m3)	3000 Existing 400 New (Nitric Acid Industry)	800-1000 Existing 300-500 New	1000 Existing 500 New	500	200 - 400 (New)	200 - 400 (New)	100 - 200 (New)

Water quality

The comparison made in Table 3 for emission limit values in Algeria (general limits), Lebanon and Spain (regarding discharges into surface waters) shows that differences between Algeria and Spain are not significant. In some cases Algeria's limit values are even more restrictive while Lebanon shows the progressive tendency of new facilities to meet EU standards.

- EU has established priority substances to be eliminated or reduced from discharges into water resources and has defined quality standards for specific uses of water
- Member States and subnational, basin and local authorities (depending on each administrative structure) are bound to enforce limit emission values for industry.
- Emission Limit Values depend on where the discharge ends: surface water, sewerage system or sea, generally.
- Algeria has developed Emission Limit Values without detailing the receptor media or distinguishing between new and existing facilities.
- Lebanon has structured limit emission values according to EU model as a result of the LIFE project concerning Standards for Environmental Quality

Table 3 Water Emission Limit Values in Algeria, Lebanon and Spain

	Algeria	Lebanon		Spain
		Existing	New	
Temperature	30° C	30° C	30° C	30° C
PH	5,5 to 8,5	5 to 9	6 to 9	5,5 to 9,5

	Algeria	Lebanon		Spain
Suspended Solids (mg/l)	30	200	60	80
DBO5 (mg/l)	40	100	25	40
DCO (mg/l)	120	250	125	160
Kjeldahl Nitrogen (mg/l)	40	40	30	
Nitric Nitrogen (mg/l)				10
Phosphates (mg/l)	2	5	5	
Total Phosphorous (mg/l)		16	10	10
Cyanides (mg/l)	0,1	0,1	0,1	0,5
Aluminium (mg/l)	5	10	10	1
Cadmium ⁴⁴ (mg/l)	0,2	0,2	0,2	0,1
Chromium 3+ (mg/l)	3			2
Chromium 6+ (mg/l)	0,1	0,5	0,2	0,2
Iron (mg/l)	5	5	5	2
Manganese (mg/l)	1	1	1	2
Mercury (mg/l)	0,01	0,05	0,05	0,05
Nickel (mg/l)	5	2	0,5	2
Lead (mg/l)	1	0,5	0,5	0,2
Copper (mg/l)	3	1,5	0,5	0,2
Zinc (mg/l)	5	5	5	3
Oil and Grease (mg/l)	20	30	30	20
Hydrocarbons (mg/l)	20	20	20	
Phenols (mg/l)	0,5			0,5
Organic Solvents (mg/l)	20			
Active Chlorine (mg/l)	1	1	1	
PCB (mg/l)	0,001			
Detergents (mg/l)	2	3	3	2
Anionic Surfactants (mg/l)	10			

The emerging question to answer is if regulating or completing the regulatory framework with new/updated standards will be, by itself, able to move industry towards a pollution reduction that allow countries to meet SAP objectives. The next section deals with this question.

⁴⁴ According to Common Measures for the control of pollution adopted by the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution (MAP Technical Reports n.95) the limit value for cadmium is 0,2 mg/l

7. How to improve industrial environmental performance optimizing existing regulations

As it has been already said, the SAP final purpose is the improvement of the quality of the marine environment by better-shared management of the land-based pollution, as well as the facilitation of the LBS Protocol implementation. That means to reduce industrial pollution.

To this end, the establishment of new limits for the release of pollutants by industries, or to fix new environmental management conditions, are not objectives by themselves. These are tools to be implemented when they demonstrate to be necessary, suitable, useful and effective.

Adopting new standards, without an efficient monitoring, enforcement or permitting system (and the needed means, laboratories or treatment facilities), will probably result in an unrealistic 'literary' exercise, without significant positive effects to the environment⁴⁵.

There are several examples of MAP countries where environmental legislation exist but it has not been properly or effectively implemented. In this case, the always-hard procedure of reviewing or developing new laws or regulations will not necessarily ease the attempt of LBS/SAP objectives.

Initiatives aiming to make realistic what is already covered by the existing regulations will probably be much more effective in terms of pollution abatement, and more efficient in terms of political effort.

To do so, it is advisable to develop a 'decision tree' model country-by-country (see Figure 5), in order to identify if the actions must go directly towards legislation reforms, or if through the improvement of the implementation procedures and tools, effective results are achieved⁴⁶. Complementarily, the scenario will become prepared for the forthcoming stricter limits or conditions.

⁴⁵ See for example, what is said on EU 'Convergence with EU environmental legislation in Eastern Europe, Caucasus and Central Asia: a Guide' (2003), downloadable at http://europa.eu.int/comm/environment/enlarg/pdf/convergence_guide_en.pdf

⁴⁶ In a coherent and complementary approximation to what is said in UNE/MAP 'Guidelines for the elaboration of national plans' [UNEP(DEC)/MED/GEF.WG.245/3]

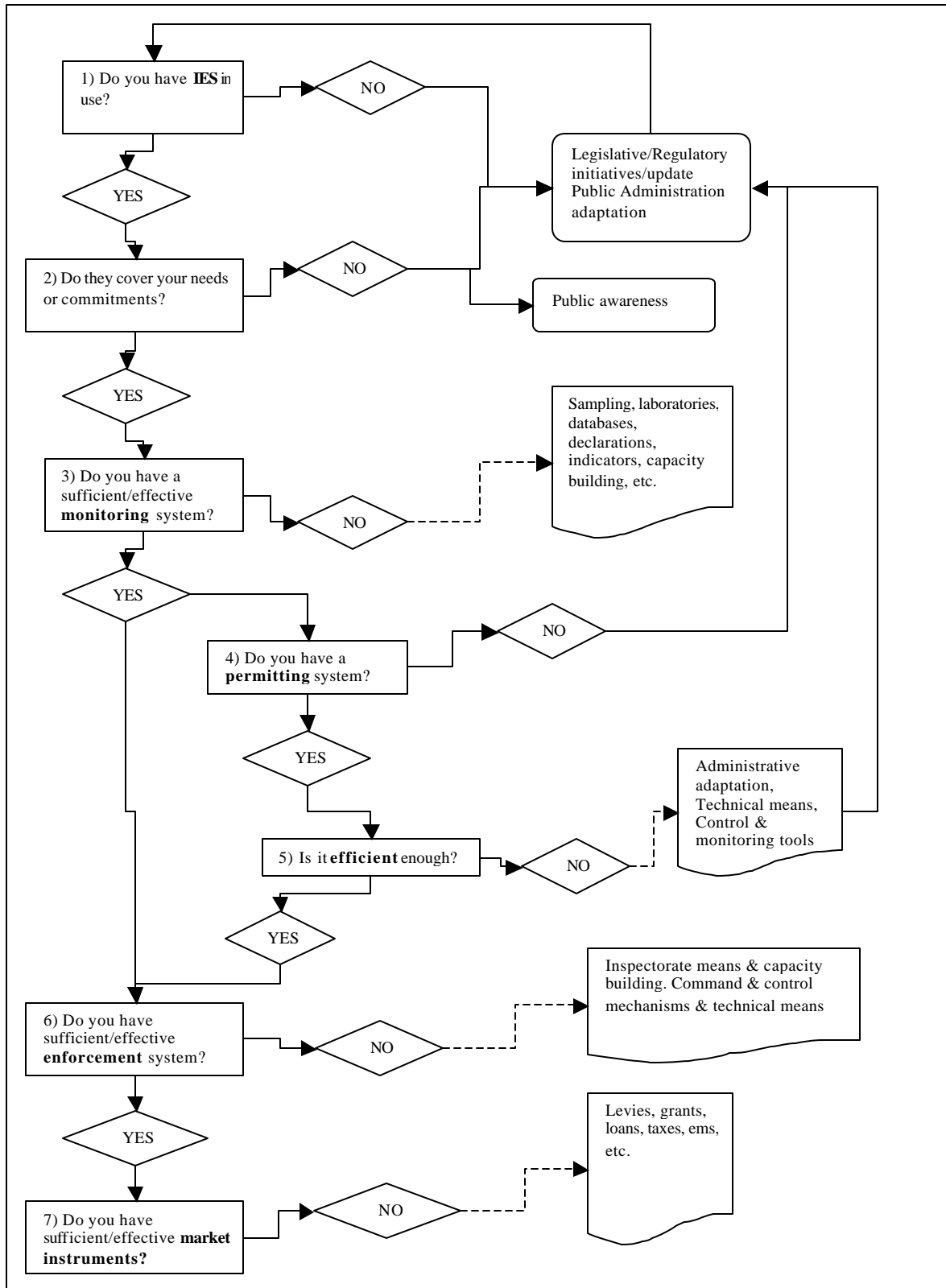


Figure 5 Analysis of existing resources optimisation

Each stage is briefly explained below:

- 1) & 2) Those preliminary questions aim to check if there are areas (at global, sectoral or vectoral level, for substances, hot-spots, protected areas, etc.) where regulatory process is needed.

The objective of the second question is to analyze the real capabilities of the existing legal framework to fulfil the needs for protecting the environment from industrial impacts. Sometimes there could be a lack of legislation⁴⁷ or of public administration bodies⁴⁸ and tools⁴⁹, sometimes there is a certain incompatibility with other national/subnational/local legislation that must be solved/coordinated.

- 3) Monitoring becomes essential for having a clear picture of the situation and its evolution. Without a sufficient monitoring system, pollution abatement policies will have a significant uncertainty level.
- 4) & 5) Permitting (together with monitoring and enforcement) will become the core of the industrial environmental system as it is the step where specific conditions could be established and monitoring and reporting obligations could be settled for particular situations, where industrial pollution⁵⁰ produces a severe impact or quality standards cannot be reached⁵¹.

By making the permitting scheme more efficient (adapted to the technical or administrative needs and combining it with a follow-up control) fewer legal measures and financial means, allocation will be required. The legal and administrative reforms to become effective must be analyzed for each country

- 6) Several positive results on pollution reduction and effectiveness could be obtained through improving enforcement means and tools (inspectorate, declarations, relevant sanctions, legal responsibilities, etc.).
- 7) Depending on each situation, market instruments could be as effective as a multiplication of rules. Its management also needs from improving institutional capabilities.

Among the several advantages arising from the optimisation of the existing elements prior to or simultaneously with introducing regulatory changes, two can be underlined:

- The possibility of avoiding/reducing the effects of time-consuming legislative processes and the associated political/social erosion, by anticipating positive results on the environment.
- The structural update, facilitating the incorporation/management of future stricter measures, including the distribution and coordination of tasks between the diverse competencies.

No substantial disadvantages can be identified of this approach although in some cases⁵² (due to international commitments or the inexistence of legal coverage) the legislative stage will probably be needed from the very beginning of the implementation process. Even in those cases, the above-recommended optimisation of the existing framework will make more realistic what should be legally adopted.

⁴⁷ i.e. the legal capability for to accomplish with commitments coming from international agreements or conventions, to introduce new measures for environment protection, or to distribute competencies between national and local authorities.

⁴⁸ i.e. inspectorate, laboratories, measurement stations, capacity building, etc.

⁴⁹ i.e. declarations, reports, public information systems, etc.

⁵⁰ We may think on industrial hotspots or particular degraded areas

⁵¹ Not always due to obsolete/inefficient factories or processes. The sole concentration of industries even using each one appropriate technologies, may cause an impact not bearable by the environment.

⁵² See LBS Protocol and SAP for details

This analysis is also valid when competencies are fragmented. In those cases, coherence within legislation and coordination among authorities is strongly recommended.

8. How Companies can adapt to new standards

Once new emission limits or waste acceptance conditions are adopted by the industrial or environmental authorities (or countries make an effective/efficient use of their existing framework), companies must accommodate⁵³ to those (new) parameters.

