



Environmental management in central government agencies

Sweden's experience

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Preface

In the autumn of 2000, the Swedish Environmental Protection Agency was entrusted with the task of supporting other government agencies in the process of introducing environmental management systems (EMSs), preparing compilations of their annual reports on this process and, in 2003, carrying out an evaluation. The implementation of environmental management systems in government agencies forms part of the Swedish Government's commitment to building an ecologically sustainable society. The process has gradually been broadened to include the majority of central government agencies.

The Government now wishes to know what progress has been made towards the goal of introducing environmental management systems, i.e. integrating concern for the environment and wise use of resources into the regular activities of agencies and, by this means, directly or indirectly reducing adverse impacts on the environment. In addition, it wants to know what steps need to be taken to carry forward the process of implementing environmental management in central government in the most effective manner.

This report provides a summary of the evaluation that has been undertaken. The Environmental Protection Agency's assessment is that these are still early days in the introduction of environmental management systems, but that the process is already yielding environmental and other benefits. At many agencies, environmental management systems have proved a valuable tool in improving the effectiveness of environmental programmes, and they have the potential to work even better and at a wider range of authorities. They require relatively modest resources, and fit in with the performance-based approach to management that has been introduced in central government in Sweden. Environmental management is an instrument that deserves to be maintained and further refined in central government agencies.

To promote the ongoing implementation of environmental management in central government, a range of action is proposed, including measures to make greater use of the environmental management process in the Government's system of performance management, to emphasize and give priority to indirect environmental aspects, and to improve monitoring, auditing and reporting.

Continued support needs to be given to agencies that have been tasked with introducing environmental management systems, for example by developing new guidance and directives. This support should focus in particular on encouraging more effective attention to indirect environmental impacts and on facilitating the adaptation of EMSs to the specific activities of individual agencies.

The evaluation was carried out with the support of a reference group consisting of Inger Bertilsson at the Swedish University of Agricultural Sciences, Sven-Eric Carlsson of the National Land Survey, Bengt Magnusson at the Swedish National Defence College, Robert Nuse at the Office of the Prosecutor-General, Kristina von Oelreich of the Environmental Protection Agency, Inger Svedén at the Gävleborg County Administrative Board, and Anna Torgny of the National Road Administration.

The authors of this report are Marie-Louise Rydén, Olle Svanberg and Birgitta Timm at the Evaluation and Environmental Economics Section of the Environmental Protection Agency. The English translation has been prepared by Martin Naylor.

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Swedish Environmental Protection Agency

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1 Executive summary

As part of its endeavour to promote sustainable development, the Swedish Government has decided that central government agencies are to introduce environmental management systems, enabling the state to give a lead in the area of environmental performance improvement. The agencies in question are expected to make responsibility and concern for the environment a natural part of their overall activities. The system envisaged is a simplification of ISO 14001 and EMAS. For a government agency, introducing an environmental management system (EMS) involves organizing its efforts to address environmental impacts, integrating environmental concerns into its mainstream operations, and setting environmental objectives and targets.

At the Government's request, the Swedish Environmental Protection Agency has carried out an evaluation of progress in implementing environmental management systems in government agencies, and of the results achieved. Have agencies met the intended objectives, and where do improvements need to be made?

Our evaluation shows that the authorities that have been most successful are the ones with significant external, direct impacts on the environment, for example as a result of construction and civil engineering work, operation and maintenance of buildings and other facilities, practical training and education. Just over twenty agencies report having taken action that has had substantial or very substantial beneficial environmental impacts in one or other of these areas. These are the most visible significant effects of central government agencies' environmental management systems to date.

Half the agencies concerned state that they have reduced their environmental impacts in one or other of the areas of office practices, use of premises or official travel. The greatest successes have been achieved with respect to recycling and waste.

Far less favourable a picture emerges if we turn to the central element of the task of introducing environmental management systems, which is concerned with agencies' indirect environmental impacts, arising from their regulations, grant schemes, official decisions, research and knowledge dissemination efforts, international activities etc. Only around thirty of the 230 authorities that have introduced an EMS report that environmental management has affected their approach to the provision of information, training and advice; and just a few say that it has affected their decisions on permits and grants, research and development programmes and international activities.

The evaluation undertaken shows that these are still early days in the implementation of environmental management systems, but that the process is already yielding

environmental and other benefits. At many agencies, environmental management has proved a valuable tool in improving the effectiveness of environmental programmes, and it has the potential to work even better and at a wider range of authorities. It requires relatively modest resources, and fits in with the performance-based results-oriented approach to management that has been introduced in central government in Sweden. Environmental management is an instrument that deserves to be maintained and further refined in central government agencies.

The difficulties experienced in handling the indirect environmental impacts of agencies' core activities can largely be ascribed to a failure to adapt the suggested environmental management system to the regular operations of the agencies concerned. Part of the problem is a lack of communication between Government and agencies concerning priorities and levels of ambition, which also means that the Government is failing to make use of the opportunities to guide and shape environmental improvement efforts which the system introduced provides. What is more, too many agencies are refraining from auditing their EMS, removing the linchpin of the system, which requires 'continual improvement' of environmental performance. This is the biggest threat to the system's survival.

More effective action could also be achieved if a larger number of agencies were to place more emphasis on and give greater priority to addressing environmental aspects with regard to which the potential environmental benefits are greatest. Authorities which currently have an EMS that focuses largely on the environmental implications of their office practices should also use the system to tackle any environmental impacts of their core activities. The way in which environmental management systems have been used has depended to a significant extent on the principal mission of the agency concerned, and on whether it has had any other environmental tasks. Work in this area will, and should, therefore proceed along different lines at different agencies, depending on their functions.

