

Green accounts and environmental management

(A summary)



The National Audit Office of Denmark

Green accounts and environmental management

1. Environmental political questions have in recent years been placed high on the political agenda both locally, nationally and internationally. It is generally understood that many activities strain the environment, for instance, discharges are being made to the soil, air and water which should be reduced.

Since 1996, requirements were made to one fifth of the heavily polluting companies, they were asked to make and publicise green accounts. Green accounts shall contain figures for what goes into the company's production: for instance, raw materials, energy and water, and the kind and amount of polluting toxics that are a part of the production processes and which the company discharges in air, water and soil, or which are a part of the products and the waste.

Green accounts have primarily been made in private companies; however, some public institutions are due to the nature of their production obliged to report in accordance with the environmental protection law chapter 5. State institutions like DONG and Statens Serum Institut (prevention and control of infectious diseases and congenital disorder) are required to make green accounts. State institutions, which are not categorised as heavily polluting, are not required to make green accounts. State institutions often include green accounts as part of their output and performance statement.

According to the environmental protection law section 6, all public authorities shall actively meet the objectives of the law when working and operating public institutions and when procuring and consuming.

The report includes the concept "environmental management". The purpose of environmental management is that the institution works systematically with environmental aspects in the institution and establishes procedures, so that the institution may keep the set environmental requirements and thus minimise the use of resources and consequently the pollution which is inflicted on the environment. Environmental management is a preventive and future oriented effort.

The basis for a status statement and for determining future objectives is formed by establishing control of whether the set objectives have been met.

2. The overall purpose of the examination of the National Audit Office of Denmark has been to review and assess form and content of the green accounts in the output and performance statement, and to examine to what extent the green accounts are being included in the management process. On the basis of the examination, the National Audit Office of Denmark has put forward some recommendations for the ongoing development of green accounts in state institutions.

Some of the purposes of the examination have been

- to map rules and guidelines for making green accounts
- to review state institutions' green accounts including assessing the usability of the green accounts and the environmental and financial effects
- to assess to what extent the green accounts are included in the management process
- to present recommendations for the ongoing development of green accounts in state institutions.

3. The examination is based on a review of the green accounts which have been presented as part of the output and performance statements for 1999 and 2000.

The National Audit Office of Denmark reviewed the accounts in order to disclose to what extent they included

1. information about environmental achievements (data on use of, for instance: electricity, water, heat)
2. observations of and explanations to the development in environmental achievements (for instance: electricity, water, heat) and self-critical assessment of objectives and results
3. information about environmental initiatives divided among parameters such as electricity, water, heat, disposal, paper, IT equipment and office equipment, canteen, cleaning and green procurements (environmental information in addition to information on electricity, water, heat) and
4. management aspects including environmental targets, environmental policy, environmental plan of action, environmental management, energy management and a green procurement policy. In addition to this, information of significant resource and environmental parameters (in other words, the institution's use of resources and the inflicted pollution).

On the basis of reviewing the green accounts for 2000, 40 institutions were selected for a questionnaire, which partly included basic questions about the green accounts, and partly questions about environmental management. The questions about environmental management were phrased and based on the basic management model: planning, execution, control and follow-up.

Guidelines for green accounts

4. The examination showed that only heavily polluting institutions were required to present green accounts, therefore, it is voluntarily for most state institutions whether or not they present green accounts. There are, however, a number of laws and orders for procurement and energy management requiring state institutions to report their procurement policy, plans of action, and use of energy to respectively the Danish Environmental Protection Agency and the Danish Energy Authority and to report on whether they have implemented energy savings devices. In addition, the environmental protection law generally instructs public authorities to actively encourage energy conservation and the reduction of environmental strain.

The preliminary lessons learned in private companies and partly with the state energy management arrangement are that they primarily have had a positive effect on the companies/institutions financially, environmentally or organisationally.

Analyses of state green accounts

5. In the period 1997-1999, an increasing number of institutions made green accounts. In 1997, 47% had made green accounts as part of their output and performance statements. In 2000, the number of institutions making green accounts declined, which in particular may be ascribed to downgrading of the area, due to lack of resources.

The institutions stated that the major objectives of making green accounts were to strengthen the environmental work in the institution and to inform the departments, staff and the public.

