

# The Guide

to development of EMAS  
in the CEE countries



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The guide gives a brief overview of the new Regulation No 761/2001 adopted by the European Parliament and by the Council on 19 March 2001, allowing voluntary participation of organisations in a Community "Eco-Management and Audit Scheme (EMAS)". It indicates a possible approach to the development of EMAS strategy and institutional structure in EU candidate countries of the Central and Eastern European region.

This guide can be used primarily by the competent bodies of the candidate countries, which may find useful some experience and information provided herein.

For further or more detailed information, please see the references, including web-sites, provided at the end of this guide.

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## Foreword

The Ministerial Conference in Sofia (1993) emphasised the need to promote environmental management systems in enterprises. Dissemination of environmental management and an active involvement of business and other stakeholders in environmental issues were recommended. The follow-up conference in Århus (1998) further developed these policy recommendations, stressing the need to facilitate the spreading of effective environmental management to candidate countries.

The DG ENV Policy Group has identified industrial co-operation with candidate countries as a priority for environmental policy. The appropriate programme has been set, the general objective of which is to improve the implementation of EU environmental rules in the candidate countries through a stronger involvement of the private sector and, in particular, of the industry.

The EU instrument "[Eco-Management and Audit Scheme](#)" (EMAS) provides a comprehensive strategy for environmental management in companies and a good vehicle for a voluntary participation of the private sector. It focuses on the introduction of voluntary approaches in companies and therefore directly involves them in the implementation of environmental norms. Introduction of EMAS in the candidate countries should significantly contribute to the fulfilment of this objective. Moreover, as EMAS is directly applicable at accession, the candidate countries need to establish the institutional structures necessary for EMAS management.

Within the programme of industrial co-operation, the project **"Programme for the Promotion of EMAS in the Czech Republic"** (hereinafter "the Project") has been launched. In order to ensure significant effect and operational results, the Project should focus on one industrial sector. The chemical industry has been chosen representing a central sector in the Czech Republic - economically as well as in terms of its environmental impact.

The Project was worked out in the period between January 2001 - May 2002 by the DHV Environment and Infrastructure BV, Amersfoort, the Netherlands, with strong participation of DHV CR, spol. s r.o., Prague, Czech Republic. The results of the Project should reach beyond the chosen pilot country and should be easily adaptable in other candidate countries. That is why the DG ENV accepted the proposal of the DHV EI to develop - within the Project - recommendations that could be effective throughout other CEE countries.

The **Sixth Environmental Action Programme** of the European Communities asks for development of a wide range of tools aimed at helping businesses understand the EC environmental requirements and how they should be met. This should include, *inter alia*, guidelines on complying with different legislation.

The EMAS Guide submitted represents fulfilment of the given tasks. It includes concrete experience gained during implementation of the Project and recommendations on how a strategy and an institutional structure for the promotion of EMAS in a candidate country could be developed. It also describes experience with the provision of support to the chemical companies for their EMAS registration.

Experience, proposals and recommendations provided in this guide shall not be deemed to represent the only feasible, and/or correct procedure of EMAS development. Specific conditions of each candidate country - e.g. arrangement of governmental and local authorities, current status, development and orientation of the manufacturing and service sectors, environmental and other legislation - must always be considered. Nevertheless, the authors are convinced that development of a strategy to promote EMAS, development of a proper institutional structure of the scheme and enlargement of a number of EMAS-registered companies can be facilitated using information provided in this guide.

## EMAS features

The aim of the Eco-Management and Audit Scheme (EMAS) is to promote continuous environmental improvements. It is a voluntary scheme designed to support organisations which continuously improve their environmental performance and which wish to have these efforts registered and made public in a credible manner. Organisations that have implemented an environmental management system and produced an independently-verified public statement about their environmental performance can also register under this scheme.

The EMAS Regulation No 1836/93, introduced in June 1993, has been put into operation in the Member States in April 1995. Originally, the scheme was open to the manufacturing industry and utilities only. In 2001, a revised European scheme was adopted based on the experiences of all companies which participated in EMAS.

### The new EMAS

The European Parliament and the Council Regulation (EC) No 761/2001 of 19 March 2001, allowing voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) has been modified to include **all** sectors of economic activity. Furthermore, the new regulation contains a number of improvements for the participating companies:

- Flexible use of an EMAS logo, will make it easier for EMAS registered organisations to raise their environmental profile.
- The relation between EMAS and ISO/EN ISO 14001 (International/ European Standard for Environmental Management System) has been clarified: The environmental management system as a part of EMAS is based on the procedures applied in the Section 4 of ISO/EN ISO 14001.
- Instead of separate registration of each site, EMAS now allows registration on the basis of the concept of organisation. The essential criterion of this concept is not the physical location of the entity to be

registered, but the managerial control over the significant environmental impacts from the top management point of view.

The EMAS Regulation applies to all 15 EU Member States and 3 European Economic Area Member States (Norway, Iceland and Liechtenstein). An increasing number of candidate countries is also implementing the scheme in preparation for their EU accession.

### EMAS logo

One of the core elements of the revised EMAS is the introduction of various forms of communication of environmental information to stakeholders. To facilitate this, the EMAS logo has been introduced.

The EMAS logo is a trademark of the Regulation No 761/2001. Its functions are to:

- Indicate the reliability and credibility of information provided by an organisation with regard to its environmental performance;
- Indicate an organisation's commitment to improvement of its environmental performance and to the sound management of its environmental aspects;
- Raise awareness of the scheme amongst the general public, interested parties and organisations willing to improve their environmental performance.



Two logos have been introduced, Version 1 for "Verified Environmental Management", and Version 2 for "Validated Information".



Organisations participating in EMAS with current EMAS registration may now use the EMAS logo to publicise and promote their involvement in the scheme. The logo may not be used in product advertising, on products and or their packaging. The EMAS logo may not be used by itself.

## EMAS structure: stepping stones

In concordance with Regulation No 761/2001, EMAS shall be open to participation of any organisation dedicated to improvement of its overall environmental performance (Article 3). Through various forms, the companies should be encouraged in their participation in the scheme. The state - interested in the development of the scheme - creates appropriate legal and administration framework for voluntary activities of the organisations.

### In particular the State shall:

- Establish a system for the accreditation of independent environmental verifiers and for the supervision of their activities;
- Designate competent bodies responsible for:
  - implementation of tasks provided for in the Regulation;
  - registration of organisations participating in the EMAS.

These competent and accreditation bodies represent the **basic elements of the scheme and establish the basis of its institutional structure**. Each Member State then selects its approach and organisational structures. The following examples of organisational development scheme can be provided:

- **Germany**

Initially the tendencies were to leave the whole system in the hands of the State, but the industry argued that if EMAS is to be voluntary, the responsibility must be with the companies. DAU, GmbH (Company for Accreditation and Supervision over Environmental Verifiers, Ltd.) was established by voluntary business confederations lead by the DIHT (Council of the Chambers of Commerce). The Federal Environment Ministry keeps its control function over the system and established an permanent advisory and steering committee which consists of representatives from industry, verifiers, government, trade unions and environmental groups. The companies registration is managed by the CIC (Chamber of Industry and Commerce). The Act on environmental audit came into effect in December 1995.