This evaluation forms the basis for a number of recommendations that are intended to promote the ongoing process of implementing environmental management in central government. They are concerned with enhancing communication between government ministries and their agencies, emphasizing and giving priority to indirect environmental aspects, improving monitoring and auditing, and reviewing the way in which agencies report back to the Government. In addition, we see a need for continued support for EMS implementation, chiefly with a view to adapting the system to agencies' specific activities and to achieving more effective attention to indirect environmental aspects.

2 Background

There are around 250 agencies in Sweden which report to the Government and fall within the remit of one or other of its ministries. They include such bodies as the National Board of Health and Welfare, the National Social Insurance Board and the National Labour Market Board. The apparatus of central government in Sweden consists of relatively small ministries and large and autonomous government agencies. Functions which in this country are discharged for example by the Environmental Protection Agency would in many others be the responsibility of the Ministry of the Environment or its equivalent.

The role of Sweden's central government agencies is to implement at a practical level the decisions of Parliament and the Government. They are autonomous in the sense that they act on their own responsibility, but in accordance with guidelines laid down by the Government in what are known as appropriation directions (*regleringsbrev*), agency standing instructions (*instruktioner*) and the Government Agencies Ordinance (*verksförordningen*). The approach applied is one of performance management (management by objectives). The Government sets objectives and establishes a budgetary framework for each agency's activities, and the agency monitors and reports on the results achieved. The operations of the agency are defined more precisely in a dialogue on objectives and results between the agency and the ministry concerned. Agencies report back annually on the results of the assignments entrusted to them in their appropriation directions.

Ecologically sustainable development is now one of the overarching goals of Swedish Government policy. To guide efforts to attain this goal, Parliament has adopted fifteen environmental quality objectives.

The environment is of concern to everyone. That means, for one thing, that every authority and every sector of society, in reaching its decisions, has to take as much account of ecological factors as it does of economic and social ones. Government agencies and central government as a whole have a special responsibility, owing to the influence they exert on other organizations and individuals. One role of government agencies is to pave the way, by means of regulations and other decisions and measures, for improvements in environmental performance throughout society. Under a provision of the Government Agencies Ordinance, central government agencies have a fundamental environmental responsibility for their activities, and in some cases their standing instructions include a special environmental clause. In addition, a number of agencies are responsible for promoting and coordinating the ecologically sustainable development of a particular sector of society, and for helping to achieve the national environmental quality objectives.

As part of its endeavour to promote sustainable development, the Government has decided that central government agencies are to introduce environmental manage-

ment systems, enabling the state to give a lead in the area of environmental performance improvement. Environmental management systematizes efforts in this area and provides clear guidelines and objectives for them, by such means as centrally drafted management documents, an explicit division of responsibilities, and procedures for monitoring and reporting of results. Environmental management in central government is based on the same principles as in the business sector, but adapted to take account of the particular functions of government agencies.

Some 230 agencies have now been given the task of introducing an environmental management system based on ISO 14001 and EMAS. Certification or registration to EMAS is not required. The first agencies received this assignment in 1996. The Government Offices (i.e. all the government ministries) are also in the process of implementing environmental management.

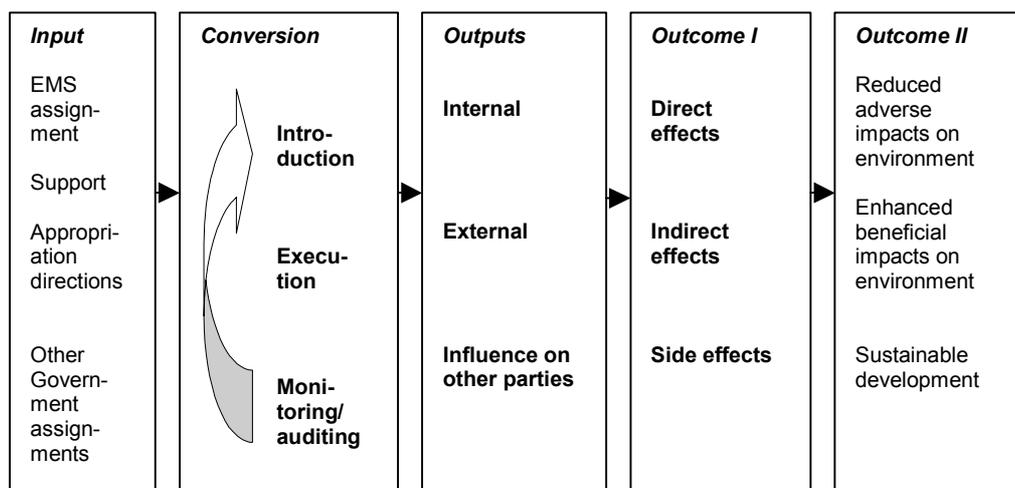
The Ministry of the Environment is the lead authority for the introduction of environmental management systems in central government. All the agencies concerned are to report annually on what has been achieved to their respective ministries. These reports provide Parliament, the Government and individual ministries with information on how EMS implementation is progressing. The Environmental Protection Agency provides support to the agencies and monitors the process by submitting a combined annual report to the Government.

The Agency's evaluation of progress in implementing environmental management systems was presented to the Government in December 2003. The full report in Swedish (report 5346) can be downloaded from the Environmental Protection Agency's website, www.naturvardsverket.se/bokhandeln, or ordered by phone at CM-Gruppen, order service: +46(0)8-505 933 40, by fax: +46(0)8-505 933 99, or by e-mail: natur@cm.se.

3 Our approach

The evaluation we have undertaken of how environmental management is working in central government agencies is intended to provide a basis for Government decisions regarding the future of environmental management in this context, any necessary changes in the directives given to the agencies concerned, and any other measures that may need to be introduced. The purpose of the exercise, in other words, is one of improvement, rather than accountability. We have focused our evaluation on environmental management as it operates in government agencies today, on the problems that exist, and on the effects of having introduced environmental management systems.