The new challenge for industrialists is how to identify the potential costs and savings arising from the new scenario, considering also the 'costs of not doing' (including potential legal responsibilities)⁵⁴

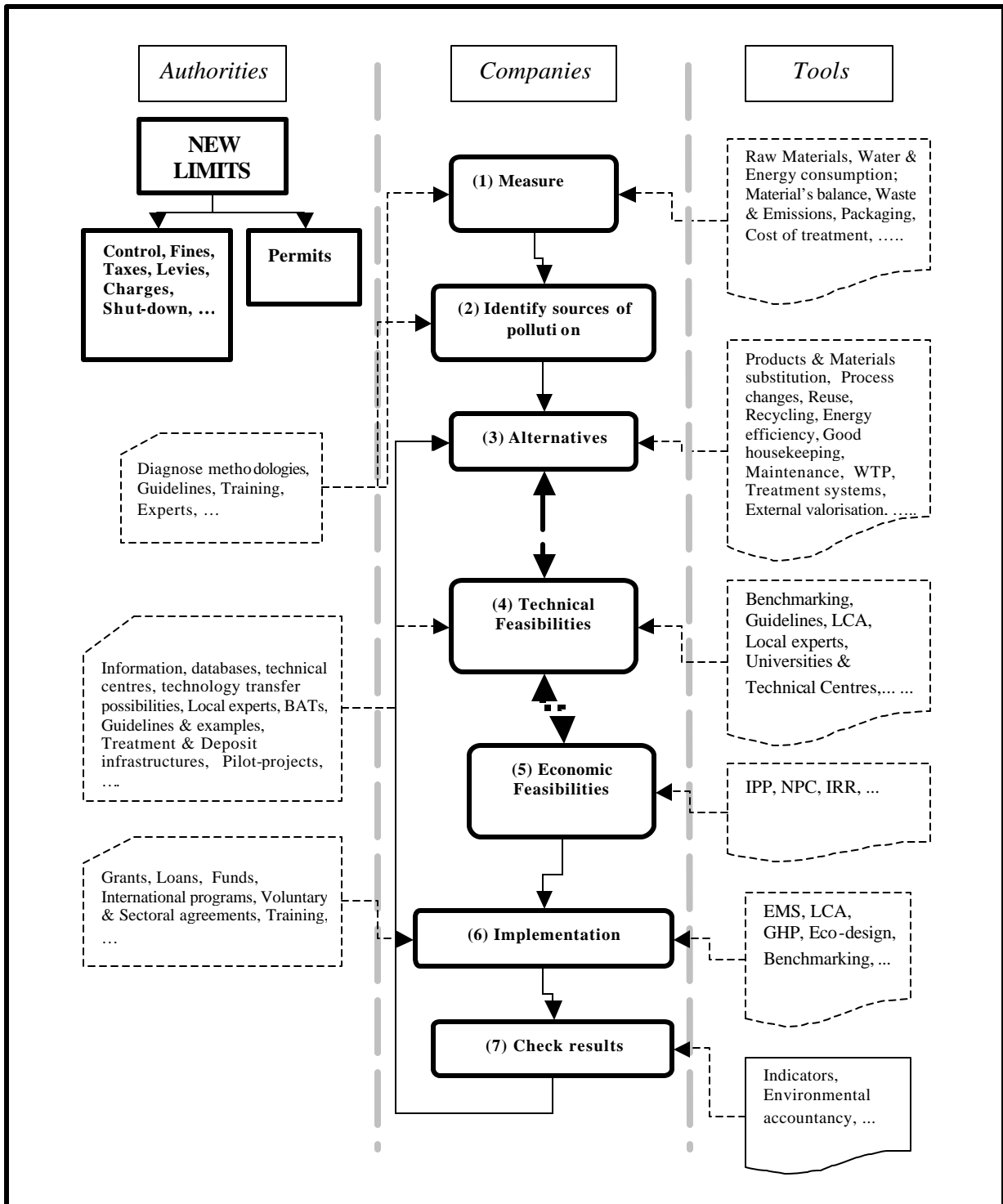
To do so, a sequential approach is recommended, as it is showed in the following diagram (see Figure 6).

There are several tools to be used by companies in any proposed step. Moreover, there are diverse instruments (technical or economical, suasive or dissuasive) that authorities can use to promote or to help companies in the process of introducing the changes needed to fit those new standards.

Figure 6 Steps & Tools for industries to incorporate new limits

⁵³ The general rules of procedure usually show that those new standards or conditions will be immediately in force for new industries or enlargement of the existing ones, and through an transitory 'adaptation period' for the existing installations

⁵⁴ Widely explained in several publications, economic situation/conditions become one of the k-elements for the correct integration of environment into companies, as well as their consideration into the general national policies. A short but explanatory paragraph on economic considerations is included under point 6.4. of SAP Regional Plan for the reduction of the generation on hazardous waste from industrial installations.



Each stage is briefly explained below:

1) Measure

The first and basic step is to measure, not only the volume and characteristics of the effluents (wastewater, emissions, waste) but also the balance between inputs of energies, raw materials and other materials used directly or indirectly in the process, and the final product.

Roughly speaking, the difference between inputs and 'product' becomes waste, wastewater or emissions to the atmosphere. The challenge for companies is how to feasibly reduce them to the levels and limits of the standards.

It must be remembered that a waste, a wastewater or a gaseous emission are or contain substances/products for which the company has 'paid' on a previous stage of the process. It seems obvious to analyze the possibilities of recovering (totally or partially) its value. The same considerations can be made for water and energies.

At this step, several existing tools, local experts' capacity building and pilot-projects could effectively incite companies to analyze their processes, by questioning the traditional routines.

2) Identification of sources of pollution

As a consequence of the measurement process, the relevant steps of the activity generating pollution appear clearly identified. Again, several methodological and technical tools may help companies (CP/RAC-MOED or UNIDO-TEST among others).

3, 4) Identification of potential alternatives, Analysis of technical feasibility of the alternatives

For both phases, different elements must be taken into consideration depending on each particular case. For example: availability of technologies, adaptability to local conditions, employee's skills & technical capacities, possible limitations on the use of certain raw materials or substances, analytical or labelling requirements, the rationale use of water and energies, land facilities, quality, customers requirements, production capacity changes, maintenance & repair, etc.

Only requirements that are economically⁵⁵ and technically feasible are enforceable in the long run. Feasibility is a pre-condition to ensure industry's acceptance of requirements (even when requirements are stringent) and to keep the costs of compliance within reasonable limits. To reduce the costs of compliance, effective dates of new regulatory requirements should be coordinated, to the possible extent, with investment cycles⁵⁶.

5) Analysis of economic feasibility of the alternatives

The most common financial instruments that can be used to analyze any investment: Differential Cash-Flow, Investment Payback Period (IPP), Internal Rate of Return (IRR), Net Present Value (NPV).

The context must be a medium to long term analysis, taking into consideration: the previewed increases on the cost of treatment/deposit, energy, water, charges on substances or products, cost of declarations, inventories, analysis, labour, maintenance, increasing/decreasing on productivity, etc. Investment and operating costs. Intangible cost/benefit must also be considered.

The following diagram tries to show the sequential process of analysing and comparing alternatives from technical and financial aspects

⁵⁵ Economic feasibility depending to a large extent on the internalisation of environmental externalities. To do so, both political will and economic instruments are needed

⁵⁶ OCDE, <http://www.oecd.org/dataoecd/36/51/26756552.pdf> (pg. 11)

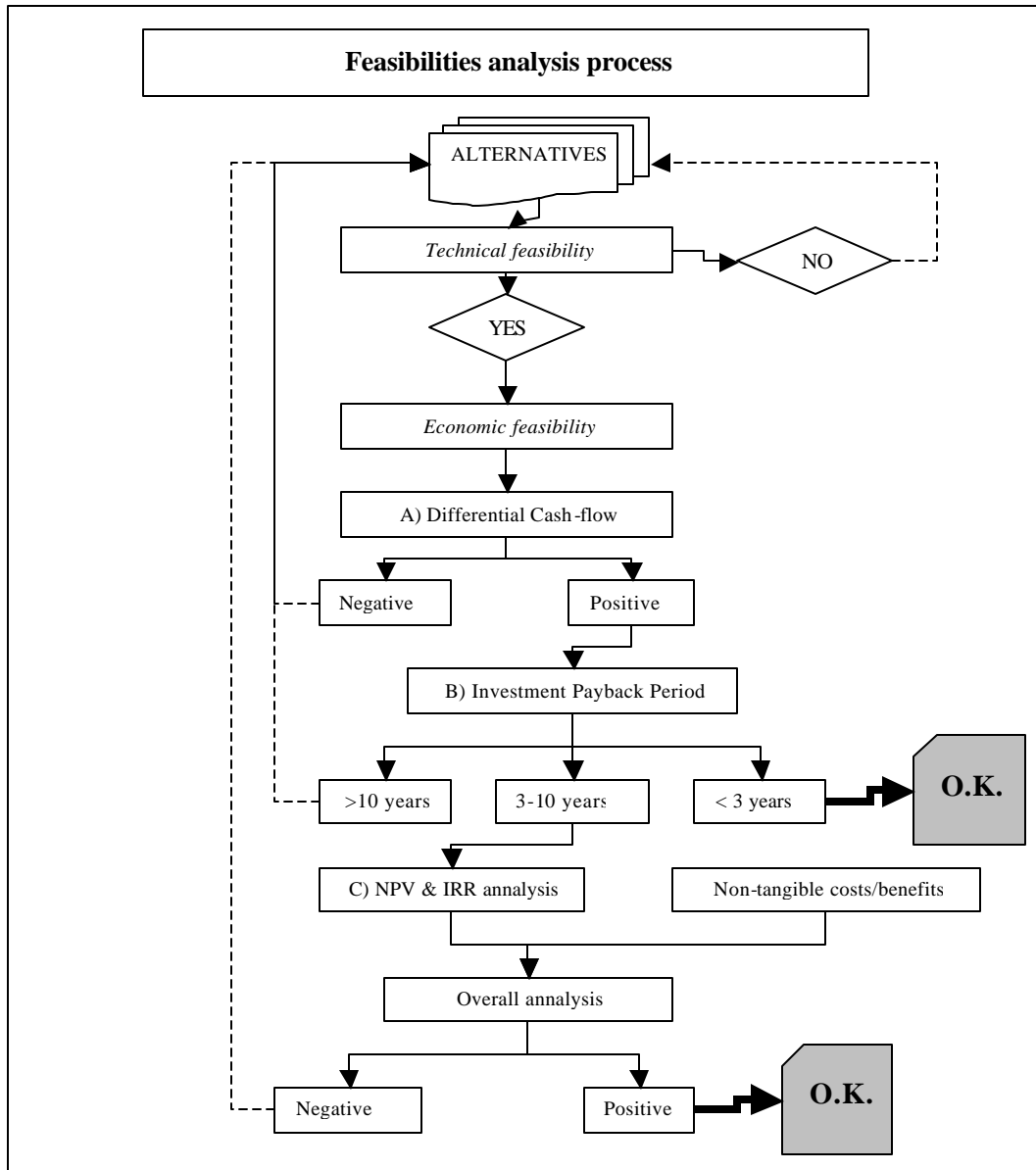


Figure 7 Feasibilities analysis⁵⁷

6) Implementation

At this step, the role of environmental authorities becomes essential for encouraging companies to adopt environmental-friendly techniques and practices, as well as discouraging the ones not adopting a proactive attitude.

Once again there are several tools and instruments, technical and economic to be used together with command & control procedures.

7) Check results

The results from implementation could be identified and evaluated through different tools, indicators or schemes. In a similar procedure that quality programs, those results become the source for the identification of new targets and provides new benchmarking information.

⁵⁷ Source: CP/RAC: 'MOED – Minimisation Opportunities Environmental Diagnosis'. On this guide (Appendix 2) can be found an extensive explanation and check-lists of technical and financial considerations to be taken into consideration when analyzing different alternatives

9. Conclusions /Recommendations

- 1) The socio-economic and environmental scenario in the Mediterranean Region is not homogenous. Among MAP countries three blocks can be identified (EU members, candidates, and the remaining ones) showing different levels of achievements, commitments or pressures and with different internal or external economic capabilities.
- 2) The level of development of environmental industrial policies, vary from country to country. In most of them, several lacks can be identified (legal, organizational, human resources, financing) limiting the effective implementation of what is already regulated.
- 3) Due to the previous considerations it is not possible to give a 'unique recipe', feasible for all the countries, for all the industrial sectors or for all the processes or substances.
- 4) As per LBS Protocol and SAP provisions, countries have to achieve a reduction of the pollution generated by industries. To attempt this objective, the updating of the different environmental industrial standards (or the introduction of new ones) has been considered as one of the most relevant instruments.
- 5) Assuming that the existence of updated industrial environmental standards can theoretically help to reduce pollution in terms of SAP targets (and the ones from its related plans and programs), without an efficient monitoring and control system, they become academic and unrealistic exercises.
- 6) The process of creating/modifying environmental industry standards is a hard and long process, both technically and legally, and needs proactive contributions from the several stakeholders involved. Technical and financial capacity of industries to adapt to the new requirements is not a trivial factor.
- 7) As not all the countries are prepared to cover those requirements, regional guidelines including methodologies, reference standards, feasibility criteria and case studies can support the process. ME DPOL/SAP can play a significant role, i.e.:
 - Producing detailed comparative study(ies) among MAP countries (mainly those not members or candidates) on industrial and environmental legislation (regarding SAP sectors or substances/products) and their real implementation to be used for identifying the real existing gaps and as a benchmark instrument.
 - Developing the precedent study(ies) and through expert(s) working group(s), producing basic reference standards, useful for countries and industries, to be presented together with relevant case-studies proving their feasibility
 - Arranging complementary diffusion and training activities
- 8) In most countries, environmental authorities have made significant efforts to improve environmental industrial situation but they often conflict with development objectives, legal procedures or political priorities. In this sense, launching such a time and effort consuming process for the establishment of strict standards may finally have the opposite environmental effect.
- 9) As a consequence, a major recommendation is first to optimize the implementation of the existing regulatory instruments (legal, economic) that surely will result in an effective pollution and impact abatement. As a subsidiary benefit, such optimization will ease the subsequent updating or introduction of further standards.
- 10) Through this document, several methodologies and framework recommendations have been studied for both issues: the updating of environmental industrial standards or the optimization of the existing situation.
- 11) To be effective, new (or updated) industrial environmental standards or the optimization of the existing situation require parallel improvements in:
 - Effectively prioritize preventive issues

- Monitoring and information tools
- Effective permitting, enforcement, control and inspectorate systems
- Capacity building
- Selected economic instruments (suasive or dissuasive)
- Improve technology transfer mechanisms
- Stakeholders involvement