- **France**

Compared to Germany, the French government has kept a stronger role in EMAS. A responsible authority is the Ministry for the Protection of Nature and the Environment; the accreditation process is managed by the French Accreditation Committee (COFRAC), established by the Decision of the Ministry of Industry.

- **The Netherlands**

The system of accreditation and supervision has been integrated into already existing institutional structures the system of voluntary agreements. The Association for the Co-ordination of Certification of EMS (SCCM) was established and took on the function of a registration body. It was founded by the government and the main Dutch employers' organisation. An advisory council to the SCCM has also been established, which consists of representatives from the government, industry and the NGO's. Accreditation and monitoring is organised by the Dutch Accreditation Council.

- **The United Kingdom**

The UK has adopted a centralised approach to EMAS. Until 1998, a responsible body had been the Department of the Environment, now it is the Institute of Environmental Assessment (IEA), a professional body to promote best practice in environmental assessment with its membership drawn from environmental consultancies, businesses, local authorities and academia. Accreditation and monitoring of all standards is up to the United Kingdom Accreditation Service (UKAS).



## EMAS implementation models

Three main models for the implementation of the EMAS competent bodies can be distinguished within the Member States:

- authority/governmental-oriented competent body;
- private sector-oriented competent body;
- stakeholder-oriented competent body.

Within each model a country can opt for a national or a regional approach. The choice is strongly dependent on a country's history and the distribution of responsibilities within a country. Examples of countries with a regional approach are **Germany**, **Spain** and **Belgium**. Countries having a competent body with a central or national approach are **Austria**, **Sweden**, and **the Netherlands**.

As far as the accreditation system is concerned, with the exception of **Germany**, **Italy** and **Austria**, all EU member states have chosen to house the accreditation of environmental verifiers under the existing national accreditation organisations, which are members of the EA (European co-operation for Accreditation). In **Germany** a new organisation was set up for accreditation of EMAS verifiers (DAU). In all European member states, with the exception of **the Netherlands**, the National Accreditation organisations are allied to the government, often with the Ministry of Economic Affairs. In **Austria** responsibility changed from a division within the Ministry of Economic Affairs to Federal Ministry for Agriculture, Forestry, Environment and Water Management.



The above given models can be described as follows:

### **AUTHORITY / GOVERNMENTAL-ORIENTED IMPLEMENTATION**

- *Characteristics and main choices*

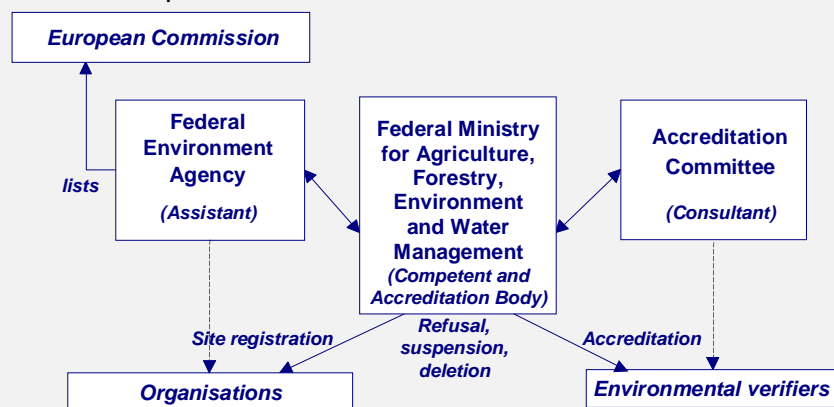
A Member State may decide to allocate a Competent body as well as an Accreditation body within a governmental setting. Such a choice results in a government-controlled accreditation system.

- *Consequences*

This choice of implementation has got the following consequences:

- High value with regards to the *regulatory benefits*: Because the government itself decides how to design the system and its institutional bodies, it can also decide on creation of the *regulatory benefits* (see Austrian environmental management act). The standards to obtain EMAS can be set at the government's discretion.
- High threshold for private companies: In this model, the private sector has little influence on the design of the system. It means that the private sector might not consider the EMAS as part of themselves. This can lead to a high threshold to participate EMAS.
- High governmental costs and involvement: In this model, governmental organisations implement the architecture and maintenance of the system. This might result in high public costs. On the other hand, since the governmental influence on the system is high, it can be used for implementation of specific policy targets but lower costs for organisations regarding registration as well as accreditation and supervision of verifiers.

An example of such an implementation can be found in **Austria**:



### PRIVATE SECTOR-ORIENTED IMPLEMENTATION

- *Characteristics and main choices*

In this model, implantation is dominated by the private sector. This model is characterised by the following choices:

- The Competent and accreditation bodies are a private organisation, financed by the business groups.
- The accreditation system and the qualification of verifiers are described by law.

- *Consequences*

If a Member State chooses such a system, the consequences might be as follows:

- Low threshold for private companies to adopt EMAS: Thanks to the strong involvement of the private sector, companies may feel that the system is part of their own world and is easy to adopt. Since their representatives have designed the system and execute the operational tasks, it meets the companies' requirements.
- Many companies participate: compared to the governmental-oriented model, more companies are usually expected to reach the EMAS level.

An example of a model dominated by private sector implementation is **Germany**.

### STAKEHOLDER-ORIENTED IMPLEMENTATION

- *Characteristics and main choices*

The third distinguished model of EMAS implementation is the stakeholder-oriented model. Such a way of implementation has the following characteristics:

- The Competent body is managed by a group of stakeholders within a co-operation or foundation.
- The accreditation system and body are operated by the National Accreditation Body.

This model tries to reach consensus and dialogue among all stakeholders, and to establish a system that is run by all participants and stakeholders.

- *Consequences*

The consequences of this model are as follows:

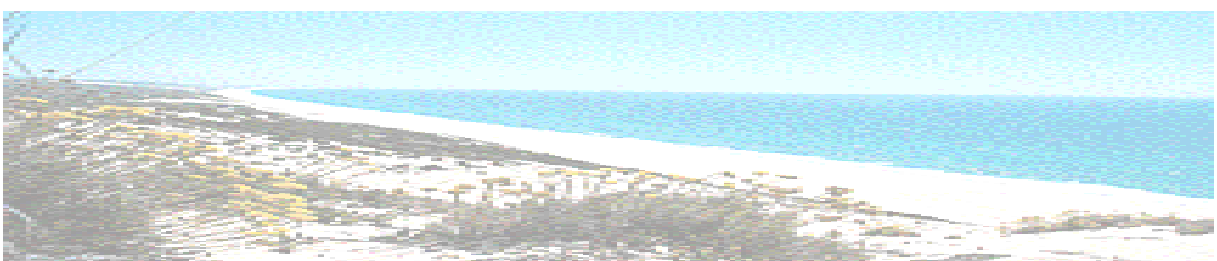
- High level of stakeholders' commitment: Since all parties are involved in the system execution and in the operational tasks of the organisational bodies required, a broad sense of consensus is met.
- Since decisions are based on building consensus, the parties involved may not be able to design the system in their most preferred way.
- High level of independence of the system, since no one is able to push through their exclusive interests.