On the basis of the assignments relating to environmental management issued to agencies by the Government, and other background material, we created a picture of how the proposed environmental management system (EMS) was intended to be introduced and implemented – what can be referred to as a *programme theory*. The purpose of this conceptual model was to facilitate planning and communication of the evaluation and to provide support for our analysis of the factual evidence collected. The assignments issued by the Government regarding environmental man-



agement, together with the support provided by the Environmental Protection Agency, can be said to constitute the input to the programme to be evaluated. The agencies' efforts to implement these assignments correspond to the *conversion* stage of the programme theory. Within this stage, two phases can be distinguished: the *introduction* phase (planning, training and organizing) and the *execution* phase or, as it can also be termed, the *implementation* or *use* phase. By the second of these phases, the environmental management system has become an integral part of the agency's core activities. This phase should be characterized by continual improvement and can only be realized by means of appropriate *monitoring*. The *outputs* of the programme may be internal or external. *Outcomes* include, for example,

reduced emissions and indirect effects on the actions of others, resulting in a reduction of adverse environmental impacts or an enhancement of beneficial impacts, and contributing to ecologically sustainable development.

The core issues that have been addressed are whether the introduction of environmental management systems has resulted in agencies improving their environmental performance, whether environmental concerns are integrated into their activities, what results have been achieved in relation to the resources invested, what obstacles exist and what the factors for success are.

We chose to undertake the evaluation primarily as a *process evaluation* and to assess the process of introducing environmental management against criteria defining a 'good' environmental management function. Such criteria include clear decisions from management, delegation, dialogue, adequate resources and appropriate skills.

A pilot study was carried out, consisting of literature reviews and an e-mail questionnaire survey of international experience.

To provide the basis for a qualitative study, we obtained documents from and conducted interviews at eight central government agencies, representing different types of activity, organizational structure and environmental impacts, and reporting to different ministries. Both certified and non-certified agencies were included. The authorities selected were the National Property Board, the Swedish Rescue Services Agency, the National Board of Trade, the National Labour Market Administration, the National Food Administration, the Swedish Energy Agency, Göteborg University and the Gävleborg County Administrative Board. The individuals interviewed were employees with different roles and functions linked to the environmental management process: environmental coordinators, representatives of management, line managers, administrative officials and laboratory personnel. In all, more than 50 interviews were conducted.

In addition, as a complement to the case studies, a quantitative study was performed. A postal questionnaire was sent to all 230 agencies that had been asked to introduce environmental management systems. The response rate was 85%. The non-response is not judged to have affected the main findings.

The evaluation was carried out with the support of a reference group made up of environmental coordinators or their counterparts at different agencies.

4 Our observations

Environmental management systems in government agencies are a means of improving the effectiveness of central government action to promote an ecologically sustainable society. The tool of environmental management has been used in different ways in different agencies, depending on the type of authority concerned. The differences can largely be attributed to the principal missions of the agencies, and to whether or not they also have other environmental tasks. In many cases we have found that these factors have affected our assessment of the operation and results of environmental management systems at individual agencies.

4.1 Environmental management systems introduced – and yet not

At the majority of government agencies, environmental management systems are confined to direct environmental impacts. Electricity, photocopying paper and official travel are generally the first areas to be tackled, followed by construction work and chemicals. Few agencies address indirect environmental aspects, such as the effects of their regulations, grant decisions etc., in the framework of their EMS. Few have performed audits. Most agencies engage in environmental management, but few can be said to have an environmental management system that is up and running in every respect.

Just over sixty per cent of the agencies concerned state that they have introduced an EMS, or will soon have done so. Nine out of ten have carried out an initial environmental review, adopted an environmental policy and defined environmental objectives. Almost as many have detailed environmental targets, and monitor progress towards them.

The most pronounced effects of environmental management systems can be seen at agencies whose core activities have significant *direct environmental impacts*. Some twenty of these agencies report that they have achieved appreciable beneficial effects.

The majority of government agencies only have objectives or targets relating to the direct environmental impacts of their office practices. Half the agencies say that they have reduced their environmental impacts in one or other of the areas of office practices, use of premises or official travel. The greatest successes have been achieved with respect to recycling and waste.

Far less favourable a picture emerges if we turn to the central element of the task of introducing environmental management systems, which is concerned with agen-

cies' *indirect environmental impacts*, arising from their regulations, grant schemes, official decisions, research and knowledge dissemination efforts, international activities etc. Only around thirty agencies report that environmental management has affected their approach to the provision of information, training and advice; and just a few say that it has affected their decisions on permits and grants, research and development programmes and international activities.

Agencies often find it difficult to measure the effects of having introduced an environmental management system. Observable changes are often the result of many interacting and conflicting factors, whose individual contributions may be impossible to distinguish. It is also difficult to track the results of preventive programmes and the delayed effects of changes in behaviour, for example following information campaigns and training. In many cases, therefore, environmental impacts and effects can only be reported indirectly, in terms of a quantity of outputs in the form of tangible measures. These then have to serve as impact indicators.

Certification to ISO 14001 or registration under EMAS is not a mandatory part of the task entrusted to agencies by the Government. Nevertheless, ten agencies have gained certification. Four have decided to apply for certification, and another four expect to do so. The reasons given for seeking certification range from the demands and expectations of stakeholders to a conviction that certification and the external audits which it requires are the best guarantee of a sustained environmental management effort, and are crucial in achieving continual improvement. The majority of agencies have not performed audits.

4.2 Have agencies with environmental management systems improved their environmental performance?

So far, the effects of environmental management on agencies' activities have been limited. The greatest effects have been seen at a number of authorities which undertake construction and civil engineering work, manage real estate or handle environmentally hazardous products and chemicals. Action is also being taken in office settings. At a few agencies, environmental management has played a part in changing the agency's approach to the provision of information, training and advice. An even smaller number have been influenced with regard to their decisions on permits and grants, research and development programmes, international activities etc.