6. Most green accounts include primarily information about the use of electricity, water and heat. Only half of the accounts included information about environmental initiatives regardless that this information shall be reported to respectively the Danish Environmental Protection Agency and the Danish Energy Authority in accord-

ance with the arrangement of the energy effectiveness in the state institutions and the circular about environment and energy considerations of state procurements.

13% of the institutions informed in their green accounts for 2000 that they had energy marking, whereas 7% informed that they had energy management. Therefore, only a few institutions included the information in their green account which they, according to the energy management arrangement, had to report to the Danish Energy Authority.

7. The green accounts for 2000 vary a lot in form and content with respect to extent and kind of environmental information. This was, however, expected as the green accounts should be adapted to the individual institution taking into consideration its use of resources and environmental strain.

In addition, the examination showed that it is not possible to compare the institutions' environmental data – their green accounts, because the consumer key figures for, for instance, electricity, water and heat were not available, or had not been calculated homogeneously.

The effects of the green accounts

8. The examination showed that the majority of the selected institutions were able to inform of one or more positive environmental effects after having made the green accounts, for instance, 28% of the institutions informed that they had obtained environmental improvements. Generally, the environmental improvements may not apparently be seen in equivalent financial savings due to price and levy increases. Of the institutions asked, 45 % had experienced savings, whereas 25% had seen an added expenditure. In some cases, the added expenditure revealed initial investments to environmental saving activities, which for some would lead to reduced expenditure over time.

The National Audit Office of Denmark noted that $\frac{3}{4}$ of the institutions had made analyses of exactly which initiatives resulted in a fast financial saving, furthermore, several institutions pointed out the following areas as financial saving: electricity, water, heat and disposal which saved money rapidly.

Background and analysis of environmental management

9. The examination showed that only a minor part of state green accounts included information about the management of the environmental aspect, in other words, that management aspects such as environmental targets, environmental policy/environmental plans of action, information of significant resource and environmental parameters, energy management and a green procurement policy were part of the accounts. Working systematically with environmental management is still on a very early stage in many state institutions.

10. Implementing environmental management in counties and municipalities have shown that environmental management is a suited management tool for increasing systematically, follow-up and evaluation of the environmental work, which have created results by way of environmental improvements. Lessons learned have shown that half of the companies in private companies had obtained financial advantages when establishing environmental management.

11. Among the relatively few institutions, which in the questionnaire of the National Audit Office of Denmark declared that they had implemented environmental management, the majority informed that they had obtained financial savings and about half of the questioned stated that the environmental work had resulted in environmental improvements. This is also illustrated in the National Audit Office of Denmark's description of environmental management systems in the Danish Environmental Protection Agency and the Royal Danish Administration of Navigation and Hydrography, which are among the institutions well under way in relation to environmental management. Both institutions have consequently obtained financial as well as environmental improvements.

The examination showed basically that the part of the institutions who had implemented environmental management obtained financial savings and environmental improvements. The conclusion is consequently that the probability for obtaining environmental improvements and financial savings is larger in institutions that have introduced environmental management than in institutions without environmental management.

If a more coherent and systematic environmental effort in state institutions is carried out, the National Audit Office

of Denmark finds that the possibilities for financial savings and major environmental improvements are within reach.

Further development of green accounts and environmental management

12. The National Audit Office of Denmark finds that there are two primary objectives for making green accounts. The first is to increase the incentive to create environmental improvements and at the same time – to some extent – to obtain financial savings. The second purpose is to illuminate the responsibility of an institution in relation to the surrounding environment and by giving information to interested parties.

The results from the National Audit Office of Denmark's questionnaire and the lessons learned with private companies' green accounts, and partly the energy management arrangement have shown that the possibilities for environmental improvements and financial savings are good when systematically working with environmental aspects. The National Audit Office of Denmark finds, therefore, that state institutions' environmental work should be strengthened by having even more state institutions implementing environmental management and by letting them present green accounts.

13. It is the opinion of the National Audit Office of Denmark that the efforts should correspond to the outcome and, therefore, it will not necessarily be relevant for minor administrative institutions to use a lot of resources on making a green account, much less establish an environmental management system. Reporting an institution's most significant use of resources, environmental effect, and of initiatives to reduce use and induced pollution should be basic elements in a green account. The environmental management systems may be established in institutions that have been working with environmental issues for some time, and wants to systematise environmental work in order to obtain additional environmental improvements and financial savings, and to ensure that the use of resources and the environmental strain stays on a low level.