An example of this model of EMAS organisation is **the Netherlands**.

The design of EMAS implementation is up to the individual Member States. The way the system and institutional structure are built depends on local circumstances. The various combinations of the positioning of the accreditation system and competent bodies in relation to government can exist. The choice of model strongly depends on a country's history and the position of existing organisations. The one extreme has both accreditation and the competent body as part of the government (**Austria** and **Italy**); in the other, both the accreditation organisation and the competent body are independent of the government (**the Netherlands**). In most countries, various combinations are used. There are examples of the competent body and the accreditation organisation being incorporated in one organisation. In **Ireland**, the National Accreditation Organisation is also the competent body. In **Italy** the competent body is also the accreditation organisation. **The United Kingdom** example shows that it is possible for the place of the competent body to change over time (it was within the government and after a few years was put within an independent organisation of many stakeholders).

There is no indication that the success of EMAS, in terms of the number of registered companies, is determined by the implementation model for the competent body or accreditation organisation. A mixture of factors influences the success of EMAS:

- The degree to which industry is already familiar with management systems and has them certified (in particular ISO 14001).
- Industry's attitude. If a number of leading companies take the plunge with EMAS registration, it can set an example and encourage other companies to do so.
- The availability of subsidies and grants for individual companies and any industry organisations.
- Pressure and incentives from various government authorities (central and local level).



## EMAS implementation in CEE countries

The governments of countries preparing for accession to the European Union are required to develop institutional structures to manage compliance with EU environmental requirements. Regulation No 761/2001 shall be directly applicable upon accession. Thus for these countries development of sound institutional structures, of implementation mechanisms and verification procedures is a prerequisite.

With regards to the needs of EMAS development in those countries, which are not yet members of the European Union and as such have not yet transposed the Regulation into their respective legal system, the following recommendation can be given: the State should identify detailed rules that put forth the conditions for development and operation of the scheme and should publish them in an appropriate form, e.g. in a form of a Government Resolution.

The overview below describes the legislative framework and institutional set-up of EMAS in CEE countries.

### EMAS legislation

Besides the **Czech Republic**, only a few other countries have already created legal framework for EMAS. **Poland** has adopted national EMAS legislation in January 2001. The **Slovak Republic** has the scheme ready and legislation is to be adopted in July 2002. In **Estonia**, EMAS is already in place. In the other CEE countries there is no operational EMAS-related legislation. Some countries have a legislation plan for transposing the EMAS rules into their national legal system. In **Bulgaria**, for example, provisions for implementation of EMAS legislation have been included in the new Environmental Protection Act. In **Slovenia**, full compliance is expected to take place by 2003 through amendments to the existing Environmental Protection Act. **Hungary** and **Lithuania** accomplished EMAS in the spring of 2001.

## Institutional framework

In some of the CEE countries there are already assigned competent and accreditation bodies. Yet the models these countries have chosen differ. Most CEE countries have got the National Accreditation Body, which can operate the accreditation system (**Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, Slovenia**). Only the **Bulgarian** Accreditation Agency is not an independent, but a state agency under the Ministry of Economics. For EMAS, some countries have already designated a specific accreditation body for accrediting environmental verifiers. In **Romania**, for example, the Ministry of Waters, Forestry and Environmental Protection is responsible for accrediting environmental verifiers. In **Poland**, the Polish Accreditation Center (PCA) acts as the EMAS Accreditation Body.

There are few countries that have designated a 'shadow' EMAS competent body. Only **Poland, the Slovak Republic, Slovenia** and **Romania** have designated a competent body. In **Poland**, the Ministry of Environment will act as the EMAS Competent Body, using as registration units Voivodship (Provincial) Departments for Environmental Protection, which are part of government administration. In the **Slovak Republic** the Ministry of Environment will act as the competent body.

## EMAS Acceptance

Besides the fact that most CEE countries do not have appropriate legislation, accreditation and competent bodies in place, they are all working towards compliance with the European rules within one or two years. This demonstrates the fact that all countries recognise the importance of the EMAS legislation implementation. Various countries already have environmental programmes, which show that these governments want to stimulate environmentally sound measures in organisations.

In **Poland**, for example, there is a programme for promotion and development of environmental management systems, adopted in January 2001. Additionally, the Ministry of Environment is in a process of establishing the Programme Council, which shall support the process of implementation and development of EMAS in Poland, together with the Cleaner Production issues. The Programme Council is to involve relevant stakeholders, including the governmental officials, representatives of industries and non-governmental organisations, such as the Polish Forum Club ISO 14000, or the Polish Cleaner Production Society. Consultations with these various stakeholders shall contribute to a growing acceptance of EMAS.

## Case study: the Czech Republic

It has been pointed out that a fundamental task of the State in developing EMAS includes primarily the establishment of the institutional, legal and administration framework of the scheme, i.e. establishment of a system to register organisations, establishment and co-ordination of the system to accredit independent environmental verifiers and publication of the detailed rules on EMAS Programme implementation.

### EMAS implementation programme

A fundamental policy document in the Czech Republic outlining the strategic objectives and approaches of the State toward the environmental protection is represented by the State Environmental Policy, updated regularly and approved by the Government of the Czech Republic. The **1999 State Environmental Policy**, amended in **January 2001**, contains a provision calling for the maximum support to implementation of the environmental management systems in companies; with the aim to include at least 150 companies in the process by the end of 2001.

With the Czech Republic on the list of candidate countries preparing for the EU accession, since 1997 there has been an increasing need to provide specific support especially to those legislative acts of the Union, which shall become - upon accession of the Czech Republic into the EU - an integral part of the Czech law. One of such pieces of legislation is the EMAS Regulation No 1836/93, updated by the Regulation No 761/2001.

A fundamental political document for the support of strategic objectives of EMAS development in the Czech Republic is primarily a Resolution of the Government of the Czech Republic No 466 of July 1, 1998, on the approval of the **National EMAS Programme**. The objective of implementation of the EMAS Programme was to establish conditions for voluntary activities of the businesses related to environmental

protection and to enable the companies increase their competitiveness on the single EU market. Besides the Resolution, in which the government stated its support to the programme these conditions included:

- Publication of detailed rules, which put forth the terms and conditions under which the legal or natural persons licensed for business can join the Programme; identify obligations of the accredited environmental verifiers and determine the respective authorities of the state administration bodies.
- Establishment of the EMAS Programme Council, which represents a responsible, conceptual, steering and control body of the Programme. The Council includes the state administration bodies, industrial confederations and non-governmental organisations.
- Establishment of the EMAS Accreditation Body, which provides accreditation of the environmental verifiers.
- Establishment of the EMAS Programme Agency, which provides managerial, expert and administration services for the EMAS Programme Council.