4.2.1 Yes, as far as direct environmental impacts are concerned

Roughly a third of the agencies report that they have achieved substantial changes for the better as a result of their EMS, while another third say they have seen few improvements. These proportions apply equally to authorities whose efforts in this area are confined to the environmental impacts of their office practices and to those

with core activities that have significant direct impacts on the environment. Almost half the agencies state that they apply environmental criteria when purchasing goods and services.

The authorities that have been most successful are the ones with significant external, direct impacts on the environment, for example as a result of construction and civil engineering work, real estate management, operation and maintenance, handling of environmentally hazardous products etc. The latter category includes agencies that use chemicals in education and practical training. The number of government agencies with core activities that have direct environmental impacts is not very great. However, just over twenty agencies report having taken action that has had substantial or very substantial beneficial impacts on the environment in one or other of the areas of construction and civil engineering, operation and maintenance of buildings and facilities, practical training and education. These are the most visible significant effects of central government agencies' environmental management systems to date.

Of the agencies whose core activities have significant environmental impacts, though, roughly a third have yet to give priority to implementing an EMS. We assume that this is due both to a lack of resources and to inadequate understanding of environmental issues and relevant technical solutions. Here there is scope for collaboration between organizations with similar problems and for benchmarking.

Several agencies say that they have been engaged for many years in an effort to improve their environmental performance and have already introduced a range of measures. These relate chiefly to their office practices. The fact that many agencies claim to have relatively little to show for their environmental management efforts also has to be seen in the light of the limited resources made available for this purpose.

4.2.2 Indirect environmental impacts difficult to tackle

One agency in three considers that its functions are such that, in one way or another, it is able to influence the environmental impacts of other parties. However, only a few agencies make use of their scope to influence the environmental behaviour of others through decisions relating to the issuing of regulations, enforcement measures, grants etc. Environmental management activities have been of greatest significance with regard to knowledge dissemination. Some thirty agencies believe that they have altered the ways in which they provide information, advice, training etc.

We find few instances in which an environmental management system can be shown to have affected the indirect environmental impacts of an agency. A pointer to the potential effects is provided by the measures that have been implemented, such as network building, incorporation of environmental elements or profiles in training programmes and operations, and checklists to ensure the inclusion of envi-

ronmental concerns in regional economic growth programmes and official inquiries. Several agencies take the view that the process of introducing an EMS has brought greater understanding and awareness of the importance of environmental issues in their activities and may also have prompted staff to modify their environmental behaviour as private individuals.

Most agencies report difficulties using their EMS to systematically address the indirect environmental impacts to which they give rise through other parties. The system is large and complex. However, guidance exists, and the approach does not differ very much from other forms of performance management. How come, then, agencies have not shouldered their responsibility to adapt the suggested EMS to their own specific activities?

The reason we judge to be most important is insufficient motivation on the part of agency managements: they do not see the relevance of environmental management to their principal activities. The fact that agencies receive no response from government ministries to their annual reports on EMS implementation helps create the impression that the ministries do not consider such systems a priority. Given that environmental management is just one of several general requirements placed on agencies, and given their desire to safeguard and focus on core activities, it is hardly surprising that not all agency heads see to it that this particular responsibility is discharged as a top priority.

Difficulties can arise at several levels: identifying the indirect environmental aspects of an agency's activities in the context of a comprehensive environmental review; rating and ranking significant indirect environmental aspects; drawing up an action plan with measurable targets; and monitoring and assessing progress towards those targets. Several of the factors involved probably have to do with the type of agency in question. A number of agencies, for example, have had difficulty identifying the significant indirect environmental aspects of operations that have not traditionally included an environmental dimension. And authorities with a long tradition of environmental improvement activity may have found it difficult to modify ingrained approaches.

ISO 14001 offers poor support for handling indirect environmental aspects, whether it be a matter of the impacts of companies' products or those of agencies' decisions. To begin with, the consultants who helped government agencies to introduce EMSs had little experience of how public authorities operate and were probably unable to offer sufficient support concerning the indirect environmental aspects of their main activities. By focusing initially on direct environmental impacts (which are of more symbolic significance), there is a danger of agencies putting off tackling the difficult issues and getting no further than 'greening the office'.

Several agencies, though, have now progressed to such a stage in the implementation of environmental management systems that indirect impacts on the environment will be an important consideration in their subsequent efforts. Internally, they are discussing how to develop ways of influencing other organizations and individuals. Our impression is that government agencies are now more interested in and in a better position to adopt a structured approach to indirect environmental impacts than they were five years ago, when the Ministry of the Environment set up working groups to develop thinking in this area. Today, with experience of their own to draw on, agencies can more easily contribute to a development process relevant to their own activities.

4.3 Are environmental concerns integrated into agencies' mainstream activities?

Fewer than half the agencies concerned have integrated environmental improvement efforts into their business plans. The ones that have not done so are authorities whose assessment is that their core operations do not affect the environment. Few use their EMS to integrate and handle indirect environmental aspects of their work relating to regulations, grant schemes or decision-making, for example.

By 'integration' we mean that environmental issues are taken into account in the regular activities of the agency, that attention is paid to the need to promote ecologically sustainable development, and that measures to improve the environment are considered in conjunction with the core issues for which the agency is responsible. An environmental management system should be seen as a tool to ensure that environmental concerns are, in a structured manner, integrated into and handled as part of an organization's overall activities. Incorporating an EMS in an agency's business plan means that the environment becomes visible at all stages, from planning to implementation and evaluation.