14. If the information in a green account should be interesting for other than merely the institution itself, the information should be reliable and comparable to information in other green accounts. Therefore, information on

use of resources and environmental strain should – if possible – be based on measures and include key figures that are similar for all accounts. Homogeneous and reliable key figures will make it possible to carry out cross-institutional benchmarking and hereby also make it possible to outline a relevant level of ambition for the environmental objectives in the individual institution.

The National Audit Office of Denmark finds that the information in a green account should be based on fixed concepts, standards and methodology and that the requirements to the presentation of an account's key figures should cover the institution's most significant environmental parameters. Hereby, the basis for auditing green accounts would be improved. In this report, the National Audit Office of Denmark outlined proposals for indicators/key figures for selected environmental parameters on the level of an institution.

15. All state institutions should, however, regardless of whether they present green accounts or not have valid figures for their own use of, among other things: electricity, water and heat to ensure that they only pay for the institution's actual use. Hereby, the incentive to encourage an environmental friendly operation is also increased. Electricity, water and heat are the most significant use of resources in most state institutions. The institutions are also obliged to make environmental friendly procurements and to report of their environmental friendly procurement policy and plans of action to the Danish Environmental Protection Agency.

16. The National Audit Office of Denmark finds that the green accounts and environmental management should be strengthened in the state. First of all, all state institutions are obliged to encourage environmental improvements. Secondly, the examination has shown that the institutions which focus on the environment by way of making green accounts have obtained environmental improvements and to some extent financial savings. Thirdly, half of the institutions present green accounts at present time.

The National Audit Office of Denmark has therefore encouraged that the Ministry of Finance includes this when reviewing the arrangement of the output and performance statements, including considering whether green accounts should be made mandatory, at least for institutions of a certain size.

This should also be seen in the light of the fact that state institutions at present time have to report certain environmental information to various authorities, information which the green account also often includes. If it is decided to make green account mandatory, it should be made simpler, for instance, that the individual institution exclusively reports environmental information in green accounts which hereby covers all information needs for interested parties.

17. The ministries which were included in the hearing process subsequently told the National Audit Office of Denmark that they did not have any comments or are positive to the report and the recommendations about further developing green accounts and environmental management in the state.

The Ministry of Finance has subsequently declared that it works on making a new way of reporting, which is shorter and more focused than the present output and performance statement. The Ministry of Finance considers whether new accounts – including green accounts – will be incorporated in the new proposal for a new way of reporting for state institutions. It is, however, the Ministry of Finance's opinion that it will not be very relevant for a majority of state institutions to make green accounts when making the annual report.

18. Considering the results of the examination It is, however, still the National Audit Office of Denmark's opinion that the green accounts and environmental management should be strengthened.

As mentioned a simplification may be made of reporting environmental information, which the institutions are obliged to follow according to the rules of procurement, use of energy, energy effectiveness and energy management.

**The examination of
the National Audit Office of Denmark showed:**

- that it is voluntarily for most of the state institutions whether or not they will present green accounts, but that in recent years, half of all state institutions have presented green accounts as part of their output and performance statement,
- that according to the environmental protection law, the institutions are obliged to take environmental considera-

tions, and that there are a number of provisions requiring state authorities to report to different authorities their procurement policy, their plans of action, and use of energy and whether they have implemented energy saving devices,

- that the green accounts for 2000 vary a lot in form and content with respect to extent and kind of environmental information,
- The preliminary lessons learned in private companies and partly with the state energy management arrangement are that they primarily have had a positive effect on the companies/institutions financially, environmentally or organisationally,
- that the majority of the selected institutions were able to inform of one or more positive environmental effects after having made the green accounts and that a part also could report on financial savings,
- that only a minor part of the green accounts included information of the management of the environmental effort and that working systematically with environmental management is still on a very early stage in many state institutions,
- there is a need for strengthening green accounts and environmental management in the state,
- that the green accounts should be based on fixed concepts, standards and methodology, and
- that there is a need for simplifying the process of reporting environmental information.