ANNEX I
INTERNATIONAL AGREEMENTS

ANNEX II
MAIN EU DIRECTIVE

Annex II: Main EU Directive

Title	Summary	Substances	Standards
AIR QUALITY			
Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management.	It defines basic principles that make it possible to: establish quality objectives for ambient air (outdoor air in the troposphere); draw up common methods and criteria for assessing air quality; obtain and disseminate information on air quality. The Council must lay down limit values and alert thresholds for some pollutants. The Member States are responsible for implementation.	Sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead; benzene and carbon monoxide; ozone; polycyclic aromatic hydrocarbons, cadmium, arsenic, nickel and mercury.	Framework
Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants.	Part of the follow-up to the Commission's communication on a strategy to combat acidification [COM(97) 88 final], which sought to establish, for the first time, national emission ceilings for four pollutants causing acidification, eutrophication and tropospheric ozone formation. This Directive provides for introduction, by the end of 2010 at the latest, of national emission ceilings. These ceilings are laid down in Annex I to the Directive. An absolute limit is also set. Member States are required to draw up programmes, by 1 October 2002, The programmes must be updated and revised as necessary in 2006.	Sulphur dioxide (SO ₂), nitrogen oxide (NO _x), volatile organic compounds (VOC) and ammonia (NH ₃)	National emission ceilings
Council Directive 1999/30/EC of 22 April 1999 relating to limit values for NO _x , SO ₂ , Pb and PM ₁₀	As required by Directive 96/62/EC this Directive contains limit values for the concentrations of sulphur dioxide, nitrogen dioxide and nitrogen oxides, and of particulates and lead, together with alert thresholds for concentrations of sulphur dioxide and nitrogen dioxide in the ambient air.	Sulphur dioxide, nitrogen dioxide and nitrogen oxides, and of particulates and lead	Limit values for concentrations in ambient air

Title	Summary	Substances	Standards
Directive 2000/69/EC of 16 November 2000 relating to limit values for benzene and carbon monoxide in ambient air.	The Directive requires Member States routinely to inform the public of concentrations of these two substances in ambient air. Member States must comply with the Directive by no later than 13 December 2002.	Benzene and carbon monoxide	Benzene is set at 5 µg/m ³ as from 1 January 2010, and the limit value for carbon monoxide is set at 10 µg/m ³ as from 1 January 2005
Directive 2002/3/EC of 12 February 2002 relating to ozone in ambient air	Its purpose is to set long-term objectives, an alert threshold and an information threshold for concentrations of ozone in ambient air in the Community; establish common methods and criteria for assessing concentrations of ozone in ambient air; ensure that adequate information is obtained on ambient levels of ozone and that it is made available to the public; maintain or improve ambient air quality; promote increased cooperation between the Member States in reducing ozone levels.	ozone	Long-term objectives Threshold concentrations in ambient air

Title	Summary	Substances	Standards
<p>Regulation (EC) No 2037/2000 of 29 June 2000 on substances that deplete the ozone layer. Amended by the following acts: Regulation (EC) No 2038/2000 of 28 September 2000; Regulation (EC) No 2039/2000 of 28 September 2000.</p>	<p>The Regulation replaced Council Regulation (EC) No 3093/94 so as to adapt Community rules in the light of the technical developments and in line with the changes made, in 1995, 1997 and 1999, to the Montreal Protocol on Substances that Deplete the Ozone Layer. In laying down stricter control provisions than those of Regulation (EC) No 3093/94 and the Montreal Protocol, it takes into account the increasing availability of products that can replace those which deplete the ozone layer. The Regulation provides for a phased restriction with deadlines for final elimination. Where CFCs are concerned, the placing on the market, use, production and importation of other fully halogenated chlorofluorocarbons, halons, carbon tetrachloride, 1,1,1-trichloroethane and hydrobromofluorocarbons will be banned with effect from the date on which the Regulation enters into force. The ban will not apply to products and equipment produced before the Regulation enters into force.</p>	<p>Chlorofluorocarbons (CFCs), other fully halogenated chlorofluorocarbons, halons, carbon tetrachloride, 1,1,1-trichloroethane, methyl bromide (MBr), hydrobromofluorocarbons and hydrochlorofluorocarbons (HCFCs)</p>	<p>The Regulation provides for a phased restriction on the use, placing on the market, production and importation of virgin HCFCs, with the deadline for final elimination:</p>

Title	Summary	Substances	Standards
<p>Council Decision 2004/259/EC of 19 February 2004 concerning the conclusion, on behalf of the European Community, of the Protocol to the 1979 Convention on Long-Range Transboundary on Persistent Organic Pollution</p>	<p>The Protocol to the 1979 Convention on Long Range Transboundary Air Pollution on Persistent Organic Pollutants, is hereby approved on behalf of the Community.</p>	<p>Persistent Organic Pollutants scheduled for elimination: Aldrin, Chlordane, Chlordecone, DDT, Dieldrin, Endrin, Heptachlor, Hexabromobiphenyl, Hexachlorobenzene, Mirex, Toxaphene. Scheduled for restrictions on use: DDT, HCH, PCB. Scheduled to reduction of: PAH, Dioxins/Furans, Hexachlorobenzene from stationary sources.</p>	
<p>Council Decision 2003/507/EC of 13 June 2003 on the accession of the European Community, to the Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution to abate Acidification, Eutrophication and Ground-Level Ozone</p>	<p>The accession of the Community to the Protocol to the 1979 Convention on Long-range Transboundary Air Pollution to Abate Acidification, Eutrophication and Ground-level Ozone is hereby approved on behalf of the Community.</p>	<p>SO₂, NO₂, NH₃, VOC.</p>	<p>National emission ceilings for SO₂, NO₂, NH₃, VOC.</p> <p>Limit values for emissions of SO_x, NO_x, VOCs from stationary sources</p>

Title	Summary	Substances	Standards
Council Decision of 4 April 2001 on the approval, on behalf of the European Community, of the Protocol to the 1979 Convention on Long-range Transboundary Air Pollution on Heavy Metals.	It stipulates the reduction of total annual emissions into the atmosphere of cadmium, lead and mercury, and the application of product control measures. The Protocol stipulates that the signatory parties must apply the best available technologies vis-à-vis all the major sources of heavy metals existing, or due to be created, on their territory. The best available technologies are described in Annex III to the Protocol. The parties must respect the emission limit values specified in Annex V.	Cadmium, lead and mercury	Emission limit values
Directive 2001/80/EC of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants.	This Directive applies to combustion plants with a rated thermal input equal to or greater than 50 MW, irrespective of the type of fuel used. The aim of the Directive is gradually to reduce the annual emissions of sulphur dioxide and oxides of nitrogen from existing plants and to lay down emission limit values in the case of new plants.	sulphur dioxide, nitrogen oxides and dust	Emission limit values
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.	Industries covered by the Directive are listed in the Annex to the Directive. For most of the activities concerned, specifies a consumption threshold above which its provisions apply. Member States must take the measures to ensure that all new installations comply with the provisions. Moreover, all new installations not already covered by IPPC Directive must be registered or authorised before being put into service. Existing installations must be registered. They must comply with the same requirements as for new installations no later than 30 October 2007.	Volatile organic compounds	Emission limit values

Title	Summary	Substances	Standards
<p>Directive 2003/87/EC of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.</p>	<p>This Directive establishes a Community greenhouse gas emission trading scheme. With effect from 1 January 2005, all installations carrying out any of the activities listed in Annex I to this Directive and emitting the specific greenhouse gases associated with that activity must be in possession of an appropriate permit issued by the competent authorities.</p>	<p>carbon dioxide and other greenhouse gases</p>	<p>greenhouse gas emission trading scheme</p>
<p>Council Directive 85/203/EEC of 7 March 1985 on air quality standards for nitrogen dioxide.</p>	<p>The Directive specifies, for the concentration of nitrogen dioxide in the atmosphere: a) a limit value which may not be exceeded throughout the Member States during specified periods; b) guide values, designed to improve the protection of human health and of the environment. It also introduces a reference method for analysing concentrations of nitrogen dioxide and specifications for the measuring stations established by the Member States.</p>	<p>nitrogen dioxide</p>	<p>Limit value Partly repealed by Directive 1999/30/EC relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air. It will be fully repealed in 2010.</p>
<p>Council Directive 82/884/EEC of 3 December 1982, on a limit value for lead in the air. As amended by the following: Council Directive 90/656/EEC of 4 December 1990; Council Directive 91/692/EEC of 23 December 1991.</p>	<p>The Directives lay down a limit value for lead in the air; a mandatory sampling method and procedure to be followed, together with a reference method for analysing the samples taken.</p>	<p>Lead</p>	<p>The limit value shall be 2 micrograms Pb/m³ expressed as an annual mean concentration Repealed from 19 July 2001, apart from Articles 1 and 2, 3(1), 7, 12 and 13, which are repealed with effect from 1 January 2005</p>

Title	Summary	Substances	Standards
INDUSTRY			
<p>Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment Amended by Directive 97/11/EC</p>	<p>The environmental impact assessment will identify, describe and assess in an appropriate manner, in the light of each individual case and in accordance with the Articles 4 to 11, the direct and indirect effects of a project on the following factors: human beings, fauna and flora, soil, water, air, climate and the landscape, the inter-action between the factors mentioned in the first and second indents, material assets and the cultural heritage. Projects of the classes listed in Annex I shall be made subject to an assessment in accordance with Articles 5 to 10. Projects of the classes listed in Annex II shall be made subject to an assessment, in accordance with Articles 5 to 10, where Member States consider that their characteristics so require.</p>		

Title	Summary	Substances	Standards
<p>Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control.</p>	<p>The goal of the directive is to achieve integrated prevention and control of pollution arising from a wide range of activities by means of measures to prevent or to reduce emissions from industrial facilities to air, water and land, including measures concerning waste, in order to achieve a high level of protection of the environment as a whole. Integrated pollution prevention and control concerns industrial and agricultural activities, as defined in Annex I</p> <p>The Directive defines the basic obligations to be met by all the industrial installations concerned, whether new or existing. They serve as the basis for drawing up operating licences or permits for the installations concerned.</p> <p>Accordingly, the Directive:</p> <ul style="list-style-type: none"> lays down a procedure for applying for, issuing and updating operating permits; lays down minimum requirements to be included in any such permit <p>A transitional period (30 October 1999 - 30 October 2007) is laid down</p> <p>The Member States are responsible for inspecting industrial installations and ensuring they comply with the Directive. An exchange of information on best available techniques (serving as a basis for emission limit values) is organised between the Commission, the Member States and the industries concerned.</p>		<p>Framework</p>
<p>WATER</p>			

Title	Summary	Substances	Standards
<p>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. Amended by the following Act: Decision No 2455/2001/EC of 20 November 2001</p>	<p>Under this Directive, Member States have to identify all the river basins lying within their national territory and assign them to individual river basin districts. River basins covering the territory of more than one Member State will be assigned to an international river basin district. By 22 December 2003 at the latest, a competent authority will be designated for each of the river basin districts.</p> <p>At the latest, four years after the date of entry into force of this directive, Member States must complete an analysis of the characteristics of each river basin district, a review of the impact of human activity on the water, an economic analysis of water use and a register of areas requiring special protection. All bodies of water used for the abstraction of water intended for human consumption providing more than 10 m³ a day as an average or serving more than 50 persons must be identified.</p> <p>The measures provided for in the river basin management plan seek to: Prevent deterioration, enhance and restore bodies of surface water and groundwater water, achieve good chemical and ecological status of such water and reduce pollution from discharges and emissions of hazardous substances; ensure a balance between abstraction and recharge of groundwater and preserve protected areas.</p>	<ol style="list-style-type: none"> 1. Organohalogen compounds and substances which may form such compounds in the aquatic environment. 2. Organophosphorous compounds. 3. Organotin compounds. 4. Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment. 5. Persistent hydrocarbons and persistent and bioaccumulable organic toxic substances. 6. Cyanides. 7. Metals and their compounds. 8. Arsenic and its compounds. 9. Biocides and plant protection products. 10. Materials in suspension. 11. Substances which contribute to eutrophication (in particular, nitrates and phosphates). 12. Substances which have an unfavourable influence on the oxygen balance (and can be measured using parameters such as BOD, COD, etc.). 	<p>Framework The limit values and quality objectives established under the re Directives of Directive 76/464/EEC shall be considered emission limit values and environmental quality standards, respectively, for the purposes of this Directive. They are established in the following Directives: (i) Mercury Discharges Directive (82/176/EEC) (1); (ii) Cadmium Discharges Directive (83/513/EEC) (2); (iii) Mercury Directive (84/156/EEC) (3); (iv) Hexachlorocyclohexane Discharges Directive (84/491/EEC) (4); and (v) The Dangerous Substance Discharges Directive (86/280/EEC) (5).</p>

