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New Instruments for Environmental Policy in the EU

Environmental Management Systems:
The European Regulation

KAROLA TASCHNER

RSC No. 98/21

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ROBERT SCHUMAN CENTRE

**New Instruments for Environmental Policy in the EU
Environmental Management Systems:
The European Regulation**

KAROLA TASCHNER

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The fifth Environmental Action Programme (EAP) aimed at broadening the range of EU policy instruments, because the implementation and enforcement of Community laws had fallen short in the Member States. The EAP mentions environmental and audit systems among those instruments. In 1993, the Council of Ministers adopted a Regulation allowing voluntary participation by companies in the industrial sector in a Community ecomanagement and audit scheme, called EMAS, a programme which has created a stir ever since its creation (EC 1993a). This paper examines the development of EMAS, compares it to competing international standards, and offers an assessment of its merits as a new tool for EU environmental protection.

EMAS is a promising instrument which suffers and benefits from the legacy of the past. It is ultimately a response to the world-wide legislation on producers' liability for damages caused by their products. Such legislation is in place in 25 countries and covers approximately between 60 and 70% of the world population. This legislation forced enterprises for their own sake to introduce quality management systems to guarantee the safety of their products. The international standard ISO 9000 series lays down requirements for quality management systems for world-wide use.

The other strand of the past of EMAS is US legislation on environmental liability, which pushed manufacturers to see to it that their environmental risks are as small as possible, i.e. they have--again for their own sake--to strive to improve their environmental performance. Environmental risks are very high and insurance companies were not willing to cover them.

The question whether the implementation of the current international standard (ISO 14001) or a similar standard actually reduces the environmental risks to any measurable degree is still under discussion.

It is by pure self-interest that any US producer will try to minimise environmental impacts since they must always be aware that litigation could be started against them. This is, however, also the reason why US manufacturers wanted to have as few commitments as necessary written into an international standard because they feared it could be used against them.

The first standards for environmental management systems were set up in the UK as a small annex to the quality management system and developed into the BS 7750 standard in 1992, and a little later, in 1993--more gloriously--into the EMAS Regulation.

What is EMAS?

EMAS is a voluntary scheme and participants are industrial sites which want to improve and publicise their environmental performance. For this purpose they have to adopt a company environmental policy containing commitments aimed at reasonable continual environmental improvement. The process sets off with an initial environmental review of the environmental effects of the site (in essence a small environmental impact assessment). Then an environmental programme and an environmental management system (EMS) have to be set up in accordance with the results of the initial review. To check the effectiveness of the system it must be audited. Any audit is of use for the site manager in the first place, but the EMAS Regulation goes one step further and asks for a validated public environmental statement which, when presented to the national competent body, gives the site the right to registration and the right to bear a label. Environmental policy, review, programme, management system and audit have to meet rather comprehensive requirements which are laid down in the annexes and present the core of EMAS. Though EMAS is a voluntary scheme, sites wanting to get registered have to fill in its requirements to the letter.

EMAS is an attempt to move away from the end-of-the-pipe philosophy with respect to pollution reduction and prevention and encourages the design of production processes which take account of the environment right from the beginning. Production processes are screened and optimised for the environment. This in itself is a fruitful exercise since it will help to save resources and reduce the cost of waste elimination. Moreover, management systems result in cost savings through better knowledge of material flows. Since most enterprises have a quality management system in place for product liability reasons, they have only to adapt this for environmental purposes, rather than starting with an entirely new philosophy.

The public statement is most promising since it could make production processes at the sites transparent and would not leave stakeholders alone with glossy brochures containing incomparable and uncertain data. Reporting to the public in the EU is still in an embryonic stage compared to the US, where emissions have to be reported and the public has a "right to know", and where not only public authorities but also enterprises themselves are obliged to provide data on request.

The most attractive element of EMAS is its dynamics. All things being equal, the results from the application of EMAS will vary considerably amongst sites because of the different levels from which they start and the different pace at which they will proceed for their "continuous improvement" which they

themselves decide. A site of good environmental performance and a comparatively "dirty" site can both get registered. This is only acceptable because the "dirty" site will also have committed itself to the improvement of environmental performance and legal compliance. EMAS sites do not guarantee to meet all environmental demands immediately, but they have signed up to do so in the future, though they will determine this date by themselves.

The environmental performance will become a matter for the board of directors and should become, in principle, a matter for employees as well. So the process can develop momentum and involve *people*. Since EMAS involves all the personnel, is linked to the top management and also involves employees, those on the spot have an opportunity to contribute to the process and invent schemes for less pollution, less waste generation, and less resource use. EMAS could help to build up a corporate identity around the environment and could make people proud of their achievements, allowing room for imagination and inventiveness; enterprises should award efforts for improvement by their personnel.

As discussed in more detail below, Article 12 of the Regulation allows the possibility of crediting national and international standards. Sites can be registered under EMAS when they have been audited according to another standard and then filled in the additional EMAS requirements.

The EMAS procedure

The purpose of EMAS is the registration of an industrial site for fulfilling certain environmental requirements. Sites eligible for EMAS registration are those operative in energy generation, waste treatment and in the industrial sectors which are mentioned in section C and D of the so called NACE index, an inventory of economic activities set up by the Community originally for statistical purposes (EC 1990). Registration concerns industrial sites and not the whole company.

As a strictly voluntary scheme, a company willing to have a site registered under EMAS has usually decided to face up to the environmental challenge. So it is only logical that EMAS demands a decision on environmental policy at highest corporate level. The environmental policy is then made accessible to the employees and the public. The company commits itself to integrate mitigation efforts into its environmental programmes, management systems and audits. Prevention of pollution, saving resources and certain aspects of protection at the work place are the principal aims. Furthermore it commits itself to abide by a number of defined practices of good environmental management. Article 3a of

the Regulation stipulates that a company's environmental policy must contain a provision requiring legal compliance by the site, and "commitments aimed at the reasonable continuous improvement of environmental performance, with a view to reducing environmental impacts to levels not exceeding those corresponding to economically viable application of best available technology."

