

## EU STRATEGY ON ENVIRONMENTAL ACCOUNTING

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### ABSTRACT

Improved environmental accounting is increasingly seen by corporate managers and environmental advocates alike as a necessary complement to improved environmental decision-making within the private sector. This paper develops an economic approach to the evaluation of environmental accounting's benefits and derives the value, and determinants, of improved accounting information in several production and capital budgeting contexts. Using concepts from managerial economics, finance, and organizational theory, the analysis identifies the types of environmental accounting improvement that are most likely to yield significant financial and environmental benefits.

**Keywords:** *environmental accounting, Economic and Financial Affairs Directorate, Eurostat.*

### 1. WORKING GROUP MISSIONS

In December 2000 a working group on the European strategy for environmental accounting was founded (ESEA). The group gathers statistical services of different EU member countries (Germany, Denmark, Greece, Finland, France, Italy, Netherlands, United Kingdom and Sweden) including the Economic and Financial Affairs Directorate of Environment and the European Environment Agency. Secretariat is provided by Eurostat.

Environmental Accounting in Europe contributes fully and effectively to the demands of information on environmental issues and sustainable development. In this field, the missions of this group refer to:

- The reviews on policies utilizations, on user needs and it also refers to the identification of the areas where environmental accounting can contribute in an optimum way to the goals achievement on a long-term in Europe.
- The contribution to the harmonization of environmental accounting results at EU level, especially when it comes to creating links with other systems indicators such as environmental accounting harmonization and improvement.
- The international manual revision of SCEE (*Systeme de compatibilite economique et environnementale integre*). SCE 2000 Manual was prepared by the London Group on Environmental and resource accounting. In March 2002, the UN Statistical Commission approved the publication SEEE (in cooperation with Eurostat, IMF, OECD and World Bank).

The answer to these concerns refers to:

- The growing demand for integrated environmental information in economic statistics and other resources, including the overall context and frameworks for sustainable development indicators
- The review after seven years of business accounting environment, given that conceptual

phase, tests show that production started regulating in various fields

- The role of environmental accounting is one of a high importance and it answers the need for a systemic approach able to provide integrated assemblies of information on environmental and economic issues.
- ESEA group reunited several times in 2001 and 2002 in order to develop recommendations on environmental accounting and communication by e-mail between meetings. They tried to identify after that the need of users and how to improve links between policy needs and environmental accounting in Europe, in order to effectively use available data in areas where information system shows a competitive advantage.

### 2. USER NEEDS AND POLITICAL DEMANDS

ESEA Group undertook a comprehensive review of user needs at community and national level. Understanding these needs involves the identification of a long-term political vision on specific information requirements and develop data sets to meet this demand. In practice, the uses are numerous and require specific data availability. Political trends that are interested in environmental accounts information are, as it follows:

- Policy is focused mainly on the problem requiring long-term care in which, of a great importance is the supervision of changes in structure (e.g. use of energy and climate, transport, non-renewable resources)
- policies tend to use indicators on the environment as objectives in certain areas (biodiversity, water quality), hence the need for the integrated data sets that link the economic, environmental pressures, environmental status
- concepts of dissociation, eco efficiency and resource productivity, are subjects of great importance
- New political fields that are oriented on products are evaluating integrated product

- policy, international trade and analyzing the impacts of chemicals policy
- Much attention is given to issues concerning the impact of transport, waste management and use of natural resources on the role of economic development and structural changes

Analysis of synthetic results and indicators of data sets allows the evaluation of policies and a better interpretation of the indicators and their potential use. A better informing is needed over structures, especially if we want to understand better the differences concerning levels and trends in all countries. Although primary information are incomplete now, environmental accounting is useful because it provides a framework of evaluation procedures for the missing data, based on other sources. Users give now a greater importance to the analysis and application of environmental accounts when it comes to shaping and determining the forecasts, preparing political projects and implementing them, noticing their impact. Some countries have governmental commissions, advisory or consultative bodies that contribute to the development of environmental accounting, facilitates users exchange and it is a source of official request for environmental accounts. A proactive approach towards users is essential in a context of environmental accounts. User groups shows relatively different needs that need to be taken into account in communication. Therefore, there are required products as in response to the needs of different user groups.

**3. PRIORITIES**

Development of an integrated economic, environmental and sustainability policy, respectively integrating environmental concerns into other policy areas, explains the increasing demand on indicators for measuring progress. Among EU policy initiatives is the sixth action program, which is an EU sustainable development strategy on a sectorial level -the Cardiff process. The main areas that have an interest in all these documents relate to climate change, sustainable transport, nature and diversity, health and environment, use of natural resources, waste management, etc. User needs may differ slightly from one country to another and correspond to specific national endowments. But the main elements of the standard environmental accounts are similar: a selection of natural resource accounts, expenses, activities and environmental taxes, etc. Priorities for future developments include areas like water, waste, including the environmental chapter” (quality of water, air, soil, ecosystems). Based on a profound analysis of the political demand and on the users need, the work group ESEA identified environmental accounting modules who directly respond to this request.