Title	Summary	Substances	Standards
<p>Decision 2455/2001/EC of 20 November 2001, establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC.</p>	<p>The Decision ranks in order of priority the substances for which quality standards and emission control measures will be set at Community level. This supplements the water framework directive, and becomes Annex X. Up to 33 priority substances or groups of substances have been proposed, including anthracene, benzene, cadmium and its compounds, tributyltin and naphthalene. The complete list can be found in the Annex to this Decision.</p>	<p>List of priority substances in the field of water policy: Alachlor, Anthracene, Atrazine, Benzene, Brominated diphenylethers, Cadmium and its compounds, C10-13-chloroalkanes, Chlorfenvinphos, Chlorpyrifos, 1,2-Dichloroethane, Dichloromethane, Di(2-ethylhexyl)phthalate (DEHP), Diuron, Endosulfan, (alpha-endosulfan), Fluoranthene, Hexachlorobenzene, Hexachlorobutadiene, Hexachlorocyclohexane, (gamma-isomer, Lindane), Isoproturon, Lead and its compounds, Mercury and its compounds, Naphthalene, Nickel and its compounds, Nonylphenols, (4-(para)-nonylphenol), Octylphenols, (para-tert-octylphenol), Pentachlorobenzene, Pentachlorophenol, Polyaromatic hydrocarbons, (Benzo(a)pyrene), (Benzo(b)fluoranthene), (Benzo(g,h,i)perylene), (Benzo(k)fluoranthene), (Indeno(1,2,3-cd)pyrene), Simazine, Tributyltin compounds, (Tributyltin -cation), Trichlorobenzenes, (1,2,4-Trichlorobenzene), Trichloromethane (Chloroform), Trifluralin</p>	<p>Framework</p>
<p>DISCHARGES OF SUBSTANCES</p>			

Title	Summary	Substances	Standards
<p>Council Directive 82/176/EEC of 22 March 1982 on limit values and quality objectives for mercury discharges by the chlor-alkali electrolysis industry. Amended by the following measures: Council Directive 90/656/EEC of 4 December 1990; Council Directive 91/692/EEC of 23 December 1991</p>	<p>These Directives concern inland surface water, territorial waters and internal coastal waters. In pursuance of Directive 76/464/EEC, these Directives lay down for plant in which alkali chlorides are electrolyzed by means of mercury cells: All discharges require prior authorization by the Member State concerned. Such authorization must lay down emission standards which are at least as stringent as those set out in Directive 82/176/EEC. Member States may grant authorizations for new plants only if such authorizations contain a reference to the standards corresponding to the best technical means available for preventing discharges of mercury.</p>	<p>Mercury</p>	<p>limit values for emission standards</p>
<p>Council Directive 84/156/EEC on limit values and quality objectives for mercury discharges by sectors other than the chlor-alkali electrolysis industry.</p>	<p>The limit values, the time limits by which they must be complied with and the monitoring procedure for discharges are laid down in Annex I. When waste waters containing mercury are treated outside the industrial plant at a treatment plant intended for the removal of mercury, the Member State may permit the limit values to be applied at the point where the waste waters leave the treatment plant</p>	<p>Mercury</p>	<p>Limit values, quality objectives</p>
<p>Council Directive 83/513/EEC of 26 September 1983 on limit values and quality objectives for cadmium discharges</p>	<p>The limit values, the time limits by which they must be complied with and the monitoring procedure for discharges are laid down in Annex I. Member state may permit the limit values to be applied at the point where waste waters leave the treatment plant.</p>	<p>cadmium</p>	<p>Limit values, quality objectives</p>

Title	Summary	Substances	Standards
Council Directive 84/491/EEC of 9 October 1984 on limit values and quality objectives for hexachlorocyclohexane discharges	The limit values, the time limits by which they must be complied with and the monitoring procedure for discharges are laid down in Annex I. The limit values shall normally apply at the point where waste waters containing HCH leave the industrial plant.	Hexachlorocyclohexane	Limit values, quality objectives
Council Directive 86/280/EEC of 12 June 1986 on limit values and quality objectives for discharges of certain dangerous substances included in List I of the Annex of Directive 76/464	The limit values, the time limits by which they must be complied with and the monitoring procedure for discharges are laid down in Annexes (Heading A). The limit values shall normally apply at the point where waste waters containing the substances leave the industrial plant.	Carbon tetrachloride, DDT, pentachlorophenol	Limit values and quality objectives

Title	Summary	Substances	Standards
<p>Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community. Amended by: Council Directive 91/692/EEC of 23 December 1991.</p>	<p>Council Directive 76/464/EEC applies to inland surface water, territorial waters, internal coastal waters and groundwater. To eliminate pollution of these waters, two lists of dangerous substances to be monitored are established:</p> <ul style="list-style-type: none"> • Pollution caused by discharges of substances on list I must be ended; • Pollution caused by products on list II must be reduced. <p>Quality objectives and emission standards are laid down for the substances on list I, based on the best available technology. These are compulsory unless the Member States prove that the quality objectives are being met and continuously maintained. All discharges require prior authorisation. The emission standards laid down in the authorizations granted pursuant to Article 3 shall determine: (a) the maximum concentration of a substance permissible in a discharge. In the case of dilution the limit value provided for in Article 6 (1) (a) shall be divided by the dilution factor; (b) the maximum quantity of a substance permissible in a discharge during one or more specified periods of time. This quantity may, if necessary, also be expressed as a unit of weight of the pollutant per unit of the characteristic element of the polluting activity (e.g. unit of weight per unit of raw material or per product unit).</p>	<p>List I contains certain individual substances which belong to the following families:</p> <ol style="list-style-type: none"> 1. organohalogen compounds and substances which may form such compounds in the aquatic environment, 2. organophosphorus compounds, 3. organotin compounds, 4. substances in respect of which it has been proved that they possess carcinogenic properties in or via the aquatic environment 5. mercury, cadmium and its compounds, 6. persistent mineral oils and hydrocarbons of petroleum origin, and for the purposes of implementing Articles 2, 8, 9 and 14 of the Directive: 7. persistent synthetic substances which may float, remain in suspension or sink and which may interfere with any use of the waters. <p>List II contains:</p> <ul style="list-style-type: none"> - substances belonging to the families and groups of substances in List I for which the limit values referred to in Article 6 of the Directive have not been determined, - certain individual substances and categories of substances belonging to the families and groups of substances which have a deleterious effect on the aquatic environment 	<p>Framework</p>

Title	Summary	Substances	Standards
<p>Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances. Amended by the following measures Council Directive 91/692/EEC of 23 December 1991</p>	<p>The purpose of these Directives is to prevent the discharge of certain toxic, persistent and bioaccumable substances into groundwater. The following are excluded: discharges of domestic effluents from isolated dwellings; discharges containing substances listed in very small quantities and concentrations discharges of matter containing radioactive substances. There are two lists of dangerous substances drawn up for the protection of groundwater: direct discharge of substances in list I is prohibited; discharge of substances in list II must be limited.</p>	<p>List I contain the individual substances which belong to the families and groups of substances enumerated, with the exception of those which are considered inappropriate to list I on the basis of a low risk of toxicity, persistence and bioaccumulation. Such substances which with regard to toxicity, persistence and bioaccumulation are appropriate to list II are to be classed in list II List II contains the individual substances and the categories of substances which could have a harmful effect on groundwater.</p>	<p>Framework</p>
<p>WASTE MANAGEMENT</p>			

Title	Summary	Substances	Standards
<p>Council Directive 75/442/EEC of 15 July 1975 on waste. Amended by: Council Directive 91/156/EEC of 18 March 1991; Council Directive 91/692/EEC of 23 December 1991; Commission Decision 96/350/EC of 24 May 1996; Council Directive 96/59/EC of 16 September 1996.</p>	<p>These measures apply to all substances or objects which the holder disposes of or is obliged to dispose of in pursuance of the national provisions in force in the Member States. They do not apply to radioactive waste, mineral waste, animal carcasses and agricultural waste, waste water, gaseous effluents and wastes that are subject to specific Community Regulations.</p> <p>Member States must prohibit the uncontrolled discarding, discharge and disposal of waste and they shall promote the prevention, recycling and reuse.</p> <p>Member States shall ensure that all holders of wastes shall hand them over to a private or public collection agency or to a disposal company, or else shall themselves conduct the disposal in compliance with the requirements of the current measures.</p> <p>Companies or establishments treating, storing or dumping waste for another party must obtain an authorization from the competent authority. The cost of disposal of waste must be borne by its holder, in accordance with the 'polluter pays' principle.</p>		<p>Framework</p>

Title	Summary	Substances	Standards
<p>Council Directive 99/31/EC of 26 April 1999 on the landfill of waste; Corrigendum: O.J. L 282 of 05.11.1999].</p>	<p>The Directive is intended to prevent or reduce the adverse effects of the landfill of waste on the environment, in particular on surface water, groundwater, soil, air and human health.</p> <p>It defines the different categories of waste and landfills are divided into three classes: landfills for hazardous waste; landfills for non-hazardous waste; landfills for inert waste.</p> <p>A standard waste acceptance procedure is laid down so as to avoid any risks: waste must be treated before being landfilled; hazardous waste within the meaning of the Directive must be assigned to a hazardous waste landfill; landfills for non-hazardous waste must be used for municipal waste and for non-hazardous waste; landfill sites for inert waste must be used only for inert waste.</p> <p>There are limitations on waste acceptance.</p>		

Title	Summary	Substances	Standards
<p>Directive 2000/76/EC of 4 December 2000 on the incineration of waste.</p>	<p>This Directive is intended to fill the gaps existing in that legislation. Apart from the incineration of non-toxic municipal waste its scope extends to the incineration of non-toxic non-municipal waste and toxic wastes not covered by Directive 94/67/EC. At the same time it is intended to incorporate the technical progress made on monitoring incineration-process emissions into the existing legislation, and to ensure that the international commitments entered into by the Community are met in terms of pollution reduction, and more particularly those laying down limit values for the emissions of dioxins, mercury and dusts arising from waste incineration. The proposal is based on an integrated approach: limits for discharges into water are added to the updated limits for emissions to atmosphere. All incineration or co-incineration plants must be authorised.</p>	<p>heavy metals, dioxins and furans, carbon monoxide (CO), dust, total organic carbon (TOC), hydrogen chloride (HCl), hydrogen fluoride (HF), sulphur dioxide (SO₂), nitrogen monoxide (NO) and nitrogen dioxide (NO₂).</p>	<p>The limit values for incineration plant emissions to atmosphere are set out in Annex V . The limit values for co-incineration plant emissions are set out in Annex II. Special provisions relating to cement kilns, other industrial sectors and combustion plants which co-incinerate waste. All discharges of effluents caused by exhaust-gas clean up must be authorised to guarantee that the emission limit values set out in Annex IV to the Directive are not exceeded.</p>
<p>SPECIFIC WASTE</p>			

Title	Summary	Substances	Standards
<p>Council Directive 94/62/EC of 15 December 1994 on packaging and packaging waste.</p>	<p>The Directive covers all packaging placed on the market in the Community and all packaging waste, whether it is used or released at industrial, commercial, office, shop, service, household or any other level, regardless of the material used.</p> <p>The Directive provides that the Member States shall take measures, which may include national programmes and may encourage the reuse of packaging.</p> <p>The Member States must introduce systems for the return and/or collection of used packaging to attain the following targets: recovery: 50% to 60%; recycling: 25% to 45%, with a minimum of 15% by weight for each packaging material.</p>		<p>Targets</p>
<p>Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCBs/PCTs).</p>	<p>Member States must take the necessary measures to ensure that used PCBs are disposed of; PCBs and equipment containing PCBs are decontaminated or disposed of. The equipment and PCBs contained in the inventories must be decontaminated or disposed of by 2010 at the latest under the conditions specified by the Directive.</p>	<p>PCBs/PCTs</p>	

Title	Summary	Substances	Standards
<p>Council Directive 91/157/EEC of 18 March 1991 on batteries and accumulators containing certain dangerous substances. Amended by: Commission Directive 93/86/EEC of 4 October 1993; Commission Directive 98/101/EC of 22 December 1998.</p>	<p>Directive 91/157/EEC prohibited, with effect from 1 January 1993, the placing on the market of: manganese alkaline batteries designed for prolonged use in extreme conditions and containing more than 0.05% by weight of mercury; any other alkaline battery with a mercury content of more than 0.025% by weight. From then on, Member States must prohibit the marketing of batteries and accumulators containing more than 0.0005 % of mercury by weight. The same will also apply to appliances incorporating such batteries and accumulators.</p>	<p>Manganese, mercury in batteries</p>	
<p>Council Directive 75/439/EEC of 16 June 1975 on the disposal of waste oil. Amended by: Council Directive 87/101/EEC of 22 December 1986; Council Directive 91/692/EEC of 23 December 1991.</p>	<p>These Directives apply to any mineral-based lubrication or industrial oils which have become unfit for the use for which they were originally intended. Member States must ensure that waste oils are collected and disposed of . They must give priority to the processing of waste oils by regeneration</p>	<p>lubrication or industrial oils</p>	

Title	Summary	Substances	Standards
<p>Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of-life vehicles.</p>	<p>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 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, except in the cases listed in Annex II. The Commission must amend the Annex in the light of scientific and technical progress.</p>	<p>end-of-life vehicles</p>	