A site has to conduct an initial review to identify its environmental impacts. This review is the basis for the objectives and targets the company sets itself for environmental improvement. The environmental programme has to be developed accordingly--bearing in mind the reduction of environmental pollution and saving of resources, provision of time scales, supply of human and financial resources, measurement plans and equipment, documentation, etc., in order to establish a functioning environmental management system.

A representative of the highest management level has to be in charge of the environmental management system. Responsibility, authority and interrelations have to be clearly attributed. The environmentally relevant activities of the site have to be documented and monitored regularly. This also includes the pursuit of working operations, training, as well as providing information about the environmental performance of the site to both internal and external parties.

The site has to monitor continuously the good functioning of the environmental management system by internal qualified personnel. After three years at the latest an external person or organisation has to verify the site. The accredited, independent verifier assesses the audit of the environmental policy programme, management and environmental declaration for their compliance with the requirements of the Regulation.

An essential result of the environmental verification is the public statement which is written in an understandable form to provide the public with information on the site's activities, a description of their relevance for the environment, their environmental policy, programme and management systems, emission data in aggregated form, waste generation, resource use, energy and water consumption and other environmentally relevant aspects and factors. The date of the next public statement and the name of the verifier must also be communicated. Each year, between the verifications, the sites have to draw up simplified environmental statements where they summarise environmental data and indicate possible changes.

When the site has met all these requirements it can be registered by the national competent body, which has to notify the regulatory authority of this event beforehand in order to allow the authority to report back, if the site is in

breach of permits or of environmental laws. The site can only get registered when the breach is rectified. The Regulation provides the competent body with the power to delete sites from the register in case they are no longer in compliance with the requirements of the Regulation. The competent bodies publish the registered sites and transmit this list to the Commission. Member States have to take care that companies and the public are informed of EMAS and that the two competent bodies--one for the accreditation of verifiers, the other for the registration--are set up, independent and neutral.

The Commission is supported by a Committee ("Article 19 Committee") which is composed of representatives from Member States, chaired by the Commission. The Commission has invited representatives from interested societal groups: industry, trade unions, environmental organisations. The Regulation will be reviewed by 1998.

Development of the EMAS Regulation

The process of preparing the EMAS Regulation was not easy. One has to be aware of this to understand its design. The acceptance by industry was crucial because without the involvement of the single enterprises the special advantages of EMAS cannot be realised. Therefore Member States were eager to act in agreement with industry.

At the time, industry's reluctance to have the EU Regulation adopted could only be overcome by making participation to the scheme voluntary instead of mandatory. Member States tended to voice the reserves of their industries which were not favourable to the adoption of EMAS. Industry favoured an international standard--similar to the British Standard--which was in the process of being developed by the International Standardisation Organisation (ISO). The text of the Regulation has been subject to many changes in the Environmental Council.

The status of some of the key elements in Commission and Council texts were changed or introduced during the negotiations (see Figure 1):

- Legal compliance was not contained in the Commission Proposals but was obviously a demand from some Member States (EC 1991, 1993b). Since the wording became less stringent between the discussion document of December 1992 and the final Regulation there must have been considerable opposition inside the Council against demanding compliance right away.

- “Economically viable application of best available technology” (EVABAT)² seems to have been a German demand since the Document of December 1992 marks a reserve of the German delegation which was eventually lifted when this new element was introduced into the regulation--reluctantly accepted by the other Member States, given the number of qualifiers. In principle, continuous improvement of environmental performance is limited by setting the goal of EVABAT.
- Mandates to CEN and EAC were envisaged by the Commission and appear as a declaration to the minutes in the Council Document of December 1992 (EC 1992).³ A declaration about these mandates appears in the minutes from the final adoption. (Declarations to the minutes are not binding; they are, however, a moral obligation for the Commission.) This is the reason that the Commission acted as if the mandates had been fixed in the text.
- Industry’s demand to allow other standards to be declared in correspondence with the requirements of the Regulation was not originally intended by the Commission but appears to have been introduced by the Member States.

Figure 1 Development of the EMAS Regulation

Key Provisions	Draft Proposals			
	I (EC 1991)	II (EC 1992)	III (EC 1993b)	IV (EC 1993a)
Legal compliance	-	+	-	“provision for...”
EVABAT	-	-	-	“commitment to...”
Mandate for CEN	+	footnote, minuted	+	declaration to the minutes
Correspondence	-	+	+	+
Mandate for EAC	+	footnote, minuted	+	declaration to the minutes

² Article 3(a) of the Regulation reads: “...must include commitments aimed at the reasonable continuous improvement of environmental performance, with a view to reducing environmental impacts to levels not exceeding those corresponding to economically viable application of best available technology.”

³ CEN is the Comité Européen de Normalisation, the European Standardisation Committee of which national standard institutes of EU and EFTA are members. The EAC is the European Accreditation of Certification, a federation of national accreditation bodies in charge of accrediting and supervising certification bodies.

Interests of industry, public authorities and NGOs

Some companies have been setting up environmental management and audit systems for their own sake to make sure that they do not run the risk of causing environmental damages for which they would be held liable. For them EMAS offers an opportunity to make their achievements known to the outside world in order to improve their public image. For enterprises which have faced public criticism over their environmental performance, it will be valuable to demonstrate concern for the environment. Companies will also gain acceptance by their customers, local community, pressure groups, shareholders, banks, insurance companies and regulatory authorities and the public at large, which altogether is not a small thing and represents significant monetary value.

The real motives for participation are improved public image and pressure from the customers. Also internal advantages have proven to be worth the effort of participating. Large companies often require EMAS participation from their small and medium enterprise suppliers (TEKES). German car manufacturers, for example, welcome EMAS participation by their suppliers, although they do not go as far as Volvo, which made it a condition that their suppliers be registered with EMAS by mid 1997 (OB 1996a).