The task which agencies have been asked to undertake with regard to environmental management systems includes drawing up an action plan to *integrate environmental concerns* into their activities. Roughly four out of ten of the authorities asked to introduce a complete EMS respond in the questionnaire that environmental issues are included as an integral part of their business plans. An equal number reply that environmental activities are covered by a separate plan. Agencies that have devoted considerable effort to implementing an EMS, and especially those that have gained certification, have incorporated environmental measures in overall planning to a greater extent than others.

As part of the task, agencies are also expected to *integrate their environmental management system* into their regular activities. Several authorities in fact consider this the most important element in improving their EMS: integrating the system

into their broader planning, budgetary and monitoring processes. Some agencies have even embarked on an exercise to include environmental, health and safety, quality and other areas within a single, overall management system.

There can be both advantages and disadvantages in integrating an environmental management system into a broader planning framework. In our view, the most suitable approach depends on the nature of the agency's activities and the stage the agency has reached in implementing its EMS. A separate environmental management system may for example be a way of giving prominence and visibility to environmental issues. This may be particularly relevant in the case of authorities where such issues have previously received relatively little attention. And for agencies with a strong focus on the environment, too, such an approach could help to lend a higher profile to environmental improvement activities and demonstrate to others what has been achieved. However, separate planning may also obstruct the aim of integrating environmental concerns into the agency's activities, i.e. paying specific attention to such concerns in the context of its core responsibilities.

To make a success of environmental management, tangible efforts to improve an agency's environmental performance need to be made a more integral part of its core activities. This is particularly true of measures to address indirect environmental aspects. In our opinion, it is generally better – but not always necessary – to integrate the environmental management system into the general planning process.

4.4 Results in relation to resources?

Our assessment is that the resources required for environmental management are reasonable in relation to the results. Admittedly, at most agencies the direct environmental effects of environmental management systems have so far been moderate, while the indirect effects have on the whole not been measured. The agencies that have made most progress have achieved tangible results and consider the introduction of an EMS to have been worth the trouble, both from an environmental point of view and in terms of the clearer structure established within their organizations.

4.4.1 Relatively modest resources needed to administer systems

Agencies devote relatively modest resources to the administration of their environmental management systems – or at least that is the case once the system is up and running. In the initial phase, and of course for certification, costs are higher. Normally, administration of an EMS entails no more than the agency's environmental coordinator assuming responsibility for the main bulk of the work – including training, monitoring and reporting – as one of his or her duties, and not always with a specified input of hours. At half the agencies, the staff resource required for this purpose amounts to less than 0.5 person-years. One agency in ten devotes more than 1.5 person-years to administration, and at a similar number of authorities em-

ployees with other main duties contribute the equivalent of more than 1 person-year to implementing the EMS. In 2002 one agency in five spent over SEK 50,000 (€ 5,400) on consultants etc., but almost half had no consultancy costs at all.

Of the authorities that have yet to introduce an environmental management system, just under half attribute the fact to a lack of staff or financial resources.

4.4.2 Effects take time to emerge

The effects, environmental and otherwise, of agencies' efforts to implement environmental management systems have so far been moderate or modest, owing to the fact that the introduction of such systems takes time, that indirect environmental aspects are difficult to handle, and that there is a time lag between input and effect.

Agencies' own assessments of the value of environmental management systems vary. Almost half of those given the task of introducing an EMS consider that the system enhances the effectiveness of their environmental efforts and that the benefits outweigh the costs – that it is 'worth the trouble'. Here it has to be remembered that our questionnaire was sent to the agencies' environmental coordinators, and that management and other staff may not necessarily be of the same opinion. Respondents at agencies that have introduced, or are well on their way to introducing, an EMS are more convinced that the process is of significance for the environment, and the more effort they devote to environmental management, the more they believe in its environmental benefits. Where an agency has an EMS that is working well, this in itself creates a sense of stability and order in the organization which alone may be worth the resources invested.

The effects of introducing an environmental management system can be found on many levels, and causal links are often unclear and difficult to prove. Our assessment and weighing of the costs of an EMS against its effects must therefore of necessity be more of the nature of a discussion and hence, in a sense, subjective.

We have the impression that, by and large, it is not the scale of the resources invested in introducing an EMS that determines the outcome. The core activities of the agency, its overall management system, attitudes among managers and staff, the environmental coordinator's abilities etc. all interact. However, the fact that many environmental coordinators attribute the slow progress made in introducing environmental management systems to a lack of resources suggests, in our view, that in many cases there are more benefits to be derived from EMS implementation than have emerged up to now.

Our assessment is that, overall, the results achieved have been fully commensurate with the resources put into introducing environmental management systems in central government. This view is based on the perception we have formed of a relatively successful environmental management process with beneficial effects, obtained at a reasonable price. Environmental management systems are an instru-

ment with the capacity to make the environmental improvement efforts of central government more effective, and with the potential to work (even) better than they do at present.

4.5 Obstacles and factors for success

Factors for success:	Obstacles:
Management committed	Management unmotivated
Communication with ministry	Lack of interest in results
Feedback/use of results	Inadequate resources
System adapted to core activities	Goal conflicts with core activities
Environment as a competitive factor	Multiple, and unclear, environmental tasks
Methodological support	'Template' not adapted to needs of organization
Good general management system	Inadequate monitoring and auditing
Rapid and clear results	Difficult to set measurable targets

4.5.1 Change meets with resistance

In any change process – which the introduction of an EMS in a government agency obviously is – there is always a danger of encountering resistance. Many of the forces that have favourably and unfavourably affected the introduction of environmental management systems are well known, and familiar from change processes in general: the individual, the collective, the organization, management, knowledge, the necessary will and ambition, fear, available resources and conflicting goals.