Title	Summary	Substances	Standards
<p>Directive 2002/96/EC of 27 January 2003 on waste electrical and electronic equipment. Amended by Directive 2003/108/EC].</p> <p>Directive 2002/95/EC of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.</p>	<p>This Directive applies to the following categories of electrical and electronic equipment: large and small household appliances; IT and telecommunications equipment; consumer equipment; lighting equipment; electrical and electronic tools (with the exception of large-scale stationary industrial tools); toys, leisure and sports equipment; medical devices (with the exception of implanted and infected products); monitoring and control instruments; automatic dispensers.</p> <p>Member States are to encourage the design and production of electrical and electronic equipment which take into account and facilitate dismantling and recovery, in particular the reuse and recycling. Producers must apply the best available treatment, recovery and recycling techniques in accordance with Annex II to the Directive.</p> <p>Directive 2002/95/EC covers the same scope as the Directive on waste electrical and electronic equipment (except for medical devices and monitoring and control instruments). It also applies to electric light bulbs and luminaires in households. From 1 July 2006, Certain exceptions are specified in the annex to the Directive.</p>	<p>waste electrical and electronic equipment</p>	<p>lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs) in electrical and electronic equipment must be replaced by other substances.</p>

Title	Summary	Substances	Standards
<p>Council Directive 78/176/EEC of 20 February 1978 on titanium dioxide industrial waste. Amended by the following measures: Council Directive 82/883/EEC of 3 December 1982; Council Directive 83/29/EEC of 24 January 1983; Council Directive 91/692/EEC of 23 December 1991.</p>	<p>The aim of this Directive is the prevention and progressive reduction, with a view to its elimination, of pollution caused by waste from the titanium dioxide industry. The Member States will actively encourage waste prevention, recovery and recycling and the re-use of waste as raw materials. Any discharge, dumping, storage, accumulation or injection of waste will require prior authorization. The Member States will draw up programmes for the gradual reduction, and ultimate elimination, of pollution caused by waste from TiO₂ manufacturing facilities</p>	<p>titanium dioxide manufacturing facilities waste</p>	
<p>Council Directive 82/883/EEC of 3 December 1982 on procedures for the surveillance and monitoring of environments concerned by waste from the titanium dioxide industry.</p>	<p>The Directive applies to the discharge into water, the land surface, underground strata and the air of waste from the manufacture of titanium dioxide. Member States may lay down other parameters in addition to those laid down by the Directive.</p>	<p>titanium dioxide manufacturing facilities waste</p>	

Title	Summary	Substances	Standards
<p>Council Directive 92/112/EEC of 15 December 1992 on procedures for harmonizing the programmes for the reduction and eventual elimination of pollution caused by waste from the titanium dioxide industry.</p>	<p>The Directive applies to solid waste, strong acid waste, weak acid waste, neutralized waste, treatment waste and dust. The processes covered are the sulphate process and the chloride process. Discharges to water from existing industrial establishments using either process and of treatment waste from existing industrial establishments using the sulphate process are prohibited from 15 June 1993. Discharges of waste other than referred is reduced to limit values laid down by the Directive. Member States may choose to make use of quality objectives coupled with appropriate limit values, provided a programme presented to the Commission, in terms of protecting the environment and avoiding distortion of competition. The Member States must ensure that discharges into the atmosphere are reduced in accordance with limit values laid down by the Directive. The Member States monitor compliance with the limit values.</p>	<p>waste from the titanium dioxide industry.</p>	<p>Member States shall take the necessary measures to ensure that discharges of waste are reduced (per tonne of titanium dioxide produced). Member States shall take the necessary measures to ensure that discharges into the atmosphere are reduced (per tonne of titanium dioxide produced).</p>
HAZARDOUS WASTE			

Title	Summary	Substances	Standards
<p>Council Directive 91/689/EEC of 12 December 1991 on hazardous waste.</p> <p>Amended by Commission Directive 94/31/EC of 27 July 1994.</p>	<p>A list of the hazardous wastes covered by the Directive is to be drawn up on the basis of the categories, constituents and properties set out in the Annexes to the Directive by 12 June 1993. Domestic waste is not covered by the Directive.</p> <p>All waste (hazardous or not) is subject to Directive 75/442/EEC. Hazardous waste is also subject to Directive 91/689/EEC.</p> <p>Any establishment or undertaking which carries out disposal or recovery operations must obtain a permit. However, the permit requirement may be waived in the latter case if the method of recovery is such that there is no danger to human health or the environment, or if the Member State has adopted general measures laying down conditions for various methods of recovery, provided the conditions have been communicated to the Commission.</p>		<p>Framework</p>

Title	Summary	Substances	Standards
<p>Council Directive 94/67/EC of 16 December 1994 on the incineration of hazardous waste.</p>	<p>The Directive defines the following concepts: Dangerous waste, solid or liquid, of Council Directive 91/689/EEC. Municipal waste and combustible liquid waste (including waste oils) are excluded on the grounds that the levels of harmful emissions from such waste are characteristically negligible; Hazardous waste incineration plant (whether new or existing), and any installation using such waste as an additional fuel. Before an incineration plant can become operational, a licence must be obtained from the competent authorities designated by each Member State. The issuing of such licences is subject to the conditions laid down in the Directive. Steps must be taken as swiftly as possible to employ the best available technologies in both the new and the existing plants. Incineration residues left over from the treatment of combustion gases must be disposed of in accordance with the provisions of the Directive on dangerous and other waste (Council Directive 75/442/EEC, and of Council Directive 91/689/EEC).</p>		<p>The Directive lays down emission threshold values comparable to those obtainable with the best available technologies. Emissions of dioxins and furans must be reduced to a minimum by means of the most advanced technologies. A guideline value of 0.1 ng TE/m³ is laid down in respect of these emissions.</p>
<p>SPECIFIC SUBSTANCES</p>			

Title	Summary	Substances	Standards
<p>REGULATION (EC) No 850/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC</p>	<p>The objective of this Regulation is to protect from persistent organic pollutants by prohibiting, phasing out as soon as possible, or restricting the production, placing on the market and use of substances subject to the Stockholm Convention on Persistent Organic Pollutants, hereinafter 'the Convention', or the 1998 Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Persistent Organic Pollutants, hereinafter 'the Protocol', and by minimising, with a view to eliminating where feasible as soon as possible, releases of such substances, and by establishing provisions regarding waste consisting of, containing or contaminated by any of these substances.</p>	<p>Persistent Organic Pollutants: Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Hexachlorobenzene, Mirex, Toxaphene, Polychlorinated Biphenyls (PCB), DDT (1,1,1-trichloro-2,2-bis(chlorophenyl) ethane), Chlordecone, Hexabromobiphenyl, HCH, including lindane.</p>	

ANNEX III: NON EU COUNTRIES

Annex III: Non EU countries

Institutions	Functions	Laws	Scope	Standards identified
ALBANIA				
Administration Albania's MoE was established in September 2001 and operates on the basis of the Law on Environmental Protection: the same law established the Committee for Environmental Protection (CEP) in 1993 and the National Environmental Agency (NEA) in 1998.	The MoE is responsible for formulating and enforcing policy and legislation. The MoE plays an important role in assisting and cooperating with other ministries and local governments to produce environmental-sector policies. The MoE grants environmental permits for industrial activities	<p>Law no.8934, date 5.09.2002 on environmental protection</p> <p>Decision No. 249 dated 24. 04. 2003 concerning the endorsement of applications for environmental licenses and information items in the environmental license.</p> <p>Law No.8990, dated 23.1.2003 on environmental impact assessment</p> <p>Decision No. 103 dated 31. 03. 2002 concerning environmental monitoring in the Republic of Albania</p> <p>Law NO. 8897 dated 16 May 2002 on protection of air from pollution</p> <p>Decision (No. date) concerning the approval of temporary norms for discharges in the air and the implementation of these norms.</p> <p>Law No. 9010 dated 13. 02. 2003 on environmental treatment of solid waste</p> <p>Decision No. 26 date 31.1.1994 on hazardous wastes and residues</p> <p>Law No. 8102, dated 28.3.1996 on regulatory framework of the sector of water supply and wastewater management</p> <p>Law No. 9115 dated 24. 07. 2003 concerning the environmental treatment of polluted waters</p> <p>Law No.8652, dated 31.7.2000 on organization and functioning of local governments</p>	<p>Law no. 8934: General provisions; Environmental policies; the use and protection of the environmental constituents; Environmental Impact assessment; Permitting of activities that affect the environment; Prevention and reduction of environmental pollution; Monitoring and datas; Environmental control; duties of the state bodies related to environment; role of the public; sanctions.</p> <p>Law on environmental management of solid waste requests reduction at source, selective collection and composing of wastes.</p>	<p>MOE is about to submit the <u>allowable limits for discharging the urban and industrial wastewaters in surface waters.</u> Clean up standard will be the same as requested by EU Directive for the treatment of the urban wastewater.</p> <p><u>Standards for discharges in the air:</u> Decision (No. date) concerning the approval of temporary norms for discharges in the air and the implementation of these norms. Appendix No. 2 Categorization of some selected sources of pollution,</p>

Institutions	Functions	Laws	Scope	Standards identified
				norms or emissions, permissible level of smoke darkness and technical conditions of activity of selected sources of pollution.
ALGERIA				
<p>Ministry of Regional Planning and Environment</p> <p>Ministry of energy and mining</p> <p>Ministry of Water Resources</p>	<p>Ministry of Regional Planning and Environment has created five institutions: Waste National Agency; Cleaner Production Technologies National Centre; Environment and Sustainable development National Observatory; Environmental training Conservatory; Wilaya Environmental Directions.</p> <p>The Ministry of Water Resources is the principal ministerial department responsible for issues relating to water resources management, including research, mobilization, use, storage, and distribution of water.</p>	<p>Law n° 03-10 of July 19 2003 on environment protection in a sustainable development framework.</p> <p>Law n° 01-19 of December 12 2001 on waste management, control and elimination;</p> <p>Executive decree n° 96-59 of January 27 1996. Executive decree n° 96-60 of January 27 1996 provides for the creation of environmental inspectors for the wilaya, which are administrative areas in Algeria.</p> <p>Executive decree n° 93-68 of March 1 1993 concerning the application of the tax on pollutant or dangerous activities. (N° JORA : 014 of 03-03-1993)</p> <p>Executive decree n° 93-160 July 10 1993 regulating industrial liquid discharges, (N° JORA : 046 of 14-07-1993)</p> <p>Executive decree n° 93-161 July 10 1993 regulating oil and lubricant dumping into the environment (N° JORA : 046 of 14-07-1993)</p> <p>Executive decree n° 93-165 July 10 1993 regulating atmospheric emissions of smoke, gas, carbon, odours and solid particles from fix installations. (N° JORA : 046 of 14-07-1993)</p> <p>The finance law of 1992 instituting a tax on</p>	<p>Law n° 83-03 Implementing a national environment protection policy directed at protecting, restructuring and making best use of natural resources, preventing and fighting against any form of pollution and nuisance and improving the conditions and quality of life.</p> <p>Law n° 01-19 Reduction and prevention of waste production and hazardousness at source. National Plan for hazardous waste management; Promotion of the municipality's role as a key player in solid waste management at the local level; revision of SWM taxes to cover costs; promotion of private sector participation in SWM services; and enhancing public awareness and education.</p>	<p>Executive Decree n° 93-160: Maximum limits for discharges of industrial installations</p>

Institutions	Functions	Laws	Scope	Standards identified
		<p>activities which are polluting or dangerous for the environment; Executive decree n° 90-78 of February 27 1990 concerning Environmental Impact Assessments (N° JORA : 010 of 07-03-1990) Decree n° 87-182 of August 18 1987 concerning electric equipment or other materials containing oils based on polychlorobiphenyl (P.C.B.). (N° JORA : 034 of 19-08-1987) Law n° 83-03 February 5 1983 on environment protection Law n° 83-17 July 16 1983, modified and completed, concerning water code.</p>		
BOSNIA AND HERZEGOVINA				
<p>Two separate entities: Federation of BiH, and the Republika Srpska (RS). Responsibility in the former goes to the Federal Ministry of Physical Planning and Environment of Bosnia and Herzegovina (MoPPE) and, in the latter, to the Urbanism, Housing and</p>	<p>Both ministries are responsible for setting strategy and policy for their respective entity. Additionally, they are in charge of agreements and permits, the setting of standards and regulations, and the enforcement of laws and regulations through licensing and inspections.</p>	<p>Annex 2 of the Dayton Accords, which addresses transitional arrangements, states that all laws from the former Socialist Republic of Bosnia and Herzegovina that are not inconsistent with the Dayton Constitution may remain in force. This is significant in terms of the environment because it affirms the standing of the Law on Physical Planning in the Federation of BiH, passed in September 1987 (Official Gazette SR BiH, No. 9/1987).</p> <p>A set of proposed laws on environment-related issues has recently been drafted by foreign and local experts. The list includes draft legislation on: water protection; waste management; nature protection; and air protection. The list also includes a framework law on</p>	<p>The Federal Law on Physical Planning incorporates the field of environment as follows: Protection and Development of the Human Environment; General; Protection of Significant Natural, Cultural and Historical Heritage Areas; Protection of Soil and Jeopardised Areas; Protection of Water; Protection of Air; Protection of Urban Conditions; and Natural Disaster and War Activities Recovery.</p> <p>In its 128 articles and 16 chapters, the proposed Framework Law on Environmental Protection</p>	<p>The proposed Framework Law on Environmental Protection covers the following issues: Setting of Environmental Quality Standards, Inspections and Supervision, Environmental Quality Standards, Inspection.</p>