Industry's interest in certification/verification would be greater if it offered them the possibility of self-control, less control by their regulatory authority, and deregulation in the long term. But this is still an issue for debate. Member States remain to be convinced whether independent verifiers can take over surveillance tasks. EMAS could provide companies with flexibility in dealing with their environmental problems, including the ability to integrate environmental management requirements into their investment cycles.

The regulatory authorities have control over undue EMAS registrations because they have to be notified in advance of a registration and can then report to the registration body breaches of environmental laws by the site. But for the time being local authorities are still hesitant to embrace EMAS.

The position of environmental organisations is ambiguous: on the one hand they welcome any voluntary attempt for more environmental protection made by industry, on the other hand they see many loopholes and possibilities for fraud, and are afraid that EMAS might develop into an instrument which will be used instead and not in addition to public authority control.

EMAS in relation to standards

Article 12 of the Regulation allows sites to get registered which have certified their ecomanagement and audit-systems according to a standard. Before this can happen, the diverse array of national standards and procedures, as well as the emerging international standards, have to be recognised by the Commission acting in agreement with the Article 19 Committee. Article 12 was added to the Regulation following demands from industry. While the Regulation was under negotiation in Council and Parliament, industry had even asked to declare any certificate based on one the many possible standards to be compatible with an EMAS registration. Article 12 has become a compromise insofar as it allows the establishment of a certain level of equivalence between a national (or international) standard and EMAS. Any additional demands imposed by EMAS, on top of the other standard, must be added later, and it is the verifier's task to check for the missing elements.

In fact, the Commission has been faced with a proliferation of standards: The British Standard BS 7750 (published in April 1992, final version in March 1994), an Irish Standard (IS 310), a Spanish Standard (UNE 77-8012(2)-93 in 1993) and a French Draft Standard (NF X 30-200, published in spring 1993, valid on a testing basis until April 1995).

In 1996 the Commission recognised those parts of the Irish, British and Spanish standards which correspond to EMAS (EC 1996a), and these have been used ever since (although as shown in Figure 4 only the British standard is widely used). In response to the prevailing uncertainty created by this proliferation, the Commission recognised the necessity of having only one harmonised standard and gave CEN the mandate to develop a European Standard (EN) in 1994. At the same time,⁴ members of CEN objected that European Standards would cause them difficulties because of the global links of European companies. They saw danger that these companies would have to apply different standards when operating abroad. They declared that it would be more convenient for them to participate in the development of an international standard, and asked to be allowed to get involved in the work of the International Standardisation Organisation (ISO) which had initiated discussion of standards on environmental management systems and audits.⁵

⁴ The author was observer to the CEN delegation which discussed the terms of reference of the mandate with the Commission officials.

⁵ ISO had set up a new Technical Committee TC 207 (Environmental Management) in June 1993. In one of the six working groups of the Committee, standards for environmental management systems and environmental auditing were discussed.

Most Member States were in favour of an ISO standard and saw advantages in having environmental management systems harmonised worldwide. Other Member States, namely Denmark and Germany, were worried that the ISO standard might become too weak to be used as a European standard for EMAS purposes. At the end of the process, the international standard was to be adopted also as a European standard. The Vienna Agreement envisages a parallel voting procedure which allows for the simultaneous adoption of the standard text under ISO and CEN, provided that the texts do not differ in their specifications. The Commission neither agreed to nor refused the development of an international standard but pointed out that the mandate for a strictly European standard had to be met.

So the members of CEN continued to join the ISO meetings, but their participation proved to be extremely difficult because they had to achieve as close a correspondence as possible between EMAS requirements and ISO standards, the binding specification document on environmental management systems,⁶ and the non-binding auditing guidelines.⁷ They could not and did not want to risk rejection of the standard as insufficient by the Article 19 Committee and the Commission. But mainly they negotiated for a standard as close as possible to EMAS requirements because, on one hand, they feared that comparatively strict EMAS obligations would place their industry at a competitive disadvantage to foreign firms, and on the other hand, they were threatened by non-EU standardises that any CEN standard going beyond ISO would be regarded as a trade barrier (for more on the GATT/WTO dimension see chs 1 and 9, Vogel 1997, Golub 1997a).

The concepts of ISO 14001 and EMAS differed from the outset: The ISO standard wants to achieve improvement of environmental management systems whereas the goal of EMAS is the continuous improvement of environmental performance. This has not changed now that the standard has been adopted: "it is important to understand and acknowledge that the ISO 14001 environmental management system is a systems approach to managing environmental issues and not a performance-based document" (Dodds 1997:7).

⁶ ISO 14001 Environmental Management Systems - Specification with Guidance for Use.

⁷ ISO Guidelines for Environmental Auditing:

- 14010 general principles for environmental auditing,
- 14011 on audit procedures,
- 14012 on qualification criteria for environmental auditors.

As discussed in more detail below, EMAS is more demanding than ISO 14001 because it requires, among other things, a validated public statement, detailed data concerning the issues to be covered in the environmental policy, programme and audit, well defined audit frequency, and inclusion of past activities.

Well defined, strict standards, however, were not in the interest of representatives from third countries, especially the US. On the contrary, these states followed the diametrically opposite aim: they wanted to keep the standard as vague as possible because they were afraid that clearer terminology could be used against them in litigation, on the basis of the rather strict civil liability legislation found in the US. Though private standards are of voluntary nature, not applying them if one has subscribed to them can be used as an assumption of tort against the defendant.