Earlier reports from different contexts paint a largely uniform picture of the success factors and problems associated with the introduction of environmental management. In the present evaluation, we have found the same factors for and obstacles to success as were reported at the very beginning of the project. Little new has emerged in these respects. The crucial point – that the system needs to be adapted to the agency's activities, organizational structure and other circumstances – does not always seem to have been borne in mind, making the introduction of the system more difficult.

We can see that some agencies have been very successful and have a well-developed EMS. These are agencies which, owing to the nature of their activities, have had particularly strong reasons to systematize their efforts in the environmental sphere or to establish a clear environmental profile for themselves. In many cases, though, getting there has been a long haul. It is common to have to start afresh. Agencies report that there have been many mistakes, and that persistence and a readiness to change are what has enabled them to succeed.

An agency management that has been clear about its commitment, made available resources, monitored the process and made any necessary corrections has been the most important factor for success.

4.5.2 Unclear or over-clear signals

Agencies were given the task of introducing environmental management systems in the form of a Government assignment dealing specifically with this issue. Some have received 'reminders', clarifications or additional terms of reference in their appropriation directions. Alongside the task of implementing an EMS, some agencies have environmental functions that are set out in their standing instructions, nine have been charged with developing and coordinating action to achieve the national environmental quality objectives, and 24 have a special responsibility for promoting and coordinating the ecologically sustainable development of a particular sector of society. These tasks relating to the environment and sustainable development are set out in various documents issued to guide agencies' activities. The multiplicity of jobs to be done, defined in different ways, is confusing, and often it is not clear to the agencies concerned how they are related and should be coordinated.

The Ministry of the Environment is the lead authority for the introduction of environmental management systems in central government. Since the autumn of 2000, the Environmental Protection Agency has been commissioned by the Government to administer, provide support for and head training on EMSs in the agencies concerned. The same consultant has been involved in the process throughout. According to ongoing evaluations by the consultant, the support provided has been considered useful. However, it does not appear to have been a substitute for a clear response from the Government regarding the specific environmental issues which agencies need to address. Most agencies call for clearer signals from their 'principal' concerning environmental management and regarding the direction and expected results of environmental improvement efforts generally.

Some agencies state that the EMS guidance they have received has lacked the procedures and documentation offered by ISO 14001 and EMAS. Others feel that the Ministry of the Environment's guidance, training programmes etc. are based on too prescriptive a template for environmental management in government agencies. This may, for good or ill, have influenced them in such a way that they have failed to make use of the scope that does exist to adapt the suggested EMS to their own operations. Suffice to say here that different agencies have differing needs.

In our view, clearer communication between government ministries and agencies would create a basis for more successful implementation of environmental management systems. By showing that they consider EMS activities important, ministries can also help to make agency managements more motivated. Some form of 'reward' for good results would provide a further incentive. The EMS needs to be communicated and prioritized at every level – from the ministry and top agency

management through managers at different levels and down to the staff who are to use the system as a tool in improving the agency's environmental performance.

4.5.3 Greater focus on overall management

On the whole, agencies take a favourable view of the task of implementing an EMS. However, understanding of why they have been asked to introduce such a system, or what it should look like, is not universal. The ease with which an EMS can be introduced seems to vary, depending on the management system or systems in operation at the agency. An agency with a well-developed overall management system, we are told, can more easily incorporate an environmental dimension into that system. According to some agencies, the process of implementing an EMS has led to greater awareness of the need for general or quality management systems or for improvements to the systems already in place.

A beneficial side effect to which many respondents draw attention in interviews and questionnaires is that EMS implementation has created a better structure and brought greater order to agencies' operations. A clearer division of responsibilities has been established. All these things have spread beyond the environmental sphere. At a number of agencies, the need for a better management system has been highlighted, as well as for approaches that will enable environmental, health and safety and other areas to be integrated into a single, overall management system.

One agency, replying to the questionnaire, stated that an important effect was 'a structured way of working which has resulted in attention to environmental impacts becoming a natural part of our activities, and which has also resulted in a better way of leading the organization in its search for continual improvement'.

One recurring question and objection is: 'Why the environment?' Respondents refer to a whole series of general requirements which their agencies have to meet – relating to gender equality, ethnicity, regional policy or finance – and are at a loss to understand why environmental activities in particular should require a separate management system. Others develop on this, suggesting that an assignment in the area of quality management would be more to the point. Such an assignment could incorporate environmental aspects and all the other components of the agency's activities. As has been mentioned earlier, many agencies discover when they introduce an EMS that they also need a good overall management system.

In our view, environmental management stands to benefit from being integrated into an effective general management system.

4.5.4 Monitoring, auditing and reporting need to be improved

We see a failure to perform audits as a contributory reason why the introduction of environmental management systems in government agencies is not proving a universal success. Auditing is essential in sustaining and improving an EMS. In certain cases, appropriate but less formalized monitoring of an agency's efforts to improve its environmental performance may be an alternative to actual auditing.

The audit process needs to be launched at an early stage in order to develop a system that works well. Both the system itself and the agency's environmental impacts should be the subject of auditing and necessary follow-up action. The Government has been unclear about what it requires in terms of auditing.

Agencies' environmental management activities do not appear to reflect the significance which we consider auditing to have. Only 28 authorities performed audits in 2002, among them the agencies that have a certified EMS or are preparing for certification. They consider auditing to be necessary to make their EMS work. For many agencies, auditing should be the next challenge to be addressed. Interest in environmental audits as a monitoring tool has grown.

Generally speaking, agencies' annual reports on EMS implementation do not provide the information their ministries need, with the result that the agencies receive little response regarding the process from the ministries. This affects their motivation both for environmental management in general and for reporting in particular.

Nor do the form and content of these reports provide the monitoring of progress which agencies themselves need. It is difficult on the basis of them to judge whether environmental management activities have been successful. Neither the Ministry of the Environment nor the Environmental Protection Agency has reviewed and assessed the substance of different authorities' environmental management systems. In our view, there is a danger that annual reports, with their focus on the process and on certain indicators, could obscure the need for internal and external auditing and undermine interest in other types of monitoring that would be more useful to the agencies concerned.