Institutions	Functions	Laws	Scope	Standards identified
<p>Communal Services, Civil Engineering and Ecology of the Republika Srpska (MoUH-CSCE).</p>		<p>environmental protection, incorporating environmental permitting and an integrated framework for environmental licensing. This law makes reference to supporting procedures, such as environmental impact assessments (EIAs), based on the concept of integrated pollution prevention and control of the governments of both Federation of Bosnia and Herzegovina and the Republika Srpska. This new environmental legislation is in the final phase of adoption. It is expected that Parliament will adopt it in summer 2002.</p>	<p>(Annex 5) covers the following issues: Principles of Environmental Protection: Public Participation and Access to Information; Environmental Information and Education: Environmental Information System and Provision of Information, Entry of Environmental Data into Other Records, Registering of Installations and Pollution, Active Dissemination of Environmental Information, Access to Environmental Information, Public Participation in Decisions, Access to Justice, Competencies, Environmental Impact Assessment (EIA); Environmental Permitting and Major Accident Prevention: Major Accidents Prevention and Control, Information on Accidents, Major Accident Prevention Plan, Safety Reports, Information on Safety Measurements; Setting of Environmental Quality Standards, Inspections and Supervision: Environmental Quality Standards, Inspection, Environmental Management System; Financing Environmental</p>	

Institutions	Functions	Laws	Scope	Standards identified
			Protection :Environmental Funds, Financial instruments; Civil Liability for Environmental Damage, Inter-Entity Cooperation, Penalties	
CROATIA				
The Ministry of Environmental Protection Physical Planning and Construction was a product of the Law on Amendments to the Law on Structure and Competence of Ministries and State Government Organisations (Official Gazette, No. 15/2000), which came into force on February 5, 2000. Ministry of agriculture, forestry and	Specifically, MoEPPPC is in charge of: preparing regulations and performing administrative checks and other administrative and expert duties in the field of environmental protection, referring to the general environmental policy in providing conditions for sustainable development; protection of air, soil, water, sea life, plants and other animals and the interactions between all of these, proposing, promoting and monitoring measures for environmental improvements; ensuring maintenance of the pollution cadastre (monitoring); managing an environmental information system; establishing environmental protection measures and requirements and ensuring compliance;	Environmental protection - general 82/94, 128/99 Law on Environmental Protection 34/97, 37/97 By-Law on Environmental Impact Assessment 82/99, 86/99 Environmental Protection Emergency Plan 74/99, 79/99 By-Law on Environmental Information System 36/96 Rule Book on Environmental Emission Inventory Air 48/95 Law on Air Quality Protection 101/96, 2/97 By-Law on Recommended and Limit Air Quality Values 140/97 By-Law on Limit Values of Pollutant Emissions from Stationary Sources into the Air 7/99, 20/99 By-Law on Substances Depleting the Ozone Layer Waste 34/95 Law on Waste 32/98 By-Law on Requirements for Handling Hazardous Waste 53/96 Rule Book on Container Waste Management	Law on Environment Protection: protection and physical planning of particularly valuable environmental parts; preventing environmental risks and threats; encouraging the use of renewable natural resources and energy; encouraging the use of environmentally the most acceptable products and of the best environmental production technologies; coordinated relation between environmental protection and economic development; prevention of environmentally risky interventions; restoring damaged parts of the environment; developing awareness of the need for environmental protection through education and promotion of environmental protection; passing legal regulations on environmental	140/97 By-Law on Limit Values of Pollutant Emissions from Stationary Sources into the Air

Institutions	Functions	Laws	Scope	Standards identified
<p>water management</p> <p>Ministry of sea, tourism, transport and development</p>	<p>waste management; preparing proposals for environmental standards; carrying out environmental inspection activities; supporting environmental education and research; carrying out research, surveys and promoting natural heritage sites; operating the central information and documentation service; determining and evaluating the characteristics of protected natural treasures; maintaining central records of protected natural areas; prescribing criteria for the establishment of public needs programmes regarding nature protection; organising, coordinating and supervising financing of environmental protection; evaluating work conditions of legal and natural persons with environmental competencies; ensuring favourable conditions for the protection of nature; controlling activities including transfer, export and import of protected natural resources; determining</p>	<p>123/97 Rule Book on Waste Management Requirements 27/96 Rule Book on Waste Types 51/96, 93/96 List of Professional Institutions with Authority of Publishing Reports on Testing Physical and Chemical Properties of Waste</p> <p>Law on Waters (Narodne novine No107/1995) Law on Water Management Financing (Narodne novine No. 107/1995).</p>	<p>protection; informing the public of environmental state and its participation in environmental protection; connecting environmental protection systems and institutions of the Republic of Croatia (hereinafter referred to as the State) with international institutions.</p> <p>Law on waste: avoiding and minimising the generation of waste, and minimising the hazardous nature of waste whose generation cannot be prevented, prevention of uncontrolled waste management, recovery of valuable substances for material purposes and energy recovery, and their treatment prior to disposal, waste disposal onto landfills, remediation of waste contaminated areas.</p>	

Institutions	Functions	Laws	Scope	Standards identified
	<p>requirements for the use of protected natural resources, and managing them in compliance with regulations; setting special construction requirements in order to protect natural heritage sites; performing inspections to ensure proper execution of nature-protection activities.</p>			
CYPRUS				
<p>Ministry of Agriculture, Natural Resources and Environment</p>	<p>The Ministry is composed of the following departments: Agriculture, Animal Husbandry, Veterinary Services, Fisheries and Marine Research, Land Consolidation, Agricultural Research Institute, Water Development, Forest, Geological Survey, Meteorological Service, Mines Service and Environment Service.</p>	<p>The harmonization with the EU legislation has resulted in a large number of laws and regulations for the following subjects: law for the assessment of the environmental impacts from certain projects, access to information, emissions and control of carbon dioxide, deliberate release of genetically modified organisms into the environment, substances that destroy the ozone layer, climate change, control of industrial pollution and risk assessment, integrated pollution prevention and control, eco-label, environmental management and audit (EMAS), protection and management of nature, noise management, management of waste, hazardous waste, packaging and packaging waste and quality of waters.</p> <p>Following are the main provisions of the most important Laws (Natural Resources and Environment). Government Waterworks Law (Cap. 341)</p>	EU	EU

Institutions	Functions	Laws	Scope	Standards identified
		Wells Law (cap 351) Irrigation Division (Villages) Law (Cap 342) Irrigation (Private Water) Association Law (Cap 115) Water Supply (Municipal and Other Areas) Law (Cap 350) Water (Domestic Purposes) Village Supplies Law (Cap 349) The Sewage and Drainage Law Public Health (Marsh Areas) Law (Cap 258) Water Pollution Control Law (Law No 69/91) Water and soil pollution control law of 2002 Water protection and management law of 2004		
EGYPT				
EEAA, the acronym for the Egyptian Environmental Affairs Agency, was officially launched in 1982. In 1994, Egypt passed Law 4 for the preservation of the environment. This law	EEAA draft laws, create and enforce regulatory standards, establish near- and long-term plans for environmental management, coordinate local, regional and national environmental protection efforts, and regularly report on the state of Egypt's environment	Law No. 4 of 1994 promulgating the environment law Law No. 48 of 1982 concerning the Protection of the River Nile. Law No. 21 of 1985 concerning the Organization and Encouragement of Industry Law No. 55 of 1977 concerning the Establishment and Operation of Thermal Machines and Steam Boilers. Companies operating in the field of <u>oil exploration, extraction, refining, storage, and transport and subject to the provisions of:</u> Law No. 6 of 1974 authorizing the Minister of Petroleum to sign Petroleum Concession	Law No. 4 of 1994: Protection of land environment from pollution (Hazardous material and waste) Protection of air environment from pollution Protection of water environment from pollution	Law No. 4 of 1994: Criteria and specifications for certain substances when discharged into the marine environment. Establishments subject to environmental assessment. Maximum limits of outdoor air pollutants.

Institutions	Functions	Laws	Scope	Standards identified
restructured the existing environmental ministry and created the Egyptian Environmental Affairs Agency (EEAA)		<p>Agreements.</p> <p>Law No. 4 of 1988 concerning Petroleum Pipelines.</p> <p><u>Electricity production and generation establishments subject to the provisions of:</u></p> <p>Law No. 145 of 1948 establishing the Cairo Electricity and Gas Department.</p> <p>Law No. 63 of 1974 concerning Establishments of the Electricity Sector.</p> <p>Law No. 12 of 1976 establishing the Egyptian Electricity Authority.</p> <p>Law No. 13 of 1976 establishing the Nuclear Electricity Generating Plants Authority.</p> <p>Law No. 27 of 1976 establishing the Rural Electricity Authority.</p> <p>Law No. 102 of 1986 establishing the Authority for the Development and Utilization of New and Renewable Energy.</p> <p><u>Companies operating in mines and quarries, and in the production of building materials, which are subject to the provisions of:</u></p> <p>Law No. 66 of 1953 concerning Mines and Quarries.</p> <p>Law No. 86 of 1956 concerning Mines and Quarries.</p>		<p>Permissible limits of air pollutants in emissions.</p> <p>Permissible limits of sound intensity and periods of safe exposure thereto.</p> <p>Maximum limits of air pollutants inside the work place according to type of industry.</p> <p>Maximum and minimum limits of temperature and humidity, period of exposure thereto, and means of protection therefrom.</p> <p>Non-degradable polluting substances which industrial establishments are prohibited from discharging into the marine environment.</p>
ISRAEL				
Ministry of the Environment	The Ministry of the Environment operates on three different levels—national, regional and local. At the national level, the	<p><u>Air</u></p> <p>The Abatement of Nuisances Law of 1961 is the principal legislative instrument for controlling air pollution.</p>	The country's environmental legislation encompasses laws for the protection of nature and natural resources (air, water and soil), for the abatement	A Covenant on Implementation of Standards on Pollutant Emissions into the Air was

Institutions	Functions	Laws	Scope	Standards identified
	<p>ministry is responsible for formulating an integrated and comprehensive national environmental policy and for developing specific strategies, standards and priorities for environmental protection and resource conservation.</p> <p>At the regional level, the ministry operates through six regional offices. Each function according to its specific environmental requirements and is responsible, inter alia, for implementing national environmental policy, participating in land-use planning processes, guiding local environmental units, inspecting and enforcing environmental legislation in local authorities, formulating environmental conditions for business licensing and advancing environmental projects to solve regional problems.</p> <p>At the local level, the ministry is professionally responsible for the operation of 39 municipal environmental units, regional environmental</p>	<p>Regulations on Air Pollution from Premises, 1962, prohibit emissions of black smoke into the air (in accordance with the Ringelmann Chart);</p> <p>Regulations on Air Quality, 1971, revised and expanded in 1992, define ambient air quality standards for different air pollutants;</p> <p>Regulations on Emission of Particulate Matter in the Air, 1972, define the permissible emission rate of particulate matter from an industrial facility which uses raw material in its production processes;</p> <p>Regulations on Prevention of Unreasonable Air and Smell Pollution from Solid Waste Disposal Sites, 1990, prohibit burning waste at solid waste disposal sites and require measures for the prevention of emissions of air pollution, smoke and odours</p> <p>The Licensing of Businesses Law, 1968, allows local authorities to impose special environmental conditions within the framework of business licenses. Environmental restrictions and conditions may be based on USEPA regulations, on emission standards issued by the Federal Government of Germany, or on any other standards acceptable to the Ministry of the Environment.</p> <p>Water Water Law, 1959 Local Authorities (Sewerage) Law, 1962 Model Local Authorities By-Law (Discharge of Industrial Sewage into the Sewage System), 1981</p>	<p>and prevention of environmental nuisances (prevention of air, noise, water and marine pollution), and for the safe treatment of contaminants and pollutants (hazardous substances, radiation and solid and liquid waste).</p> <p>Alongside laws and regulations dealing with specific environmental issues, Israel's legislation includes comprehensive laws, such as the Planning and Building Law and the Licensing of Businesses Law, which provide a framework for controlling the use of resources and promoting sustainable development.</p>	<p>signed by the Environment Ministry and the Manufacturers Association in 1997. The appendix to the Covenant includes Regulations on the Abatement of Nuisances (Pollutant Emissions into the Air). Emission standards for the power stations operated by the Israel Electric Corporation are currently being finalized. In addition, emission standards for urban waste incinerators and hazardous waste incinerators were published in 1997 and guidelines on the emissions of air pollutants from diesel generators for electricity production were published in 1999.</p> <p>Regulations on Air</p>

Institutions	Functions	Laws	Scope	Standards identified
	<p>units and associations of towns for the environment, eight of which serve the Arab sector. Municipal environmental units implement ministerial policy on the local level and serve as advisory bodies to the local authority on environmental issues.</p>	<p>Water Regulations (Prevention of Water Pollution) (Reduction of Salt Use in the Regeneration Process), 1994, require a number of technical steps to bring about a salt reduction in the regeneration of ion exchange;</p> <p>Water Regulations (Prevention of Water Pollution) (Evaporation and Storage Ponds), 1997, aim at preventing water pollution from evaporation and storage ponds, on the one hand, and at restricting their use, on the other hand;</p> <p>Water Regulations (Prevention of Water Pollution) (Gasoline Stations), 1997, require specific conditions for the establishment and operation of gas stations including measures and equipment to prevent leaks;</p> <p>Water Regulations (Prevention of Water Pollution) (Prohibition on Discharge of Brines to Water Sources), 1998, prohibit the discharge of brines from ion-exchange renewal, from food, tanning and textile industries, and from hospitals to water sources and to the municipal sewage system;</p> <p>Water Regulations (Prevention of Water Pollution) (Metals and Other Pollutants), 2000, are largely targeted at the electroplating industry but include a list of twenty pollutants which apply to all dischargers of wastewater.</p> <p><u>Waste</u></p> <p>Collection and Disposal of Waste for Recycling Law, June 1993</p> <p>Collection and Disposal of Waste for Recycling Regulations, 1998</p>		<p>Quality, 1971, defines ambient air quality standards for different air pollutants.</p> <p>Water Regulations (Prevention of Water Pollution) (Metals and Other Pollutants), 2000 These regulations were promulgated for the purpose of "protecting water sources from heavy metals and other pollutants by limiting the volume of wastewater discharged from pollution sources and reducing the concentration of pollutants in it." They set maximum concentration levels (expressed in milligrams per litre) for 20 pollutants.</p>