In fact, this anxiety appears somewhat misplaced, as US companies have to fulfil much stricter demands in order to receive insurance cover. They already had to change their attitudes profoundly when civil liability for environmental damage was introduced, long before ISO discussions on ecoaudits began. According to one American expert on environmental liability:

1. US insurance companies denied insurance cover for past sins and current practices presented uninsurable exposure for pollution damages.
2. Environmental management systems cannot take credit for reopening the insurance market in the USA--at least not the type of environmental management systems that we are talking about when we refer to ISO 14001 or EMAS or BS 7750. Although many factors were involved, the use of legal compliance audits, site management audits, risk assessment techniques, and due diligence investigations (at the time of mergers and acquisitions) gave insurers confidence that they could write policies for enterprises...Companies established full blown environmental management systems and procedures to help ensure that they remained in compliance with rules, regulations and laws. These systems tend to look like ISO 14001, i.e. policies, procedures, training, documentation, and so on...US companies have to do much more (than EU companies) because of the liability provisions...One insurer scoffed at ISO 14001 in the sense that it adds nothing for those who underwrite risks to the routine practices already in place at US companies.⁸

⁸ Personal letter from William D'Allessandro, Executive Editor, Victor House News Co. International, Amherst, NH.

But Europeans have no legislation on civil liability for environmental damages. EMAS is the first attempt to introduce measures for effective risk control on sites. The position of the Europeans became stronger with every new round of negotiation, especially following the intervention of the US Environmental Protection Agency, which insisted on introducing EMAS-like elements into the binding ISO 14001 standard, for instance “commitment to legal compliance” (EMAS: “provision for legal compliance”) and “commitment to prevention of pollution” (EMAS: “continuous improvement of environmental performance”).

The strong economic and legal concerns of the respective parties are understandable; compared to EMAS, ISO 14001 was in fact less demanding since its wording was less clear. In assessing the environmental merits of ISO 14001, a study by the US consultancy firm Benchmark, commissioned by the European Environmental Bureau, raised 5 provocative questions (EEB 1995):

1. Benchmark criticises ISO 14001's lack of commitment to Agenda 21 or any international environmental convention, and how it restricts itself to laws and regulations applicable in the respective country.
2. ISO 14001 can become an international trade standard without operative participation from governments or NGOs because, although observers from governments and NGOs may participate in the negotiations, only national standards institutes have voting rights.
3. A company certified according to ISO 14001 cannot demonstrate that it has good environmental, health and safety performance because environmental performance as conceived by this standard relates only to the measurable performances of the environmental management systems. ISO 14001 is a specification standard for verifying only conformity with an organisation's own environmental policy, not of environmental performance in general.
4. In particular Benchmark criticises the lack of public access to information. The only provision for transparency is that companies “shall consider processes for external communication.”
5. ISO 14001 does not require transnational corporations to meet the environmental standards of their home country everywhere in the world. Rather, companies only have to apply local/national standards--a very disappointing result for an international standard.

The process of developing ISO 14001 was accompanied by an ad hoc-working group from CEN's side which was composed of representatives from national standardisation institutes, but also from governments, industry and the author as an observer for environmental NGOs. This working group compared the two texts--EMAS and ISO 14001--in order to spot inconsistencies and to prepare the European delegation for the following ISO meeting.

This was also an opportunity for the NGOs to learn about the working mechanisms of standardisation bodies. The standardisation institutes take over de facto legislative tasks though they are not democratically legitimised, and not neutral because they are dominated by industry. This is often perfectly acceptable, but not when adopting standards for a policy like environmental management systems. Also, national standardisation institutes often delegate their representation to persons coming from industry, so it could happen that a Canadian from Exxon acted as a Belgian representative. Finally, though ISO should work according to the consensus principle, i.e. unanimous agreement after long discussions, the ad-hoc working group started voting, a procedure which by its very nature neglects minority positions.

The description of the standardisation process is crucial because there was a risk that ISO 14001 could replace EMAS requirements via Article 12 and so undermine a promising environmental instrument. Environmental organisations were concerned that ISO standards might serve as a pretext to amend the EMAS Regulation in order to prevent trade barriers, with the positive EMAS elements lost in the process.

Differences between EMAS and ISO 14001

An important difference between EMAS and ISO 14001 is that for EMAS the five Benchmark questions can be answered in a more positive sense. For instance, under EMAS, international conventions must be followed as far as the EU has ratified them and transposed them into Community legislation.⁹ Also, unlike the ISO standard, EMAS was adopted in a more democratic decisionmaking procedure through the Council of Ministers after consulting the European Parliament. The most important difference is the aim: instead of merely validating a firm's adherence to its own policy goals (system performance), EMAS measures environmental performance and requires continuous improvement. Oversight and transparency are further improved through the obligation EMAS imposes on

⁹ The EU has ratified the Basel and the Biodiversity Conventions, while the US has not.

registered sites to issue a public statement. Sites have to meet not only local and national, but also EU standards since EMAS is only valid inside the EU.

Industry representatives used to contend that the EMAS requirements were implicitly contained in ISO 14001. This would certainly be true if a company would be ambitious in respect to the environment. There is, however, no guarantee that companies will always be of good will, undertaking unilateral and ambitious investments towards environmental improvement. The dilemma lies in the language, which often leaves too much scope for avoiding important obligations.

- Where ISO 14001 remains vague in its terminology, EMAS is clear.
- Unlike ISO 14001, EMAS' audit checks for improvement of environmental performance rather than environmental system performance.
- The EMAS system is based on the results of the initial review.
- ISO 14001 speaks about "environmental aspects" and not about "environmental effects" or "impacts" as EMAS does.
- ISO 14001 envisages a "commitment to legal compliance". A "provision to legal compliance" (EMAS) is stronger, i.e. a firm will need to indicate time scale, as well as human and financial resources. "Provision to legal compliance" is more than what many sites currently achieve. This requirement will make them act responsibly and gives them enough flexibility to plan for their compliance.
- ISO has laid down no requirement concerning audit frequency and the relevance of past activities.

The commitment to "continuous improvement of environmental performance" is promising because sites, once they have entered the scheme, will have to demonstrate their dedication to the targets of EMAS which over time become ever more demanding. Like an upward escalator, there is only one way to go if they do not want to lose their registration.