Approval of the National EMAS Programme and establishment of the **EMAS Programme Council**, establishment of the **EMAS Agency** and of the **Accreditation Body** lead to establishment and stabilisation of the fundamental system structure.

#### Basic elements of the institutional structure

- **Responsible state administration body: Ministry of Environment**  
A body responsible for EMAS in the Czech system is the Ministry of Environment. The EMAS Programme Council was established at the Ministry of Environment as a permanent conceptual, steering and supervision body for the EMAS Programme, whose activity is in concordance with activities of the responsible bodies in the EU Member States.

The chairman of the Council is the Deputy Environment Minister, deputy chairman is the Deputy Minister of Industry and Trade. The EMAS Programme Council includes representatives of the central administration bodies (Ministry of Environment, Ministry of Industry and Trade, Ministry of Agriculture, Ministry of Health, Ministry of Finance, Ministry of Regional Development, Ministry of Transport and Telecommunications) and representatives of other important stakeholders (Czech Accreditation Institute, Confederation of Industry and Transport, Association of the Chemical Industry, Czech National Bank, Czech Insurance Association, Economic Chamber, Society for Sustainable Development, Czech Union for Protection of Nature, Barum Otrokovice S.R.O. and EASTMAN SOKOLOV A.S.). The Council has a total of 22 members. The EMAS Programme Council meets according to actual needs, at least twice a year.

- **Registration place: EMAS Agency at the Czech Environmental Institute**

The EMAS Agency is a competent body responsible for registration of organisations and environmental verifiers in the Czech EMAS system. The Agency is established at the Czech Environmental Institute, an independent contributory organisation within the authority of the Ministry of Environment. The Agency chief is nominated by the Minister and manages work of other personnel. At present, the Agency is composed of two employees with university degrees.

EMAS Agency acts as a Programme Council administrative office and performs related expert and managerial activities. It operates a database of Czech companies registered in the EMAS Programme and co-operates with the accreditation authorities in notifications of the foreign accredited verifiers active in the Czech Republic. It delivers information to the business community and the public in the form of seminars, lectures, publications, etc. The Agency collects fees from the registration applicants, set by the Ministry of Environment; it asks for, collects and assesses standpoints of the state administration bodies and of the Environmental Inspection with regards to the EMAS Programme registration applications.

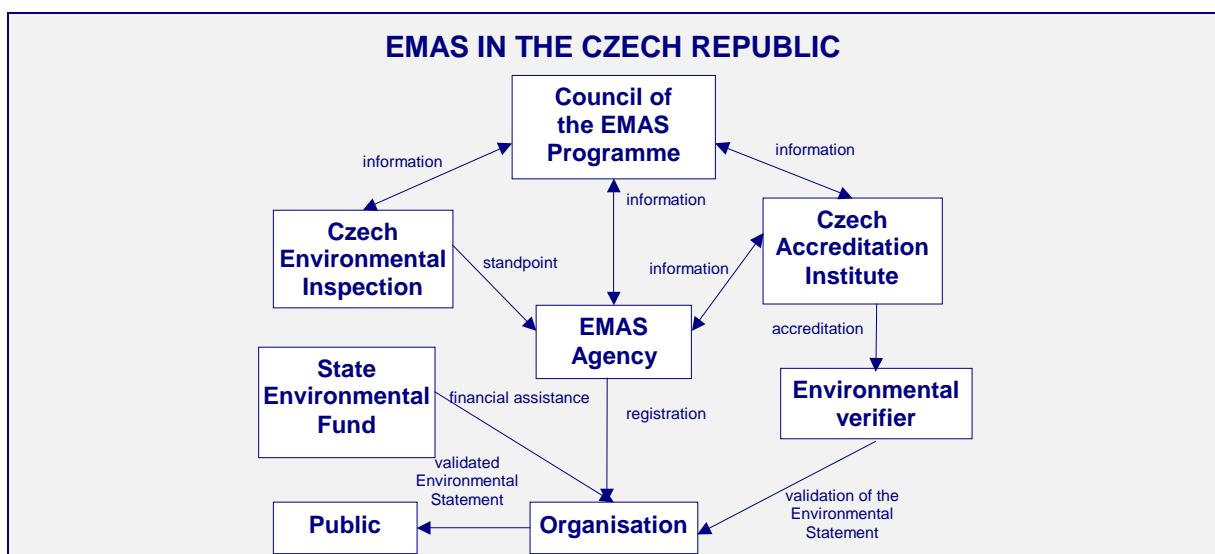
- **Accreditation body: Czech Accreditation Institute**

The Czech Accreditation Institute, p.s.c., is a competent body responsible for accreditation and supervision of environmental verifiers under the Czech EMAS system.

Czech Accreditation Institute (CAI) is a contributory organisation established in 1993 as a state administration body and authorised to perform accreditation. In 1998 CAI was transformed to a public service company providing services (accreditation and supervision) based on the authorisation of the Ministry of Industry and Trade. CAI works on a non-profit basis: costs of operations are covered revenues from its own activities; contributions from the state budget for international co-operation amount to circa 4 - 5% of the organisation's budget. As of January 1, 2001, CAI had 42 permanent employees (out of which 83% hold university degrees). The database of external assessors providing expert assistance in the process of accreditation includes circa 400 experts.

Within its accreditation activity, CAI issues certificates of accreditation for:

- testing and calibration laboratories;
- the certification bodies which execute certification of products, quality systems and personnel;
- inspection bodies;
- organisers of the qualification assessment programme;
- the certification bodies which execute certification of the environmental management systems - EMS;
- environmental verifiers of the EMAS programme.



At the beginning of 2002, the **National EMAS Programme has been updated** with regard to the Regulation No 761/2001.

From the point of view of the **future EMAS development** and of the increase of the number of registered businesses **it is requested in the updated National EMAS Programme** to, *inter alia*:

- Update the strategic documents and methodical instructions in connection with the approval of the Regulation No 761/2001.
- Create environment for reduction of the state regulation and supervision in registered organisations on the basis of, for example, a voluntary agreement between the Ministry of Environment and the representatives of the business community; issue a methodical instruction for the inspection bodies based on such an agreement, which would enable simplification of the inspection visits and controls in the registered organisations.
- Suggest the prerequisites of EMS implementation into the terms of the Act on public procurement.
- Intensify state information and training activities through establishment of an education programme for selected target groups (state administration including Czech Environmental Inspection authorities, management of the SME's, banking sector, insurance companies) on EMAS; obtain resources from the state budget or other sources for the programme implementation.
- Simplify the process of businesses registration in the EMAS Programme through the provision of more detailed specification of the statement content required from the inspection authority by the organisation to be registered.