Institutions	Functions	Laws	Scope	Standards identified
		<p>Maintenance of Cleanliness Law, 1984 Maintenance of Cleanliness Regulations (Cleanliness Maintenance Fund), 1986 Maintenance of Cleanliness Regulations (Cleanliness Maintenance Fee), 1987 Maintenance of Cleanliness Regulations (Vehicle Signs), 1987 Criminal Procedure Order (Finable Offenses-Maintenance of Cleanliness), 2000 Hazardous Substances Law, 1993</p>		
LEBANON				
<p>The Ministry of Environment (MoE) was established by Law 216 on April 2, 1993 and is empowered by the government to study, propose and implement national environmental policies.</p>	<p>Prepare an appropriate legislative framework to enforce environmental policies; Initiate working plans and program for which to set accurate indicators and standards in environmentally-affected private and public sectors; Launch public awareness campaigns through core academic curricula and through various audio-visual media; Improve the application of Environmental Impact Assessment (EIA) requirements on major development projects and encourage sustainable development; and Empower local non-governmental</p>	<p>Decree 4917 24/04/98 Divides establishments into three classes upon their environmental threat Decree 5243 05/04/01 Amends Decree 4917 introducing five industrial classes Decision 44, CoM -/-/99 Requires Class 1 and 2 industries from being located inside an industrial zone Decision 23, CoM 11/12/99 Exempts Class 2 and 3 industries from being located inside an industrial zone Decision 5/1, MoE 25/01/01 Provides environmental guidelines for establishing gas stations Decision 16/1, MoE 05/04/01 Provides environmental guidelines for establishing farms Decision 75/1, MoE 02/09/01 Provides environmental guidelines for establishing or Tanneries Decision 4/1, MoE 12/01/01 Provides</p>		<p>National Standards for Environmental Quality (NSEQ)</p>

Institutions	Functions	Laws	Scope	Standards identified
	<p>organizations role in civil society.</p>	<p>environmental guidelines for establishing slaughterhouses Decision 3/1, MoE 25/01/01 Provides environmental guidelines for establishing rendering plants Decision 29/1, MoE 31/05/01 Provides environmental guidelines for establishing dairy production Decision 5/1, MoE 04/01/01 Provides environmental guidelines for establishing fruit and vegetable processing plants Decision 60/1, MoE 20/09/01 Provides environmental guidelines for establishing stone cutting plants Decision 61/1, MoE 20/09/01 Provides environmental guidelines for establishing plastics manufacturing plants <u>Water</u> Law 221 29/05/00 Water authorities Law 241 07/08/00 Amends Law 221 by reorganizing the water boards into four regional water authorities Decree 1039, Mol 02/08/99 Sets permissible standards for drinking water parameters <u>Air</u> Decision 52/1, MoE 29/07/96 Establishes National Air Quality Standards Decision 8/1, MoE 01/03/01 Updates/replaces Decision 1/52/ by developing National Standards for Environmental Quality (NSEQ) Decision 191/1, MoE -/09/97 Defines environmental guidelines to improve the environmental performance of Portland</p>		

Institutions	Functions	Laws	Scope	Standards identified
		<p>cement</p> <p><u>Solid Waste Management</u></p> <p>Law 504 06/09/95 Approves a loan agreement between the GoL and the WB for implementing SWEMP</p> <p>Decision 58, CoM 02/01/97 Adopts the Emergency Plan for SWM in GBA</p> <p>Decision 22/1, MoE 24/10/96 Bans all waste imports destined for final disposal or energy recovery (incineration), as well as hazardous waste imports bound for recycling</p>		
LIBYA				
<p>Libyan Arab Jamahiriya Environment general authority</p> <p>Shabeyat administrations have environmental competencies</p>		<p>Legislative Act N° 7 of 1982 concerning protection of the environment</p>	<p>General provisions</p> <p>Protection of the atmosphere</p> <p>Protection of the seas and marine resources</p> <p>Protection of water resources</p> <p>Protection of foodstuffs</p> <p>Environmental health</p> <p>Protection of contagious diseases</p> <p>Soils and plant protection</p> <p>Protection of wildlife</p> <p>Penalties</p>	
MALTA				
<p>Ministry for rural affairs and the environment</p> <p>Malta Environment and Planning</p>		<p>Chapter 435: Act XX of 2001 Environment Protection Act</p>	<p>Act XX of 2001 established the national Commission for Sustainable Development in order to prepare a National Strategy for Sustainable Development;</p>	<p>National Marine Pollution Strategy sets Environmental Quality Standards and Emission Limit Values</p>

Institutions	Functions	Laws	Scope	Standards identified
Authority			National Marine Pollution Strategy to control discharges into the Marine Environment (to satisfy obligations stipulated by EU Directives and Decisions).	
MOROCCO				
Ministry of land, water and environment planning Secretariat d'état charge de l'environnement Conseil National de l'Environnement (CNE) Commission de la Prévention et de la Lutte contre la Pollution et les Nuisances Comité Normes et Standards (CNS)	Decree n° 2-99-922 (13 January 2000) concerning organisation and attributions of the Environment Department within Land planning, Environment, Town planning and Housing Ministry. Main attributions are: - Contribute to the protection of natural resources in order to avoid dissipation or degradation affecting sustainable development; - Implement appropriate surveillance instruments and environment monitoring; - Promote Environmental Impact Assessments; - Prevent and combat pollution and nuisances potentially affecting public health ; - Enforce legislation; - Integrate environment	Law No. 11-03 on environment protection and improvement Dahir n° 1 -03-59 of 12 May 2003 promulgating law n° 11-03 concerning environment protection and improvement. Law n° 12-03 concerning environmental impact assessments. Dahir n° 1 -03-60 of 12 May 2003 promulgating law n° 12-03 concerning environmental impact assessments. Law n° 13, concerning fight against air pollution. Dahir n° 1 -03-61 of 12 May 2003 promulgating law n° 13, concerning fights against air pollution. Law No. 10-95 on water Dahir No. 1-95-154 of 16 August 1995 promulgating law 10-95 on water. DAHIR No. 1-69-170 of 25 July 1969 on soil defence and restoration (B.O. 29 July 1969), and modified. (B.O. 19 Nov 1969) Decree No. 2-69-311 of 25 July 1969 concerning application of dahir n. 1-69-170 and modified B.O. 19 Nov. 1969 Dahir of 25 August 1914 regulating unsanitary, nuisance or dangerous establishments.	General references for laws and regulations : - Continental waters - Forests - Protected areas - Plants and vegetation - Wildlife - Hunting - Fishing - Sea waters - Coast - Land - Mines - Air pollution - Solid waste - Nuisances - Hazardous Substances - Land and town planning - Classified activities	Standards relating to the water sector are being prepared by CNS in relation to: Categories of quality for surface water; Irrigation water quality; General limit values for liquid discharges ; Limit values for liquid discharges from sugar factories; Limit values for liquid discharges from yeast factories; Limit values for liquid discharges from petrol refineries; Limit values for liquid discharges from tanneries; Limit values for liquid discharges from

Institutions	Functions	Laws	Scope	Standards identified
	<p>dimension into development;</p> <ul style="list-style-type: none"> - Develop regional and international cooperation activities within environment management; - Promote cooperation between international non-governmental organisations and national associations and local communities. 			<p>pulp and paper industries; Limit values for liquid discharges from olive oil factories;</p> <p>Air Standards being developed by CNS are:</p> <p>Air quality standards ;</p> <p>General limit values for atmospheric emissions; Limit values for atmospheric emissions from petrol refineries; Limit values for atmospheric emissions from power stations; Limit values for atmospheric emissions in cement factories.</p>
SERBIA AND MONTENEGRO				

Institutions	Functions	Laws	Scope	Standards identified
<p>Ministry of Health and Environment Protection</p> <p>Directorate of Environmental Protection</p>	<p>Directorate of Environmental Protection is in charge of state administration related to the following:</p> <ul style="list-style-type: none"> • the system of environmental protection and promotion; • conservation of nature; • establishing and implementing measures to conserve natural entities; • protection of natural resources from pollution; • establishing environmentally safe conditions for construction of new facilities in regions of special interest for the republic; • manufacturing and utilising radioactive material and disposing of it; • tasks related to ionising and non-ionising radiation; • protection from noise and vibrations; • protection from toxic and dangerous materials in production; • waste disposal; • inspection supervision in the area of environmental protection; • programming and coordinating international collaboration in the field of 	<p>The Environment Protection Act, Official Journal of the Republic of Serbia, No. 66/91, 83/92, 53/93, 67/93, 48/94 and 53/95</p> <p>Regulation on Environmental Impact Assessments of Facilities and Construction Works, Official Journal of the Republic of Serbia, No. 61/92</p> <p>Regulation on the Limit Values of the Emission, Measurements' Methods and Deadlines, and Keeping Records, Official Journal of the Republic of Serbia, No. 30/97 and 35/97</p> <p>Program of Air Quality Control, Official Journal of the Republic of Serbia, No.70/93</p> <p>Rule of Waters Official Journal of the Republic of Serbia, No. 46/91, 53/93 and 48/94</p> <p>The enforcement of the Rule refers to the superficial and ground waters, including drinking water, thermal and mineral water, as well as boundary and trans-boundary watercourses and inter-republic waters within the boundaries of the Republic of Serbia. The Rule is supplemented by other regulations, such as: Regulation on Hazardous Substances in Waters, Official Journal of the Republic of Serbia, No. 31/82 and Regulation on Methods and Minimal Number of Waste Water Quality Assessments, Official Journal of the Republic of Serbia, No. 47/83, Amendment 13/84</p>	<p>The Environment Protection Act2 (1991), together with subsidiary regulations, governs the following issues: protection measures in planning and construction, air protection, water protection, soil protection, forest protection, natural resource protection, protection from noise, protection from ionizing radiation, protection from hazardous and waste substances, environmental protection financing, inspection monitoring.</p> <p>Special sectoral acts govern management and protection of different environmental media (water, forests, soil, hunting and fishing). There are also acts governing special issues directly or indirectly related to the environment.</p> <p>The Environmental Protection Inspectorate in the Ministry of Health and Environmental Protection controls the environmental impact of polluters through three types of permits.</p> <ul style="list-style-type: none"> • Facility analysis (i.e. Environmental Impact Assessments) for new and 	<p>Present standards for quality of environmental media in FR Yugoslavia:</p> <ul style="list-style-type: none"> • More than 16 JUS ISO air quality standards (5 currently being adopted); • 79 JUS ISO water quality standards (5 currently being adopted); • 42 standards are outdated, and should be updated; • 1 JUS ISO soil quality standard (5 currently being adopted).