A separate report on the EMS is presented annually. For agencies with major direct impacts on the environment, a separate environmental report can meet a need precisely because it brings together all the relevant environmental issues and allows progress to be clearly monitored. For authorities with several different environmental tasks, however, a separate EMS report may be confusing to both the ministry and the agency in question. Several agencies have called for better coordination between different ministries and different assignments. We support that call.

We also believe that separate accounts of EMS implementation in agencies' annual reports could stand in the way of integration of the environmental dimension. During the introduction phase, a separate report on an agency's EMS may be important as a basis for determining whether and how it is developing. Some form of continued feedback on the system is also needed to sustain the necessary focus on the EMS assignment; such feedback is an important driving force. At a later stage, though, integration of environmental concerns should also mean that the EMS and its results are monitored as part of overall monitoring of the agency's activities.

4.6 Different types of agencies

In future efforts to implement environmental management systems, it should be recognized that such activities will, and should, proceed along different lines at different agencies, depending on the functions they discharge.

For agencies already active in the environmental sphere, the introduction of environmental management systems has been of help in *structuring* and *defining priorities* for efforts in this area. For authorities that had not previously addressed environmental issues, the process has also helped to *identify* and *give prominence* to such issues. With reference to these variables, we have identified four fundamentally different groups of agencies. Some agencies may in practice belong to more than one group.

- 1) Office-based agencies which for the most part only exert direct impacts on the environment through their office practices, use of premises and travel policies. They have not traditionally focused on environmental issues, and often lack expertise and experience in this area. Typical examples of this type may be found among the agencies that have been given simplified EMS assignments.
- 2) Agencies with significant direct environmental impacts arising from construction and civil engineering work, exploitation of natural resources, or use of substances hazardous to health and the environment. Many of these authorities have not traditionally focused to any great degree on environmental issues. Considerable expertise and experience often exists regarding specific environmental issues, but a broader, more integrated approach may be lacking.
- 3) Agencies whose core activities have indirect environmental impacts and which have not traditionally addressed environmental issues in a systematic manner. A broader, integrated approach to such issues may be lacking.
- 4) Agencies with specific environmental terms of reference, whose overall activities or a substantial part of them relate to the environment. They have significant indirect impacts on the environment. Some of them are responsible for pursuing the national environmental quality objectives and/or have specific assignments relating to ecologically sustainable development. In general, they have considerable environmental expertise and a good overall, integrated approach to environmental issues.

5 Recommendations

The evaluation undertaken forms the basis for the following recommendations, which are intended to promote the ongoing process of implementing environmental management in central government.

5.1 Use the system of performance management

Problem

The agencies call for clearer signals from their principal, the Government, regarding the implementation of environmental management. The environmental management system they have been asked to introduce fits in well with the Government's performance-based results-oriented approach to the management of public bodies. The agencies wish to engage in a dialogue with their respective ministries concerning the direction of their environmental improvement efforts and the results expected and achieved. Only ten per cent state that their ministries have followed the work they have done in this area.

Our assessment is that the lack of response from the Government is damaging to the motivation of agency managements. Insufficient motivation on the part of management is the reason we judge to be most important in explaining why agencies fail to give priority to their environmental management systems. They are unable to see the relevance of these systems to their core activities. The lack of response from the relevant ministries helps create the impression that they do not give priority to EMS implementation, either. Success hinges crucially on an agency management that is clear about its commitment, provides the necessary resources and monitors progress in performing the task it has set.

Recommendation

Communication between government ministries and agencies regarding environmental issues needs to be improved. Environmental management systems can provide an effective tool in this context, since they offer a systematic approach and an opportunity to see the overall picture and assess what is important. Adequate attention to environmental management on the part of the ministry concerned is important in motivating agency managers.

Agencies' environmental management efforts provide the Government with the basic knowledge it needs to develop the state's role in the promotion of sustainable development. In their dialogue with agencies concerning the results achieved, in their appropriation directions and in other ways, ministries could give clearer signals concerning the direction and level of ambition of efforts to improve environmental performance. Different assignments relating to ecologically sustainable development could be better coordinated and overlapping avoided.

5.2 Emphasize and give priority to indirect environmental aspects

Problem

According to the Government, special effort should be devoted to the indirect environmental impacts of agencies' activities and to preventive measures with the aim of achieving ecological sustainability. Few agencies report that they have a structured approach to handling the indirect environmental aspects of their operations. They lack methods and good examples. Several authorities stress that integrating environmental concerns into their activities is the most important step in improving their environmental management system.

Many agencies report that, in their initial enthusiasm, they attempted to tackle too many environmental aspects of their activities at once. They set the bar too high, resulting in unrealistic resource requirements and, at the next stage, far too many objectives and targets, which were not achieved. Such a lack of focus can be detrimental. A conspicuous feature of agencies with effective environmental management systems is that they have been quite ruthless in setting priorities for where they invest their resources. Limiting one's efforts is a key to success. Once an agency has developed and introduced its EMS at an administrative level, it can further refine the system by simplifying it, defining priorities and focusing on the environmental impacts of its activities.

Recommendation

Environmental management needs to be better adapted to agencies' activities, in order to deal with those aspects of their operations that can give rise to significant environmental impacts through their influence on the actions of other parties – i.e. their indirect environmental aspects. To give an impetus to agencies' efforts to tackle indirect environmental impacts, ministries must make demands and show an interest in and follow up the results achieved.

Focusing reporting to the Government on the environmental dimensions of core activities can be a way of putting indirect environmental aspects on the agenda. There is a need for special projects to develop methods to monitor and measure indirect environmental impacts. Simple indicators are not sufficient; what are needed are more advanced assessments of an evaluative character.