According to the EMAS Agency data the following was, the status of implementation of the environmental management systems in the Czech Republic as of April 20, 2002:

- 216 EMS-certified businesses according to ISO/EN ISO 14001;
- 18 businesses with EMS implemented according to EMAS, out of which 7 companies are registered;
- at least 6 companies preparing for EMAS implementation by the end 2002;
- 12 organisations accredited for certification according to ISO/EN ISO 14001;
- 2 organisations accredited for EMAS verification.

## Promotion of EMAS implementation

According to Article 11 of the Regulation, the Member States shall promote organisations' participation in EMAS through, for example:

- facilitation of access to information, support funds, public institutions and public procurement;
- establishment or promotion of technical assistance measures, especially in conjunction with initiatives from appropriate professional or local points of contact (e.g. local authorities, chambers of commerce, trade or craft associations), etc.

In the individual EU Member States, these support activities assume various forms. Without excess simplification, they cannot be divided into individual types or kinds of support. Therefore, the following text lists mainly examples of specific measures applied in the EU states.

For the sake of the initial stage of the project, it is appropriate that the **government contributes to cover all external costs of EMAS implementation** incurred by companies; a revision can be done after a certain period of time.

For example the original **Austrian** programme of EMAS support (co-ordinated by an Austrian bank Kommunalkredit upon request of the Ministry of Environment) was a success. In the first two years companies received funding for all external costs related to EMAS implementation. After two years the programme was reviewed. The Austrian Ministry of Environment (at present called the Ministry for Agriculture, Forestry, Environment and Water Management) has introduced new funding possibilities, which can be beneficial to companies implementing EMAS. Support is as follows: a company which has initiated EMAS implementation identifies a specific measure to improve its environmental performance. In order to implement this measure, financial investments are needed. The company can apply

for financial support of such a measure and for partial funding of EMAS implementation.

An interesting alternative approach to EMAS funding, as opposed to an all-or-nothing approach, is a **step-by-step approach considered in some countries**. This implies that a company or organisation receives funding after each stage of EMAS implementation, e.g. after the initial environmental review, establishment of the management system, and after the internal audit. Another feasible approach is the **supply-chain** approach, whereby large companies request EMAS participation from their suppliers. As long as large companies provide some form of support of EMAS implementation to suppliers, this approach has greatest chances of success.

Company decision on its participation in system is based on **economic benefits**. Analyses indicate that EMAS implementation indeed is beneficial. EMAS implementation also represents a contribution towards environmental protection, primarily through implementation of environmentally-motivated and accident-prevention measures.

Average costs of EMAS implementation listed by **German** businesses in a 2000 survey are EUR 59,300, realised savings from the system implementation represent EUR 71,600, resulting in the net benefit of EUR 12,300. Most often cited benefits for society (the State) resulting from environmental improvements brought about by companies include: reduction or replacement of problematic materials (mentioned by 97% of polled companies), technical improvements (91% of companies), environmentally motivated optimisation of transport (76% of companies).

Attractiveness of EMAS implementation is increased through support of the State and other entrepreneurial players. The state support can assume a form of financial contributions for the EMAS System implementation and/or of **possible state regulation exemptions**, for example when the decisions on the frequency and details of the inspection and supervision activities, on the details of the reports required, etc. are made.

In **Germany**, the state-level governments provide the EMAS registered companies with certain reliefs. In Bavaria in 1995, for example, a voluntary agreement was concluded between the government and the business community containing, *inter alia*, an obligation of the industry to reach 500 registrations by the end of October 2000 (fulfilled one year ahead). On the other hand, the Bavarian government promised to reduce the level of monitoring of companies with EMAS registration by modification of the traditional reporting and monitoring processes (wastes, waters, air). In **France** some regional inspection authorities also have an option to reduce the frequency of visits and reports required from registered companies.

A significant development incentive is represented by limited **participation of the State in the system of accreditation and monitoring of the environmental verifiers** and in the procedures regarding registration of the system participants. It is appropriate that entrepreneurial bodies participate in the accreditation system; registration seems to be well carried out through an agency, with the state checking only through an intermediary.

In **Germany**, strengthened participation of the business community in the process of accreditation has led to increased interest of businesses in EMAS participation. Another reason included a government financial support - almost all state environmental ministries, alternatively ministries of industry and trade, contribute to the EMAS development. It is estimated that the state support has been received by 30 - 60% of the registered participants.





In the **Czech Republic** the State provides **financial support** to EMAS implementation primarily through two programmes co-ordinated by the State Environmental Fund (SEF) and by the Ministry of Industry and Trade.

Objective of the **SEF Programme** is to support EMAS Programme implementation primarily in the small and middle size enterprises, in the health-care and services sectors. Support is defined as a contribution for the expenses related to EMAS implementation, inclusive of training until the moment of the Environmental Statement validation. Support can reach up to 50% of the costs and is provided to companies which fulfil the Programme criteria even before the EMAS System implementation.

Also the **TRH (Market) Programme** sponsored by the Ministry of Industry and Trade and implemented via the Czech-Moravian Guarantee and Development Bank, A.S., is aimed primarily at companies with less than 250 employees. This Programme shall enable, *inter alia*, that businesses be provided with a contribution amounting to 50% of costs of expert advisory services related to EMS implementation according to EMAS (or ISO/EN ISO 14001). This contribution is paid out to companies which fulfil the programme criteria after the Environmental Statement will have been validated (or the certificate will have been obtained), and amounts to the maximum of EUR 6,500.

## Introducing EMAS to companies

Each candidate country has different preconditions for EMAS development and, therefore, appropriate methods for EMAS introduction to companies might differ from one country to another. Nevertheless, all CEE countries have undergone fundamental economic changes stemming from transformation from planned to market economies.

Repeated surveys amongst companies in the Czech Republic have revealed the following initial barriers to successful EMAS development:

- Number of corporate owners and managers have had low awareness of environmental problems and their economic aspects; often they have been satisfied that so far no penalties have been imposed, or that low environmental fees have been paid, or that their commitment to environmental protection was only formal, without any real content.
- Pressure of customers and clients for better environmental behaviour of the producer and supplier has been very low.
- Bad economic and financial situation of many companies has prevented financing of any activities other than production-related.
- Undergoing restructuring of companies, both production-related and organisational, has not implied necessary long-term security for potential application of the EMAS System.
- In many cases, changes of corporate ownership have had a direct impact on priorities of long-term corporate strategies related to environmental protection and EMAS implementation.
- Small and mid-size enterprises have only had a limited number of technical personnel available with widely accumulated functions who have managed to perform only fundamental environmental activities stemming from respective regulation.
- Limited familiarity with or use of other management systems, in particular those involving quality.
- Little familiarity with environmental management by local authorities.

Launch of EMAS in the candidate countries should be based on the best regulation available in order to facilitate growth of an effective EMAS System. The new management processes, brought about primarily through the injection of foreign capital, competitive environment of the free market and thanks to increasing pressure of the general public should also be applied in environmental protection. Understanding and easier application of this approach should be effected through the use of the well-tested tools introduced under the following steps.