These main differences must be bridged if an industrial site certified under ISO 14001 wants to be registered under EMAS. Article 12 provides that a site certified to a standard is given credit for its achievements under that standard. The missing elements, however, have to be accounted for. The CEN ad-hoc group on

EMAS thus made an inventory of the loose ends in the so-called "Bridging Document". The intention was to add this document as a non-binding CEN report to the CEN standard on environmental management systems.

The fact that this would have added additional requirements to ISO 14001 (in essence creating a new standard) raised many concerns from industry, which fears distortion of global competition: either Europeans could claim they had done more than other users of the same standard and were entitled to more credit, for example in a case of public procurement conditions,¹⁰ or they would incur additional costs from meeting the demands of something like "ISO plus" without receiving any benefits. European industry wanted to avoid under all circumstances giving the impression of deviating from the international standard. Therefore they did not want to give the Bridging Document any binding status.

When ISO 14001 was finally voted on in the parallel procedure in 1996, CEN members voted in favour of the ISO standard, but in the parallel vote Germany and Ireland opposed adopting it as the CEN standard to serve EMAS under Article 12 of the Regulation. They found the differences between EMAS and ISO 14001 were too important. This did not bode well for the vote in the Article 19 Committee.

In light of these developments, the EU Commission changed its strategy. The Bridging Document was dropped but the Commission decided that the missing or less evident elements of ISO 14001 should be taken into account by the certification bodies and later the verifiers. It had always been the intention that the certification body would have to use the Bridging Document when delivering evidence that the site met its requirements, one of which was adding these missing elements for EMAS purposes. The verifier will assess the presented evidence before he signs up.

¹⁰ The access to public markets is one of the strongest motives for companies to undergo certification/verification under both a standard or EMAS. It had been one of the reasons to create the international standard from the outset because companies overseas saw themselves disadvantaged compared to EMAS registered firms and declared EMAS registration as a competitive advantage for EU sites which was in conflict with the GATT Agreement because it creates technical barriers to trade.

Issues of Certification

Certification bodies have to be accredited by the national (private) accreditation body, which follows certain rules to make sure that certification bodies are competent, independent and objective.¹¹ The EN 45012 standard profiles quality certification bodies and the work they are accredited to deliver.¹² No standard exists yet for environmental certification bodies. Since the Commission was afraid it would take too long to write a standard to describe their brief, the federation of national accreditation bodies (EAC) was asked in 1994 to develop a guidance document which could be used to accredit environmental certification bodies. EN 45012 served as a basis and was adapted to environmental needs whereby the term "quality system" was replaced with "environmental management system". The EAC guidance is then appended under each clause of the standard.

Representatives from national accreditation bodies negotiated the text, and again government, industry and NGO representatives participated as observers. The environmentalist who followed the negotiations regards the system as reliable and credible. The product of their joint deliberations was EAC Guidelines for the Accreditation of Certification Bodies for Environmental Management Systems (EMS); the final version was published in 1996. This text is not a standard. It is in principle an agreement among national private bodies which commit themselves to place identical demands on the private certification bodies they will be accrediting. It is by no means a binding instrument and will be regulated by market forces. Given this situation the German Government has insisted on developing an international standard for the accreditation of certification bodies, but this will require several years of work.

The EMS define many aspects of certification bodies, including their object and field of application, their general requirements, organisational structure, and working procedures. A certification body has to have a governing board which is responsible for performance, and which formulates and implements the policy. The senior executive is responsible to the governing board. It is very important that certification bodies are competent, impartial and non-discriminatory. The

¹¹ According to ISO definitions, certification is the "procedure by which a third party gives written assurance that a product, process or service conforms to specific requirements," while accreditation is the "procedure by which an authoritative body gives formal recognition that a body or person is competent to carry out specific tasks."

¹² EN 45012 contains the "General Criteria for Certification Bodies Operating Quality System Certification."

EMS describes independence as follows: "the senior executive... has to be free from control by those who have a direct commercial interest in the products or services concerned." Documented procedures enable the audit, certification and surveillance of environmental management systems, and last but not least, withdrawal and cancellation of certificates.

The national accreditation bodies, the EAC members, are in charge of accrediting certification bodies. National accreditation bodies have all their own procedures and fee structures. Common procedures demanded by the EAC Guidelines are: assessment of the applicant's Head Office by document review and most importantly "witness auditing" by the accreditation body on site. The scope of the certification body--the industrial activities they want to specialise in--will be defined. Accredited certification bodies will undergo routine surveillance by the accreditation body on both Head Office and site activity. National accreditation bodies will likely enter into a multilateral recognition agreement to recognise each other's work. Such an Agreement will involve peer review. For the time being, the International Accreditation of Certification body (IAC) is negotiating on the basis of ISO/IEC Guide 62,¹³ a corresponding Guide for EMS trying to transfer as much wording as possible from the European Guide on EMS.

The description of the accreditation process and the tasks of the certification bodies raise the question whether these private institutions will be able to provide reliable results. The argument is that this corresponds to the system of chartered accountants for financial audits which our whole economy relies upon. Accreditation and certification bodies which do not act responsibly would fall out of the system because they have lost their credibility. Whether this applies for environmental certification bodies still remains to be seen. Analogous experiences on undeserved certificates obtained for the quality and safety of products give reasons for concern.

The EAC Guide demands that the certifier should not have provided consulting services to the site he is certifying. This does not preclude consulting firms offering both services to the same site as long as they guarantee that the activities are executed by different people. One might doubt, however, whether the two tasks can ever be entirely unrelated.