5.3 Improve monitoring and auditing of environmental management systems

Problem

Monitoring and auditing are one of the linchpins of an environmental management system. They are needed to assess results and progress towards existing goals, to provide a basis for corrective action, or to define more demanding goals. They are also important as a basis for communicating the results of environmental management efforts within and outside the agency and for reporting back to the Government.

Only a small number of agencies have carried out audits. Some have found it difficult to sustain their EMS over an extended period, one reason being uncertainty about how to monitor and audit their environmental improvement efforts. Among other things, they say that they lack tangible tools for monitoring and continual improvement. They feel that the assignment given to them by the Government does not make it sufficiently clear how auditing and continual improvement should be undertaken. The biggest difficulties relate to the indirect environmental aspects of their activities.

Our assessment is that existing shortcomings in the area of monitoring and auditing are one of the most serious threats to central government agencies' environmental management systems.

Recommendation

Both internal and external auditing of environmental management systems are important tools in maintaining a sustained commitment to environmental management and continual improvement. In our view, if a less formalized EMS is chosen, more general monitoring of an agency's activities can in certain cases provide an alternative to auditing of the system.

External audits can for example be conducted by other authorities, on the basis of an exchange of services (second-party audit), or by a certification body or an independent organization with the status of the Swedish National Audit Office (third-party audit). Second-party audits can also be expected to have a beneficial spin-off effect in the form of a mutual exchange of experience regarding environmental management. They probably represent an economical approach to external auditing.

Third-party audits, preferably by a certification body, could be a requirement in the case of agencies with major direct impacts on the environment. Such audits could be performed both within and outside the framework of certification.

There are indications that the environmental review carried out at the beginning of the environmental management process does not always identify the most important environmental issues. Even agencies that have been given a simplified EMS assignment say that their activities have indirect environmental aspects. If environmental reviews were adequately performed and assessed, all the different agencies could be given the same assignment in this area. Expert scrutiny of these reviews would enable resources to be targeted on the areas with the most serious environmental implications; in particular, such a process should focus on how agencies have identified and assessed significant environmental aspects in relation to the national environmental quality objectives.

5.4 Make reporting on progress relevant to needs

Problem

The annual reports submitted by agencies to the Government are used only to monitor the actual introduction of their environmental management systems. No one has been given the task of scrutinizing and assessing the substance of those systems. It is difficult on the basis of the reports submitted to judge whether environmental management activities have been successful, which could partly explain why government ministries have in general shown little interest.

One reason why the ministries do not discuss the direction and level of ambition of environmental management systems and why the process of EMS implementation does not give rise to action on their part could be that these annual reports generally do not supply the information they need.

Nor do the form and content of the reports provide the monitoring of progress which agencies themselves require. In our view, there is a danger that these annual reports, with their focus on the process and on certain indicators, could obscure the need for internal and external auditing and undermine interest in other types of monitoring that would be more useful to the agencies concerned.

Recommendation

Annual reporting to the Government on progress in introducing environmental management systems and on their effects should continue to provide support for and an impetus to agencies' efforts in this area. However, the forms which it assumes should be reviewed, to make it relevant to each particular agency and to ensure that it provides the basic information the ministries need to guide agencies' activities in an ecologically sustainable direction. According to the guidance issued by the Government Offices, reporting should form a basis for the dialogue between ministry and agency on expected and achieved results and on related budgetary issues (the 'performance dialogue').

To avoid creating an unrealistically heavy workload, and to permit an overall assessment of what has been achieved, reporting on the results and effects of an agency's environmental management system should be coordinated in terms of timing and content with other reporting to the Government. Since an EMS is intended to integrate environmental concerns into an organization's overall operations, it is natural to report on the results of this system in conjunction with reporting on the agency's activities as a whole. This will enable the effectiveness of the EMS to be assessed at the same time as overall operations are reviewed. We have not adopted a position as to who should carry out such a review.

5.5 Continue to support the process

Problem

The use of environmental management systems is still in an initial phase, and a great deal of further development is still required. Only a small proportion of the 230 agencies can be regarded as self-sufficient and relatively independent of support in this area.

Recommendation

In our view, there is a need for continued support, chiefly with regard to adapting environmental management systems to agencies' specific activities and achieving more effective attention to indirect environmental aspects. This support should be geared to the different types of agency concerned, with their differing activities and environmental impacts, e.g. major direct and/or indirect impacts or limited impacts. There is a role for an organization that can maintain a broader view and coordinate and offer a lead in this area. Support could be provided by an expert body entrusted with this task by the Government, and in the form of collaboration between agencies with similar activities. Key concerns include:

- Implementing development projects, creating networks and ensuring feedback of experience by disseminating good examples of processes, measures and effects. Collaboration between agencies with shared basic conditions and problems could be useful.
- Developing new guidance and directives.

Environmental management in central government agencies

- Sweden's experience

As part of its endeavour to promote sustainable development, the Swedish Government has decided that 230 central government agencies are to introduce environmental management systems. For a government agency, implementing such a system involves organizing its efforts to address environmental impacts, integrating environmental concerns into its mainstream operations, and setting environmental objectives and targets.

What progress has been made? What has been achieved? Where do improvements need to be made? These are some of the questions addressed in this report, which is a summary of an evaluation carried out for the Government by the Swedish Environmental Protection Agency. The report is aimed primarily at officials and decision-makers working in central government agencies and ministries.

Everyone has a part to play in bringing about ecologically sustainable development: organizations, companies, individuals and public bodies. Central government departments and agencies have a particular responsibility, on account of the influence they exert on others. One role of government agencies is to introduce regulations and implement other decisions and measures that will create conditions and smooth the way for improvements in environmental performance throughout society.