<b>Environmental accounts recommended for a joint implementation</b>	<b>Main needs of UE users</b>
Atmospheric emissions and energy accounts	Climate change, air quality and health, resources and energy efficiency, evaluating trends in emissions, international aspects of sustainability, assessing the direct costs and the costs of planned policies
Water flow accounts (use and supply)	Water framework directive, sustainable use of resources, economic evaluation of projects
The accounting for raw materials flows in the economy	Sustainable use of natural resources, decoupling economic growth and resource use
Spending accounts for environmental protection and environmental industry	Framework Directive on water, waste and resource management, economic policy analysis, environmental assessment activities and employment
Environmental taxes	Climate change, modeling green taxation and fiscal policy, economic instruments and economic evaluation
Environmental forestry and active resources	Ustainable use of natural resources, climate change, nature and diversity

**4. THE ADDED VALUE AND LIMITS OF ACCOUNTING**

Environmental accounts are tools that offers a good cost-performance report for the following reasons:

- they enable integration and optimal use of dispersed and incomplete primary data and also contributes to the existing data structure, improve coherence and serve as a basis for evaluation;
- are integrated into the data set that correlates environment information with economic agents;
- allow obtaining consistent sets of correlated indicators;

- represents consequently an essential basis for analysis and modeling concerning environment and economy;
- guarantees international comparability of results because of the frames, concepts and common methods;
- play a role in the Systemic informational environment in which accounting staff can help guide and develop environmental information to ensure greater consistency with economic and social information and other uses.

There are considered different types of analysis concerning environmental accounts. A minimum of analytical applications is useful in the process of compiling and disseminating imputation emissions, through some techniques that involve inputs and outputs. Other applications are related to decomposition analyses and estimates on goods and services.

**5. LIMITATION OF ENVIRONMENTAL ACCOUNTING**

**Environmental Accounting** suffers from various and serious limitations as it follows:

- There is no standard accounting method.
- Comparison between two firms or countries is not possible if method of accounting is different which is quite obvious.
- Input for EA is not easily available because costs and benefits relevant to the environment are not easily measurable.

- Many business and the Government organizations, even the large and well managed ones, don't adequately track the use of energy and material or the cost of inefficient materials use, waste management and related issue. Many organisations, therefore, significantly
- underestimate the cost of a poor environment performance to their organization.
- It mainly considers the cost internal to the company and excludes cost to society.

**6. STATUS QUO**

Environmental work in accounting performed by Eurostat and the Member States is quite diverse. The working group's task is to examine the experience of Member States and on an international level, to analyze the definitions and classifications in force concerning primary data in order to evaluate the availabilities and to identify the political needs in this area.

Environmental accounts have evolved from an incipient manner to a business organization form of modules adapted to a developing interest in the relevant accounts. Each module is connected with other modules and one of the tasks of environmental management accounts is to ensure consistency of individual modules in order to allow information to be taken directly from source. It is also important to use the best practices of national accounting for their application in environmental accounting. Activity domains of environmental accounting are as follows:

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We mention the progress in other fields, even though the methods and the results are still in an experimental stage and the primary data aren't available yet. It is about soils, ecosystems, water, waste and specific substances accounts, including recreational and

environmental functions of forests. A development of these modules is necessary and it must be planned according to the political requests. Regarding this, we present the new statistic regulation (SBS, NACE REV. 1.1 – concerning waste management statistic).

The environmental accounting modules proposed by SCEE 2000 include natural resource accounts, physical fluxes accounts, monetary accounts, etc.

## 7. RECOMANDATIONS FOR AN ENVIRONMENTAL ACCOUNTING STRATEGY AT AN EU SCALE

By creating an environmental accounting at a community scale, Eurostat began to standardize collecting data on different areas. It was agreed on the capitalization and establishing a working program that can ensure regulated and on time production of some environmental module accounts. The environment is a very complex domain. Providing relevant information involves the use of data sets.

## 8. ENVIRONMENTAL ACCOUNTS APPLIED AT COMMUNITY LEVEL

The priority areas recommended for establishing harmonized reports are:

- atmospheric emissions and energy accounts
- Water flow accounts (water supply and use)
- material flow accounts of the economy
- environmental taxation
- Forestry accounts (work wood)
- Subsoil asset accounts (Oil and Gas)

The development of these accounts is made on modules, in terms of keeping the integrity of such elements.

Accounts can serve as a framework for obtaining short-term forecasts and indicators on sustainable development.

### 8.1. Priorities for tracking development

It is essential to follow the development in other areas of environmental accounting. The Member States have proposed three types of experimental accounts concerning: development on a short-term, middle-term and long-term. Considering the political request on information and the estimated costs, it is proposed the following classification:

- Areas for a short term development and for an experimental application in EU states.

- Waste accounts
- Soil accounts
- Water quality accounts
- Accounts on water emission
- Accounts concerning the use of feedstock
- Areas for a middle term development and for an experimental application in EU states.
- Soil accounts
- accounts of fisheries and fish
- Water quality accounts
- resource management expenditure (for water)
- Economic instruments (grants)
- Areas for a long term development and for an experimental application in EU
- environmental and recreational functions of forests
- ecosystems accounts
- accounts of specific substances
- Other management expenditure of resources
- economic instruments
- expenses related to natural and economic disasters.

## 9. CONCLUSIONS

Eurostat in conjunction with the working group "Environmental economic accounts", usually collects information for other fields also. Considering the high operationality accounts it is necessary to improve the comparability between countries and also improve the harmonization of data series.

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