## Step 1: Publicity

Initial activities, the objective of which is to provide basic information and evoke interest of companies and stakeholders in EMAS; these can be focused on:

- Publication of a simple **leaflet** with brief information on EMAS, terms and conditions of participation, its benefits and requirements. An important part is information on the support of EMAS implementation and references to sources of further information. The leaflet can be distributed both electronically (web-sites, email) or it can be published in a relatively high volume and distributed through interest and profession associations and public administration.

A suitable model is the leaflet "EMAS - Performance, credibility, transparency" published by The Office for Official Publications of the European Communities. Its local national version in Czech language is provided in Annex 1.

- Performance of Knowledge-Attitude-Practice (**KAP**) **studies**. Results of KAP studies can be included in the process of development of effective information campaigns, training programmes and materials, of pilot projects and manuals, which cover the needs of various target groups. The KAP studies and the follow-up information campaigns should be targeted at least at some of the following target groups:
  - senior managers in industry;
  - environmental specialists and internal auditors in industry;
  - consultants;
  - government officials in municipalities and regional offices;
  - external auditors;
  - financing institutions (banks, insurance companies);
  - NGO's and public.
- Execution of **information campaigns**, which would deliver special-tailored relevant messages to the target groups and to the general public can be based on preparation and distribution of additional information materials, organisation of seminars and round tables, on one-on-one visits, on establishment of an EMAS web-site, etc.

Experience shows that government officials represent an important target group; for successful EMAS development it is important that this group be well informed. Government officials should understand that EMAS provides important organisational guarantees of a company's ability to identify, on a continued basis, to monitor and to act on its environmental effects and its environmental performance, and take measures as necessary to meet the legal requirements and reporting on all relevant matters.

## Step 2: Training

**Courses and workshops** focused on various target groups enable that high level of attention be devoted to EMAS promotion. Training shall further enhance knowledge of the target groups as well as provide them with a clear strategy and the right tools for taking action in their own local environment. For training purposes, it is practical that the above-described target groups be divided into the following clusters:

- consultants and auditors;
- representatives of industry; and
- other stakeholders.

All participants should be provided with introductory courses; selected groups (consultants, auditors, industrial environmental specialists) should then be provided with advanced courses. Advanced training should be in the form of workshops, where attendees co-operate on case studies. Results are assessed and presented within groups. A special Train-the-Trainers course trains future lecturers on how to relate the EMAS principles using various presentation techniques.

Education programme also includes preparation of the training resource materials. These materials can either be developed, or existing documents can be used, which have been developed for various other projects; they should nevertheless always be professionally customised for local, domestic context.

A good form of how to organise courses and workshops for corporate representatives is through the interest or professional associations. This way a build-up of **EMAS-convoys** should be simplified in situations where, under a consultant's instruction, several companies (about 4 to 8) work together on their way to EMAS. This is a very helpful and efficient process, in which through benchmarking participants can quickly understand benefits for their businesses.

Training courses or workshops are also an appropriate place for presentations of various **manuals**, which give practical guidance to EMAS implementation.

### Step 3: Implementation

Establishment of an environmental management system in accordance with EMAS requirements is a demanding and long-term activity. This process is simplified for organisations with some structured management system already in place, e.g. quality control and/or health & safety management systems.

Apart from additional funding by external sources described in the previous section, a qualified consultation assistance can be provided within the scope of the **pilot projects** focused on various target group of companies. Within the project terms of reference it is appropriate that offer to participate in pilot projects be addressed to the widest possible audience of companies, since the level of feedback cannot be *ex-ante* projected. Experience shows that the feedback is about 10%. The invitation letter recommending participation would clarify the advantages of EMAS registration in terms of market access and impact on the decision makers. Two following terms are very crucial to companies contemplating EMAS implementation:

- The companies have to rest assured that EMAS implementation is beneficial. In order for the companies to be attracted by the benefits, these have to be related to the core of their business.
- Implementation itself should not be complicated. It also should not be too costly and necessary information should be easily attainable.

In order for the project to be successful, organisations which express their interest in participation have to be screened for their preparedness for EMAS implementation. Methodology of the potential analysis should respect various levels of their management systems and different focus of their entrepreneurial activities. This objective can be taken care of using the check-list, which would focus on most important areas, such as:

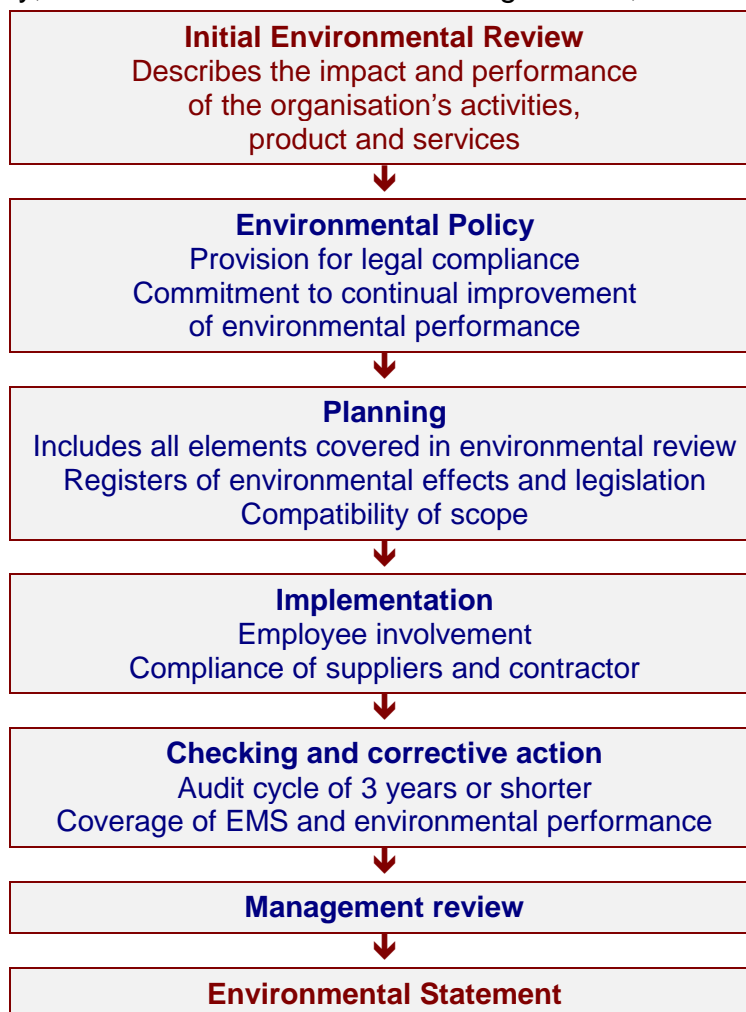
- environmental policy, objectives, targets and programmes;
- environmental aspects and impacts;
- human and financial resources;
- organisational aspect of the environmental protection and integration within the management system;
- documentation;
- monitoring and measurement;
- emergency preparedness and working safety;
- self-control process / internal audits
- communication and reporting.