Institutions	Functions	Laws	Scope	Standards identified
	environmental protection; and • other tasks defined by law.	<p>Regulation on Permitted Noise Level, Official Journal of the Republic of Serbia, No. 54/92</p> <p>Regulation on Selecting the Organizations that Meet the Conditions for Noise Measurement in the Human Environment, Official Journal of the Republic of Serbia, No. 1/84, 44/84, 44/87, 51/91</p> <p>Regulations on Handling certain Waste Products with Hazardous Substances' Characteristics, Official Journal of the Republic of Serbia, No. 12/95</p> <p>Regulation on Locality Selecting Criteria and Setup of Landfills of Hazardous Substances, Official Journal of Republic of Serbia, No. 54/92</p> <p>Rule of Handling Waste Substances</p>	<p>reconstruction facilities was introduced into Serbian legislation as a mandatory requirement in 1992 "(Regulations of the Analysis of Impact of Facilities: Works on the Environment, Official Gazette RS Vol. 61/1992).</p> <ul style="list-style-type: none"> Major industrial plants with large amounts of dangerous chemicals are obliged to prepare a chemical-accident risk evaluation "(Regulation on Methodology for Evaluation of Risk of Chemical Accidents and Environmental Pollution, Measures to Prevent Accidents and Provide Relief from Consequences," Official Gazette RS, Vol. 60/1994, 63/94). The Institute of Conservation of Nature issues a strictly limited number of permits for collection of or trading in endangered flora and/or fauna. 	
SLOVENIA				

Institutions	Functions	Laws	Scope	Standards identified
<p>The Ministry of the Environment, Spatial Planning and Energy</p> <p>The Environmental Agency of the Republic of Slovenia</p> <p>The Office for Spatial Planning</p> <p>The Agency for Efficient Use of Energy</p> <p>The Inspectorate for the Environment and Spatial Planning</p> <p>Local institutions structure</p>	<p>The Ministry of the Environment, Spatial Planning and Energy ensures a healthy living environment for all the inhabitants of Slovenia and encourages and co-ordinates efforts towards sustainable development based, in addition to social well-being, on the wise and thrifty use of natural resources.</p> <p>In the conviction that the future of Slovenia is in the community of European nations, it ensures all the necessary conditions for accession to the European Union on terms of equality, both in the area of infrastructural linkage and in that of environmental standards and measures.</p>	<p>Environmental Protection Act (2004)</p> <p>Water Act (2002)</p> <p>Spatial Planning Act (2002)</p> <p>Decree on Amendments and Supplements to the Decree on the Types of Activity Affecting the Environment for which an Environmental Impact Assessment is Mandatory</p> <p>Decree on the emission of substances into the air from stationary sources of pollution</p> <p>Decree on the Emission of Substances into the Atmosphere from Hazardous Waste Incineration Plants</p> <p>Decree on the tax for the pollution of the atmosphere with emissions of carbon dioxide</p> <p>Decree on the emission of substances into the atmosphere from plants for the production of lead and its alloys from secondary raw materials</p> <p>Decree on the emission of substances into the atmosphere from plants for the production and processing of wood products</p> <p>Decree on the emission of substances into the atmosphere from lacquering plants</p> <p>Decree on the emission of substances into the atmosphere from stationary internal combustion engines and stationary gas turbines</p> <p>Decree on the emission of substances into the atmosphere from plants for the processing of light alloys, ferrous alloys and steel</p> <p>Decree on the emission of substances into the atmosphere from cement production plants</p> <p>Decree on the emission of substances into the air from plants for the production of ceramics</p>	<p>In accordance with National Programme for Adoption of the Acquis Communautaire (NPAA), adopted by Parliament in 1998, the EU environmental legislation was transposed to the national legislation through the Environmental Protection Act (EPA), adopted by Parliament in 1993 (amended in 2004), the Water Act, adopted by Parliament in 2002 and to the corresponding Ordinances and Decrees, adopted in period 1999-2002, by which the sector specific EU standards and corresponding implementation schemes and periods are defined.</p> <p>The National Environmental Action Programme (NEAP), adopted by Parliament in 1999 and National Development Plan (NDP), adopted by Parliament in 2001 are the basic strategic documents, which define the national environmental policy and main objectives of different environmental sectors.</p> <p>Corresponding to directions, stated in EPA, main environmental objectives, stated in NEAP and the</p>	<p>EU</p>

Institutions	Functions	Laws	Scope	Standards identified
		<p>and brick products objects</p> <p>Decree on the emission of substances into the air from aluminium production plants</p> <p>Decree on Emissions of Substances into the Atmosphere from Heating Plants</p> <p>Order on the promulgation of the Waters Act</p> <p>Rules on the Handling of Packaging and Packaging Waste</p> <p>Decree on the quantity of waste from the production of titanium dioxide discharged into water and on the emission of substances into the air from the production of titanium dioxide</p> <p>Rules regarding hygienic suitability of bathing water (2003)</p> <p>RULES on the monitoring of environmental pollution from the production of titanium dioxide</p> <p>RULES on the management of waste from the production of titanium dioxide</p> <p>Rules on Waste Incineration</p> <p>Rules on the Disposal of Polychlorinated Biphenyls and Polychlorinated Terphenyls</p> <p>Rules on the Management of Waste Oils</p> <p>Rules on waste management</p> <p>Regulations on Changes and Additions to the Regulations on the Management of Wastes which Contain Toxic Substances</p> <p>Decree on Input of Dangerous Substances and Plant Nutrients into the Soil</p> <p>Decree on the Limit, Warning and Critical Concentration Values of Dangerous Substances in Soil</p> <p>Regulations on Initial Measurement of Noise and Operational Noise Monitoring for Sources</p>	<p>transitional periods for implementation of the Acquis Communautaire (10 years for implementation of Urban Waste Water Directive; 8 years for implementation of IPPC Directive (industry and waste management sectors) and 4 years for implementation of Packaging and Packaging Waste Directive (introduction of corresponding scheme of implementation)), negotiated with the European Commission, the sectoral Action Plans for implementation of the investment-intensive Directives in water, waste and air sectors were elaborated.</p>	

Institutions	Functions	Laws	Scope	Standards identified
		of Noise and on Conditions for Their Execution General Provisions		
SYRIA				
Ministry of State of Environmental Affairs.	Overall responsibility for co-ordinating all HWM management activities in Syria lies with the Higher Council for Environmental Safety (HCES). The Ministry of Environment is responsible for developing the appropriate policy, monitoring the implementation of the legislation, and intersectoral coordination.	The Environmental Protection Law, Law 50 which makes provisions for all areas of environmental protection. However, to date, although they are in process, no executive regulations have been finalised to actually implement the law. Law. Decree No. 2145 (1971) and Law No. 17 (1982) regulates water exploitation and water quality monitoring and according to Law 17, The Ministry of Irrigation is given the responsibility for the protection of all freshwater resources from pollution, as well as conserving the different watersheds throughout the country. They are therefore responsible for enforcing compliance with wastewater discharge regulations	Law 50 makes provisions for all areas of environmental protection	There are a number of guidance documents that set specific limits on factory air emissions (so called 'end-of-pipe' regulations). However, these regulations are not effectively enforced.
TUNISIA				

Institutions	Functions	Laws	Scope	Standards identified
<p>Ministry of Environment and Land-Use Planning Agence Nationale de Protection de l'Environnement (ANPE)</p>	<p>The Ministry of Environment and Land-Use Planning has principal responsibility for environmental protection in Tunisia. It is involved in drawing up of regulations and standards, preparation of national programmes, approval of investments, launch of model operations, help to local authorities and industry, and public information campaigns. The Ministry's implementing arm is the National Agency for Environmental Protection and it is further supported by a range of other committees and agencies: The EIA Directorate of ANPE is the body responsible for EIA in Tunisia. ANPE is responsible for administering, reviewing, and monitoring EIAs. Other government authorities which are competent to issue authorisations for development activities may not do so until ANPE has issued its approval for the project, based on an EIA study.</p>	<p>Decree No. 68-88 of March 28 1968 concerning nuisance, dangerous or unsanitary establishments. Organic law on local authorities ("communes") n°95-68 dated of 24 July 1995, article 129. Law n°88-91 of 2 August 88 (article 5) and its application decree n°91-362 of 13 March 1991 regulating environmental impact studies <u>Sewage and waste water treatment</u> The Water Code (Law 75-16 of 31 March 1975) prevents the pollution of water resources and lays down general conditions for releasing waste water into the natural environment Decree 86-56 of 2 January 1985 on the regulation of waste dumping in the natural environment Decree 79-768 of 8 September 1979 and decree 94-1885 of 12 September 1994, laying down conditions for the dumping of waste water other than domestic waste water in the public sewage networks located in areas covered by the ONAS infrastructure. Decree 94-2050 of 3 October 1994, laying down conditions for linking into the public sewage networks in areas covered by the ONAS infrastructure. <u>Solid waste</u> Law 96-41 of 10/06/1996 on the control, management and disposal of waste. Decree n°97-1102 laying down conditions and methods for the collection and management of used bags and packaging. <u>Soil and water conservation</u></p>	<p>Texts relating to curbing pollution are numerous and varied. They mainly concern waste management, classified units the control and supervision of which are governed by the Labour Code, noise and other disturbances to public health governed by the organic law on municipalities. In order to ensure a rigorous monitoring of environment and pollution sources, a corps of inspectors was set up and its statute approved in 1990. This measure using a repressive power is translated by sanctions against polluters; it has been strengthened by a preventive measure (1991) consisting in the obligation to precede all projects by Environmental Impact Assessments to take into account environmental concerns in decision-making. As regards waste (household and industrial, dangerous and inert), the law on their management and disposal (1996) fills a legal vacuum, which characterised the preventive aspect in</p>	<p>Tunisian standard NT 106002, on discharge of effluents into the public sewage network. Approved by decree of the Ministry of the National Economy, 20 July 1989. Circular issued by the Ministry of Industry dated of 3 April 1997 approving Tunisian standards on acceptable pollution thresholds for cement works. Circular issued by the Ministry of the National Economy dated 28 December 1994 on approving Tunisian standards on maximum acceptable thresholds and acceptable thresholds for certain polluting substances in the air.</p>

Institutions	Functions	Laws	Scope	Standards identified
		<p>Law 75/16 of 31 March 1975, relative to the Water Code.</p> <p>Law of 17 July 1995 regarding soil and water conservation</p> <p>Law 95-70 on the National Council for the Conservation of Water and Soil</p> <p>Waste water management</p> <p>Decree 86-56 of 2 January 1986 on regulations for discharges into the environment</p> <p>Decree 79-768 of 8 September 1979 completed by Decree 94-1885 of 12 September 1994, laying down regulations on conditions for discharging residual water other than household waste water into the public sewage network located in areas where the ONAS is responsible for sewage services.</p> <p>Decree 94-2050 of 3 October 1994, laying down the conditions for connection to the public sewage network located in the areas under where the ONAS is responsible for sewage services.</p>	environmental protection.	<p>Circular issued by the Ministry of Industry dated of 13 April 1996 approving Tunisian standards on air quality.</p>
TURKEY				
<p>Ministry of Environment was created in 1991.</p> <p>The ME has special consultative organs at three levels to ensure</p>	<p>The Ministry of Environment was established by government Decree no. 443 in 1991, which empowers it to conduct activities to protect and improve the environment. These activities involve ensuring appropriate land use, protecting natural resources, plants and animal</p>	<p>Environment Act (No 2872) of 1983</p> <p>Act no 1593 on General Hygiene (Articles 268 and 275)</p> <p>Act no. 1580 on Municipalities (Articles 15/19 and 18/2)</p> <p>Act no. 2399 on Poisonous Gases and Banning of the Importation and Domestic Production of Such Gases</p> <p>Regulation on the Training of Heating Operators in Private and Official Buildings,</p>	<p>The Environment Act (No 2872) of 1983 embodies the polluter pays principle adopted by other countries, and sets forth the concept of absolute liability to operationalize it. It also defines activities to prevent and solve environmental problems. These involve banning certain polluting operations, requiring</p>	<p>Air pollution standards, based on German norms, were set by the Ministry of Environment (ME) in 1986. The 1988 Water Pollution Control Regulation presented the</p>

Institutions	Functions	Laws	Scope	Standards identified
<p>the participation of people in line with the requirements of environmental protection and development activities: The Environment Council (ENC), the Higher Council for the Environment (HCE), and Local Environment Committees (LECs). At the provincial level, there are "Provincial Directorates of environment" which, as of 1995, were organized in 33 provinces.</p>	<p>species, and preventing pollution. Its duties include drafting laws, preparing rules and internal regulations, creating institutions (such as village environment associations and commissions to manage waste), supervising and planning environmental designs, interventions and actions as appropriate, managing watershed water quality and regional waste, creating environmental policies and strategies, coordinating environmental activities at international and national levels, conducting research, applying measurements, monitoring compliance, collecting data, managing finances, and carrying out extension and training.</p>	<p>Manufacturing Enterprises and Industrial Plants, and on the Operation, Control and Maintenance of Heating Systems" Regulation on the Protection of Air Quality (RPAQ) Act no. 831 on Waters (Articles 2, 7, and Annex 4) Act no. 167 and Regulation on Ground Water Resources Act no. 1380 and Regulation on Water Products Regulation on the Control of Water Pollution (RCWP) Noise Control Regulation (NCR) Regulation on the Control of Solid Wastes Regulation on the Control of Hazardous Waste (RCHW) Regulation on the Control of Medical Wastes Regulation on the Control of Hazardous Chemical Substances and Products</p>	<p>environmental impact assessments (EIAs) for specific activities (effective in 1993), identifying sensitive locales to be defined as special environmental protection areas, providing sanctions to prevent the discharge of hazardous chemical substances and wastes, banning noise, promoting incentives to pollute less, creating an environmental fund, and securing participation in decision making bodies such as the Environment Council (ENC), Higher Council for the Environment (HCE), and Local Environment Committees (LECs)</p>	<p>principles for classifying inland water resources as well as discharging and treating wastewater. The 1986 Noise Control Regulation set maximum levels of noise for indoor and outdoor spaces as well as mitigation measures. More recently, a number of regulations on waste management were approved, including those on solid waste (1991), medical waste (1993), toxic chemicals and their products (1993), and hazardous waste (1995), based on West European norms. Other environmental standards are set by the Turkish Institute of Standards (TIS).</p>

ANNEX IV
REFERENCES

Annex IV: References

Some of the documents and web pages consulted during the preparation of this report are referenced within the document as footnotes⁵⁸. The ones considered as the most relevant are typed in **bold**.

Some of them refer to other geographical areas than the Mediterranean region; they have been included as they contain information basic principles that could be useful when designing/implementing environmental policies elsewhere.

Other web pages or document references not directly related to the document are included as they could be useful in a process of updating environmental tools.

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⁵⁸ It has not been possible to identify any relevant webpage for the purposes of this report, referring to Libyan Arab Jamahiriya

⁵⁹ EU Commission has recently contracted (July 2004) the further development of this report under the title: '*Promotion of environmental integration and convergence with EU environmental legislation and standards in southern Mediterranean countries*'

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