There is another concern: certifiers accredited to certify management systems for product quality are applying to accredit environmental management systems

¹³ This Guide contains the "General Requirements for Bodies Operating Assessment and Certification of Quality Management Systems."

without really being qualified for it. EMS differ considerably in their requirements from quality management since the former is directed at the environmental impact of production methods, whereas the latter is directed at controlling product quality by setting up adequate management structures. Certifiers may have received additional training but they have not always been proven to satisfy the requirements of certifying EMS.¹⁴

In light of all these, one should expect initial certifications to differ considerably in quality. Hopefully, over time, peer review, competition and a vigilant public will help to improve a system which has much to offer all stakeholders. Nonetheless, the question remains: since the accreditation bodies will accredit certification bodies for the use of ISO 14001, how will differences to EMAS be handled?

In 1997 the Commission presented two texts to the Article 19 Committee on the recognition of the international standard ISO 14001 and ISO EN 14001. Certain parts, but not all provisions, of the EMAS Regulation will be recognised by meeting ISO standards, as will certification procedures which follow EAC Guidelines, German and the Austrian laws. As mentioned above, where ISO and ISO EN require an environmental management system audit, the Regulation demands an environmental performance audit.¹⁵ Through these two Commission texts, the system audit has found its way into EMAS.

Issues of verification

Unlike the certifier's brief, the requirements for verifiers are part of the Regulation. Verifiers have to prove their competence in assessing environmental performance in the industrial sectors they have special experience and knowledge of, as they are accredited for special NACE sectors of industry only. Furthermore they must have competence to conduct audits. They must be independent, objective and impartial. They will be accredited and supervised by a national system for which Member States have "to guarantee...independence and neutrality" and "ensure appropriate consultation of parties involved" [Article 6(1)]. "Environmental verifiers accredited in one Member State may perform verification activities in any other Member State" [Article 6(7)]. As shown in Figure 2, the numbers of accredited verifiers (which totalled 131 in early 1997)

¹⁴ Roger Brockway, UK Accreditation Board, personal communication.

¹⁵ Regulation No 1836/93, Annex II, E (1) includes the provision "with the objective of evaluating environmental performance."

varies considerably amongst the different Member States, with Germany the distant front runner.

Figure 2 Number of Accredited EMAS Verifiers in EU Member States

	As of 13 September 1996	As of 29 January 1997
Austria	8	12
Germany	103	116
Denmark	3	3
France	6	9
Finland	2	2
Netherlands	3	3
Spain	0	1
Sweden	3	5
UK	7	7

Member States had to set up two competent bodies, one for the accreditation of environmental verifiers and the other for the registration of EMAS validated sites. All Member States--with the exception of Italy--have notified their competent bodies to the Commission. The accreditation of environmental verifiers lies in the hands of national accreditation bodies.

A closer look at the German system reveals that it is different because the German law implementing the EU Regulation includes an accreditation system for verifiers/certifiers (BG 1995:1591). This law defines the terms of reference for the accreditation body for verifiers. As the German law envisages no separate procedure for certifiers, the verifiers will do both jobs. In Germany and France single persons are allowed to be accredited verifiers. The French and the German systems are criticised because individuals are recognised as verifiers whereas in other countries they come as a team with a variety of competencies. Doubts have been arising whether individuals can cover such a broad range of competencies. The verifier in Germany, however, will contract accredited experts who possess special knowledge in a sector of industry. Austria has also implemented parts of the Regulation through a number of Ordinances which make no distinction between verifiers and certifiers. The Article 19 Committee will decide whether the different procedures are in compliance with the requirements of the Regulation.

The Commission has the task, together with the Article 19 Committee, to promote collaboration among Member States in order to avoid inconsistencies in the accreditation and supervision of environmental verifiers acting in other

Member States than their own. Furthermore, the Commission has provided a document to give environmental verifiers guidance when accomplishing their task. The document is not binding, only of informative nature. It will be continuously completed over time. It contains detailed interpretation of the text of the Regulation in order to assist verifiers on their job. This guide also describes independence. Unfortunately, a provision which originally allowed verifiers to validate a site only three times in succession was later dropped. A verifier must make sure that his work does not depend on one single company.

Some Member States have set up very sophisticated procedures to accredit verifiers: in Denmark they are examined “on their job,” i.e. while they do an audit, under the surveillance of officials of the Environmental Protection Agency. In Germany, NGOs have participated to describe the requirements and qualifications of environmental verifiers.

It will be up to the verifier to make sure that the elements missing from other standards, which are needed to fulfil the requirements of the EMAS Regulation, have been provided by the certification body. Industry has made it quite clear that the verifier should not reopen the assessment of what the certification body has already provided. This puts the verifier into an awkward position: he has to sign up with his name but if he reopens the audit he “will be out of business” as one representative of a standard institute put it. Hopefully verifiers will be able to protect their own independence and credibility in the first place because that is primarily what they make their living on. The problem may be somewhat hypothetical, however, since very often certification and verification will be carried out by the same person.

The verifier is a key figure in EMAS because he is the mediator between the inside and the outside, the site and the stakeholders. Nobody else will be as exposed to the public as the verifier: while he has to check the performance of the site he also acts on behalf of the client who has chosen and is paying him, and thus expects a certain loyalty, but when he signs the environmental statement he is liable to the public.

The Commission distributes regularly handouts on EMAS registrations, information from which is summarised in Figure 3. The number of registered sites is increasing rapidly, and about 70% of them are German..

Figure 3 Certified EMAS Sites in Europe

	As of 21 March 96	As of 13 September 96	As of 7 February 97
Austria	6	25	46
Belgium	2	2	2
Denmark	3	4	13
Germany	113	290	348
Finland	0	3	4
France	3	5	7
Ireland	1	1	2
Netherlands	3	7	11
Sweden	1	5	43
UK	9	20	25
EU 15	141	362	501

Since ISO 14001 has not yet been fully operational, many sites use BS 7750 as their standard. Industrial sites in most countries enter EMAS via a standard, whereas sites in Austria and Germany base themselves on the text of the Regulation directly. The difference between Germany and the other Member States concerning the number of registered sites has raised many speculations. As a matter of fact, as shown in Figure 4, many sites have certified EMS under one standard or another, but have not gone further to seek EMAS registrations: in the UK, 156 sites had been certified under the British Standard 7750 and only 15 had an EMAS registration by November 1996, whereas in Germany, 45 had been certified and 260 were registered under EMAS (UKOB 1996:17).