Information necessary for completion of the potential analysis check-list is obtained with consultant's assistance mainly through discussions, reviews of the respective documentation and a short site inspection. Results of the potential analysis should assume a form of a feasibility study of EMAS implementation within the company; the study can include estimate of a timeframe and personnel requirements of implementation. The study represents a candid document when further participation of such organisation is being contemplated.

A key condition of successful process of EMAS implementation is permanent support by the top management during the whole course of project implementation. A certain guarantee can be provided by the agreement on co-operation and advisory of a supplier (donor or consultant) and the organisation in a form of a pro-forma letter of co-operation, in the course of implementation of EMAS System.

Participation in EMAS is voluntary, but in order to receive EMAS registration, organisation must:

- Conduct an **initial environmental review** of its activities.
- Establish, document, implement and maintain an effective **environmental management system** based on ISO/EN ISO 14001 element requirements respecting 'Plan-Do-Check-Act (PDCA)' approach applied to all processes. Improvements in EMS are intended to result in improvements in environmental performance.
- To provide a **statement** of its environmental performance.



**Organisation implementing EMAS shall focus on the following issues:**

- *Legal compliance*

Organisation shall be able to demonstrate it has:

- identified and is aware of the implications to the organisation of all relevant environmental legislation;
- provided for legal compliance with environmental legislation;
- procedures in place that enable it to meet these requirements on an ongoing basis.

- *Performance improvement*

Organisation shall be able to demonstrate that the management system and the audit procedures address the actual environmental performance of the organisation. As part of the management review process, actual performance of the organisation shall be evaluated compared to its objectives and targets. The organisation shall also commit itself to the continual improvement of its environmental performance.

The means to achieve these objectives and targets cannot be expressed in term of environmental objectives, i.e. implementation of a certain measure or investment cannot be confused with a target value of pollution reduction (of the impact).

- *Public reporting*

Organisations shall be able to demonstrate an open dialogue with the general public and other interested parties including local communities and customers with regard to the environmental impact of their activities, products and services.

- *Employee involvement*

Employees shall be involved in the process aimed at continuous improvement of the organisation's environmental performance. Appropriate forms of participation should be used, such as the suggestion-book system or project-based group works or environmental teams.



Effective support within the scope of the pilot project should be targeted at fulfilment of the most professionally demanding requirements:

- Initial environmental review investigation of an organisation's interactions with the environment;
- Identification of environmental aspects arising from the organisation's past, existing or planned activities, from its products or services, to determine significant environmental impacts;
- Identification of relevant legal and regulatory requirements;
- Establishment of objectives and targets, which are consistent with the environmental policy, including commitments to pollution prevention, compliance with legal and other environmental requirements and continuous improvement;
- Training of the top management, project team and internal auditors, to facilitate their competence, skills and awareness;
- Development of documentation sufficiently describing the environmental management system, which would be appropriately integrated with documentation of other systems implemented by the organisation;
- Start-up of internal audits on appropriate level of knowledge and experience;
- Development of a concise and comprehensive environmental statement presenting objectives and actual results.

Consultant's primary role in the pilot project is to represent an objective, unbiased approach to identification of causes of imperfections and to focus managers' attention on the respective solutions. Pilot implementation in selected companies shall provide a range of successful examples for others to follow.

Annex 2 provides an example of aspects and preventive measures in the chemical industry.

## Example of Projects in the Czech Republic

### **Project POEMS (1/1999 - 3/2000)**

Main objective of the POEMS Project (Pollution and Environmental Management Systems Consultation) was to assist small and middle-sized enterprises in environmental management system implementation. In order to increase the economic efficiency of the system, the pollution prevention, waste minimisation and cleaner production processes were utilised.

The project, based on the EMS-convoy method, included 12 companies.

The first step was to establish corporate teams within individual companies and determine personnel in charge of the system implementation. The whole project was split into 2 one-day and 10 two-day seminars, organised after at least 4-week intervals, and joined by 2-3 company representatives. With a total scope of 4-5 days between the seminars, the companies were visited by consultants helping with preparations of the cleaner production projects and of the system documentation.

The two-day lecture seminars were designed to allow exchange of experiences between enterprises.

### **Project Phare 9705-05-02 Support to the introduction of environmental management and auditing system (EMAS) (9/1999 - 12/2000)**

The Project was targeted mainly at smaller and middle-size enterprises, which lack sufficient personnel and financial resources for EMAS implementation; it was also targeted at companies representing significant environmental polluters and/or important exporters to the EU countries. The project implementation included information campaigns in selected regions, which were to acquaint the key professional groups with the principles of EMAS implementation. Short courses for the state administration and company employees took place and a short manual was prepared, to be used for EMAS implementation and for further self-training of professionals.

The project achieved the following results:

- Of 51 companies contacted, 17 underwent an EMAS gap analysis. 13 of these companies participated in the EMAS implementation pilot project.
- A total of 286 representatives of industrial companies, insurance companies, government bodies, local authorities and NGO's participated in 16 introductory and advanced training seminars.
- 20 training courses were organised in the pilot project companies, with about 180 participants.

There has been an increase in available information and awareness about EMAS in the Czech Republic.



**Project ENV.1/SER/2000/0017: Programme for the Promotion of EMAS in the Czech Republic (12/2001 - 5/2002)**

At total of 524 companies from the target group of the chemical industry were approached within the scope of one part of the Project devoted to EMAS implementation support.

51 companies provided feedback on the offer to participate in the Project, of which 40 agreed that the potential analysis be carried out. The methodical approach was based on a shared expectations principle. The related questionnaire served both as a company self-assessment and as an external assessment by the consultant. 22 companies were recommended to continue in the project based on the results of the potential analysis. Selected companies, which committed themselves to co-operation were being prepared to the level of the EMAS System pre-verification. Ten agreements have been concluded in total. Participating companies have committed to implement EMAS by the end of 2002.

In the first round, support was offered to companies with most advanced EMAS implementation in the form of assistance with the elaboration of the draft version of the environmental statement and also with pre-verification (2 days per company) of the degree of EMAS System implementation.

Co-operation was further offered to companies that require wider assistance based on differentiated coaching of the EMAS implementation, i.e. training of the top management and internal auditors, identification of the environmental aspects, identification of relevant legal requirements, preparation of documentation and draft versions of the environmental statement.

## Step 4: Survey

Regular, ideally an annual survey in companies which implemented environmental management system, including the cost-benefit analysis provides for an unbiased monitoring of EMAS development and brings important information for new parties interested in EMAS. It could be organised by competent bodies.

The survey may ask questions related to EMAS implementation, such as:

- key benefits / advantages for organisation and correspondence with its expectations;
- main areas of environmental improvement;
- experience in getting employees involved;
- investment and operational costs incurred;
- spent time – number of employees, days (man/days);
- experience in a dialogue with interested parties;
- experience in cases where a quality management system had already been implemented;
- experience in cases where no structured management system had initially been implemented.

## Conclusion

The main driving force behind EMAS implementation is not only to avoid risks, and to have better control over the organisation but also to improve corporate image and its prestige. Other benefits include improvement of the efficiency of business procedures and of the overall business culture and decision-making. The strategy of companies based on their realisation that economic activity and environmental protection are not separate and mutually conflicting aspects, is of long-term benefit. Systematically anchored and adopted solutions adopted by companies themselves better respect the economical interrelations. Overall, EMAS has got a positive impact on improving competitiveness of organisations, since there is an ever-increasing pressure by customers for implementation of the system of environmental management as a tool for achievement of an optimum environmental profile.

Moreover, EMAS establishes a new relationship between the state administration, business community and the general public. Voluntary participation by organisations and self-regulation complement each other in ideal fashion.

## Abbreviations

CEE	Central and Eastern European (countries)
DG ENV	Directorate General-Environment of the European Commission
DHV EI	DHV Environment and Infrastructure BV, Amersfoort, the Netherlands
EC	The European Communities
EMAS	Eco-Management and Audit Scheme
EMS	Environmental Management System
EU	The European Union
ISO	The International Standard Organisation
ISO/EN ISO 14001	Environmental management systems - Specification with guidance for use
NGO	Non-governmental Organisation
SME	Small and middle sized enterprises



## Further information

### Internet sites about EMAS:

<http://europa.eu.int/comm/environment/emas> is the official EMAS 'Help' desk of the European Commission, DG Environment. It includes an introduction to EMAS, reference documents and guiding documents.

<http://www.inem.org> is the International Network for Environmental Management web-site.

<http://www.epe.be> is the European Partners for the Environment web-site.

### The EU Member State and the European Economic Area Member State EMAS web-sites:

<http://www.umweltmanagement.at> (Austria),

<http://fanc.fgov.be> (Belgium),

<http://www.mst.dk> (Denmark),

<http://www.vyh.fi> (Finland),

<http://environnement.acfci.cci.fr> (France),

<http://www.emas-logo.de> (Germany),

<http://www.minenv.gr> (Greece),

<http://www.nab.ie> (Ireland),

<http://www.sinanet.anpa.it> (Italy),

<http://www.mev.etat.lu> (Luxembourg),

<http://www.sccm.nl> (the Netherlands),

<http://www.dga.min-amb.pt> (Portugal),

<http://www.mma.es> (Spain),

<http://www.environment.com> (Sweden),

<http://www.emas.org.uk> (UK),

<http://www.brreg.no> (Norway).

### The CEE countries EMAS web-sites:

<http://www.moew.govrn.bg> (Bulgaria),

<http://www.ceu.cz/emas> (Czech Republic),

<http://www.envir.ee> (Estonia),

<http://www.ktm.hu> (Hungary),

<http://www.vvi.gov.lv> (Latvia),

<http://www.aplinkuma.lt> (Lithuania),

<http://www.mos.gov.pl> (Poland),

<http://www.mappm.ro> (Romania),

<http://www.lifeenv.gov.sk> (Slovak Republic),

<http://www.gov.si/mop> (Slovenia).

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## Annex 2: Specifics of EMAS in the chemical industry

### Problem areas / environmental aspects

Chemical production is usually unique for its entry of a large number of chemical substances (inorganic and organic chemistry). The following areas of concern can be identified from the environmental point of view:

#### **Aspects resulting from the hazardous nature of substances**

- hazardousness of chemical substances and their large amounts (volume, variety);
- manipulation and storage at input, during the production process, at outlet (in products);
- emissions into the environment, burden of its individual components, i.e. water, air, soil, rock bed;
- production and disposal of hazardous and other wastes;
- usually a large number of products and the related customer-oriented information demands with regards to environmental aspects and in relation to the product life-cycle.

#### **Hazardous activities**

- large number of localities of potential accidental leakage;
- significantly high probability of occurrence of extraordinary or accident situation;
- usually an extensive scope of past environmental burden and a need for a follow-up monitoring after finalisation of the clean-up works.

#### **Other aspects**

- electricity consumption;
- steam consumption;
- water consumption.

## Specific requirements and recommendations for EMAS implementation

### **Requirements for the initial environmental review**

- sufficiently detailed procedure on determination of the current status of environmental protection within the organisation, inclusive of legal compliance;
- review of the management system and its current level, comparison with requirements of the Regulation No 761/2001;
- status of the technical, operational and control documents, their validity and relevancy;
- functioning of operational and auxiliary technologies and storage installations – their technical shape;
- analysis of occurrence of past environmental burden;
- emissions from individual lines of production (activities) into the environment, i.e. water, air, soil, rock bed;
- detailed processing of the environmental aspects register of normal operation conditions, extraordinary operation conditions and emergency situations, inclusive of assessment of significance of the aspects according to established methodology.

### **Recommendation for documents preparation**

- relation to the present quality management system, if such a system has been established and operated;
- stress on sufficiently detailed preparation of documents of all layers (EMAS manual, procedures, operation proceedings), especially of the work and inspection instructions layer (for various types of production technologies and products) and of emergency preparedness and response procedures. Pollution prevention and reduction in individual components of the environment at the place of origination is applied in the course of preparation of the operation management documents. Separate documents are usually necessary to take care of certain layers of documents: waste management and record-keeping; generation, collection and treatment of waste waters; operation of sources of air pollution (energy sector and production technologies).

## **Preventive measures**

Application of the prevention principles and reduction of pollution of individual components of the environment in place of production, i.e. in the production and auxiliary operations:

- monitoring and maintenance of technical shape of installations for operation of production technologies;
- monitoring and maintenance of the technical shape of facilities for collection and chemical purification of waste waters, separation of operation and cooling water, re-circulation, multiple utilisation of operating water, separate pre-cleaning of waste waters;
- monitoring and maintenance of the technical shape of energy-source air polluters, distribution of media and energies, situation in measurements and monitoring;
- monitoring and maintenance of manipulation and storage areas (filling places) and reservoirs or tanks (storage of chemical substances);
- generation of other and hazardous wastes stemming from individual types of production and auxiliary operations (energy sector, water management), collection of wastes, storage, record-keeping and disposal, eventually their further utilisation or recycling and implementation of waste-free, waste-efficient technologies;
- selection of raw materials and auxiliary materials with respect to environmental aspects;
- care along the whole life-cycle of products and services, from development to utilisation (User's Manual, Safety Data Sheets);
- with regards to monitoring and measurements, focus should be also paid besides significant environmental aspects and impacts related to the legal requirements (limits) on monitoring of processes and of substances with hazardous properties both from the point of view of environmental protection and human health;
- emergency preparedness solution with respect to hazardous properties of chemical substances, with respect to substances harmful to waters, and with respect to fire preparedness and health protection of personnel;
- training including practical drills focused on pollution prevention and emergency preparedness.