Figure 4 Certified and EMAS registered sites in the EU (as of November 1996)

	EMAS	National standard BS 7750	ISO 14001
Belgium	3	0	5
Denmark	3	25	25
UK	15	156	(156)
Finland	2	0	6
France	3	0	5
Germany	260	0	45
Netherlands	5	100	0
Ireland	1	8 (IS 310)	0
Italy	pilot projects	0	7
Austria	8	0	0
Portugal	pilot projects	0	0
Sweden	1	0	0
Spain	pilot projects	0	0

EMAS is also applied differently in spirit: “The ‘soft’ managerial style practised in the UK stresses cost effectiveness as the means for achieving environmental performance improvements. Germany pushes a strong line of environmental laws” (EG 1995). For the time being no industrial site has been denied validation for not fulfilling the EMAS requirements. The first validation, however, has not yet assessed improvements; this will only occur when the next verification is due.

The Environmental Statement

A Swedish study which evaluated the environmental statements of 58 sites revealed a number of important problems (Swedish EMAS Council 1996). For a start, the length of the statements varied dramatically amongst sites, as shown in Figure 5.

Figure 5 Length of environmental statements

number of pages	1-10	11-20	21-40	>40
number of sites	11	26	16	2

According to the study, significant environmental effects, targets and objectives were clearly listed in 40 statements and not clearly listed in 15. Moreover, the types of pollution addressed in the statements also varied considerable (Figure 6).

Figure 6 Proportion of environmental statements summarising specific environmental issues

Issue	Proportion (%)
Pollutant emissions	76
Waste generation	100
Consumption of	
--raw material	71
--energy	100
--water	95
Noise	38
Other environmental issues	45

Finally, there were enormous discrepancies in the method of verification: 2 statements were verified by a validation stamp, 38 by a validation statement, 3 included full assessment and validation statements, and only 12 made reference to the verifier. Given these variations in length, content and procedure, one can only conclude that environmental statements did not live up to the demands of the Regulation.

The environmental statements are the only part of the EMAS process which is accessible. The statements should give information which allows the interested public to assess to what extent the site has improved its environmental performance. The first validation--ending with registration--considers only the existence of the EMAS elements but progress should be measurable after the second validation at the latest. It would be valuable to have an indicator for progress for EMAS because otherwise progress might only be modest. The Regulation does not say anything about the speed at which companies must improve.

Evaluation of EMAS

EMAS could have much to offer if the framework is devised properly and registration of industrial sites achieves all the necessary requirements. It could help environmental policy to a certain extent move from end of pipe solutions towards a more integrated approach which focuses on environmental aspects of the production process as well as the products.

Most of the pioneering firms who originally introduced management and audit systems proudly boast that, although they faced high initial outlays for the audit itself, they then reaped substantial economic gains in the end, as the audit brought to their attention many important details of their production about which they had been previously unaware.

An Austrian study concludes that the introduction of EMS is paying off (Austrian Economic Chamber 1996). Firms undergoing EMAS registration had earned their investment back after less than 14 months on average. The time required for implementing an EMAS system in a company was one person-day per employee. Some 60% of the measures implemented in the course of the EMAS project were of an organisational nature, the remaining 40% were related to technological matters. When evaluating the consequences of the measures applied, the firms rated the economic effects of the measures somewhat higher than their ecological impact.

First signals from Germany indicate that both banks and insurance companies are susceptible to the effort a company has made to obtain registration. In March 1996, the Deutsche Bank announced favourable rates of interest for EMAS registered sites because it regards EMAS validation as a clear signal of lowered environmental risks. Also a number of important German insurance companies view the existence of EMAS registration as a favourable factor when assessing clients for their premium level. They insist, however, that they do not grant a "rebate" because of EMAS (OB 1996b).

To take two more examples, the Land of Bavaria has negotiated an agreement with the federations of Bavarian industry and trade (UB 1995). They guarantee 500 EMAS registered sites by the year 1999. The Bavarian Government has declared its intent to work towards alleviating reporting and documenting requirements, controls and monitoring of regulatory authorities, as well as permit procedures for EMAS registered sites. And an Italian representative has stated that his country intends to implement the recently adopted EU Directive on Integrated Pollution Prevention and Control by applying EMAS.

Legal compliance

Public authorities could also have an interest in EMAS because there are limits to their ability to control all industrial sites. Some Member States cannot afford the necessary qualified personnel and see scope, in theory, in controls carried out by private certifiers/verifiers, the costs of which are borne by the sites themselves. EMAS could be regarded advantageously for them especially when considering the shrinking state budgets which will not even guarantee the maintenance of the often insufficient existing controls. As public authorities certainly do not plan to retire from controlling the sites, EMAS could help to maintain trust for sites which have convincingly demonstrated compliance efforts with previous legal requirements (Lübbe-Wolff 1996:227).

As already indicated, local authorities are not yet very willing to give enterprises credit for their efforts. Examples have arisen, for example, where regulatory authorities have been especially severe with sites applying for registration and have been overly rigid in controlling them. The Commission is concerned that this attitude might discourage enterprises from registration. On the other hand, registered companies have also approached their regulatory authority with the request to have their licenses re-formulated in a more generous way, although this is obviously not in agreement with the requirement of continuous improvement of environmental performance.

To help governments interpret the Regulation, the Commission distributed a document to government officials which states:

It is therefore clear that the EMAS Regulation does not introduce any idea of substitution between itself and environmental legislation, whatever the source is. Being voluntary, EMAS could not have this purpose...This does not prevent the authorities in the Member States, responsible for applying environmental legislation, developing a way to add value to participation in EMAS. This recognition of EMAS participation--usually called deregulation--is facilitated by the fact that registration in EMAS involves 'provision for compliance with all relevant regulatory requirements regarding the environment' (EC 1996b).

In the same Document, the Commission also states that under the heading 'EMAS and the implementation of environmental liability' that:

The system does not generate any extra incentives for the enforcement authority to start pursuing companies...In any event, it is the responsibility of the site to produce accurate information, irrespective of their participation in EMAS. The environmental statement does not provide a special opportunity to pursue a case of environmental liability. On the contrary, the holistic approach of EMAS is a means to reduce the risks, thanks, in particular, to the better control of environmental effects it generates. This leads to changes from corrective actions to a preventive way of dealing with environmental issues.

Industrial sites undergoing EMAS registration are not exempt from requirements under existing legislation. They only present evidence that there are grounds for the assumption that they have worked on their environmental impacts in order to reduce them. This effort by the industrial site should be understood as demonstration of goodwill with the objective to create a climate of trust. The only conceivable concessions which might be acceptable are where EMAS reporting requirements duplicate existing provisions.

This view is obviously not shared entirely by representatives of the International Standardisation Organisation with respect to enterprises which have been certified under ISO 14001. They answered the question: "What if an ISO 14000-certified company was found to be in non-compliance with an environmental regulation?" (Dodds 1997).

Mr. Renswik (Norwegian Ministry of Environment): There would be a less severe reaction on the part of the regulatory authorities if the company were implementing an environmental management system.

Mr. Dodds (Chairman of TC 207 Subcommittee 1 which developed ISO 14001): Things do go wrong and fall out of compliance. However, if something went wrong, a company implementing an ISO-14000 based environmental

management system had procedures to deal with the occurrence. In addition, ISO 14000 was very clear in requiring the company to declare its intent to comply with regulations, to do so and to be able to demonstrate that it is doing so.

EMAS, subsidiarity and deregulation

Meanwhile deregulation is high on the agenda in Brussels. The question arises whether EMAS is an instrument which can guarantee “a high level of environmental protection” as demanded in the Treaty at a time when the Community is reviewing its legislation and increasingly restricting itself to strategies and framework directives to be filled in by Member States following the principle of subsidiarity (see Golub 1997b).

Environmental organisations are worried by this because they foresee that the “repatriation” of EU environmental legislation might entail eco-dumping. They fear eco-dumping not in the sense that production moves away to “pollution havens” but in the sense that bad examples may be imitated because industries do not want to follow stricter rules than their competitors in other Member States and will lobby their governments to be entitled to produce according to the same (low) environmental standards. This problem was recognised twenty years ago and was one of the reasons that the Community created its environmental legislation.

This cannot be remedied by a system like EMAS which has merits of its own but which are irrespective of the legal environmental norms. It will by definition not be the goal of EMAS to improve industrial sites beyond legal compliance. When the legal framework places inadequate demands on firms concerning emissions, waste generation, nature protection etc., EMAS cannot be expected to repair these shortcomings.

On the contrary, the stringency of data collection is not guaranteed in EMAS. There is a danger that the assessment might be too superficial and unsatisfactory, especially because the certifiers/verifiers might not be independent enough since the companies are their clients. It will be difficult to resist the temptation to please them in order to be invited for the next audit (Führ 1993).

Improvement through revision

The Regulation is weak where it leaves too much flexibility. This may have been a good principle for the beginning but the text should become more explicit as time passes. When the Regulation is revised in 1998 the "provision for legal compliance" should be changed into "legal compliance" with provisions for temporary exemptions. The wording of "commitment to continuous improvement of environmental performance, with a view to reducing environmental impacts to levels not exceeding those corresponding to economically viable application of best available technology" leaves much to the imagination and substitutes good intentions for solid environmental improvements. The number of qualifiers reflects the difficulty of reaching a compromise during negotiations in Council. It should read instead: "Registered sites shall improve environmental performance continuously and apply best available technology."

Environmental organisations think that Article 12 is the weakest point in EMAS and would like to have it removed in a review. They publicise the advantages of EMAS over ISO 14001, and encourage third countries, including their environmental organisations, to demand some of the more stringent EMAS requirements when the international standard is reviewed in five years. The ISO standard leaves even more room for manoeuvre, as it can be applied in a very demanding way but also rather superficially because of its vague wording.

The EMAS registration does not stipulate for many types of information in the public statement. It is up to the company if they want to disclose more information than what is required under the Regulation. A revised Regulation should make the statement more demanding so that it will accustom industrial sites to regular reporting on the environmental impact of their activities. Furthermore, the information should be presented in a standardised form in order to make it comparable. The best way to issue emission data would be to relate them to production and not give them in absolute amounts, as is currently done.

Civil liability for environmental damage

One of the most promising environmental instruments of all in Community legislation would be the introduction of civil liability for environmental damage, perhaps the only effective means of respecting the polluter pays principle. Producers tend to internalise profits and externalise the cost to the environment in the form of pollution, waste, resource consumption and destruction of ecosystems. Civil liability would privatise the damage and send the costs for the environmental damage home to the one who has caused it.

The Fifth Environmental Action Programme envisages the introduction of civil liability for environmental damages. This project meets much scepticism concerning the insurability of the risks given the bad experiences in the United States where insurance companies have refused to insure for environmental damage once the law on environmental liability had been introduced. The EU would be much better off in a comparable situation and EMAS will be of utmost importance in that respect: companies who have set up environmental management and audit systems are better in control of their production processes than without since they are better aware of their risks and can minimise or even avoid them and so reduce their insurance premium. Thus, this is one of the greatest potentials of EMAS: It could help to pave the way for industry to enter smoothly into civil liability for environmental damages. The advantage of legislation on civil liability is not that firms would run into more litigation. On the contrary, this is not the desired effect. They should take preventive measures in order to avoid damage, and EMAS is a first step towards organising internal management in a self-responsible way, although the efforts made under EMAS are still on the modest side.

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