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Accounting for the Environment

- The European Development -

Economic and social aspects of our society influence the pressures that are exerted on environmental systems. The environmental accounting framework (SEEA, 2003) is particularly useful to assess the influence of the economy on the environment both directly and indirectly. The environmental accounts have the advantage that they are consistent with National Accounts. Furthermore, they can be coupled to input-output tables, which make it possible to perform in-depth analyses of the relationship between the economy and the environment. In this paper we will summarise the activities in the European countries and the main future challenges in order to Account for the Environment.

The economy is a complex system of which extraction of natural resources, production, consumption, technology, investment, imports and exports, and release of wastes (and pollution) are just a few of the many different interrelated dimensions. All these different aspects of the economy may have detrimental or beneficial effects on environmental pressures.

The System of Integrated Environmental and Economic Accounting (SEEA) has been developed to link environmental and economic statistics. An important characteristic of environmental accounting is that the data are consistent with the National Accounts which mean that the environmental data can be directly compared to well known macro-economic indicators such as GDP, inflation and investment rates, developed in the System of National Accounts (SNA).

Specific accounts in the SEEA cover e.g. (1) natural resources such as forests, oil and gas (stocks); (2) flow accounts for material use, air emissions, water, waste; and (3) economic accounts for environmental expenditure and revenues, eco-industries and taxes. Combined with the national accounts, the environmental accounts provide a powerful tool to analyse to

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what extent our current production and consumption patterns are degrading natural resources or are polluting the environment. Up to now there no work to put these pressures in relation to potential thresholds in the environment beyond those the degradation becomes irreversible and how the degradation of the environment harms the economy. In addition the data includes information about policy measures such as environmental related taxes or subsidies.

Environmental Accounts can answer tricky political questions and give a complement to environmental statistics: are we reaching the desired decoupling (economic growth with less and less impact on the environment)? Are we respecting the Kyoto targets in terms of greenhouse gas emissions or are we simply exporting the emissions by relocating production activities? What are the more or less harmful economic sectors for the environment? What is the productivity from natural resources at European level? How much employment is generated by environmental protection? Are eco-industries growing? Are Market-based policy instruments increasingly used?

ENVIRONMENTAL ACCOUNTS IN THE EUROPEAN COUNTRIES

Eurostat has together with European countries taken the strategic decision to adopt the environmental accounts as the main conceptual framework to collect and analyse environmental data. Its robustness is out of question and its main strength is the possibility to link environment with economy and other dimensions of sustainable development (social, institutional). The European Strategy for Environmental Accounting (ESEA) was adopted by the Statistical Programme Committee in 2003¹. The first priorities are to develop

¹ Further policy documents underlining to the importance of Environmental Accounts include e.g.

- COM (94) 670 Directions for the EU on Environmental indicators and Greened National Accounting - Integration of Environmental and Economic Information Systems.

<http://eur-lex.europa.eu/Notice.do?pos=2&page=1&lang=en&pgs=10&nbl=1&list=202866:cs,&hwords=>

- Decision on the Review of the 5th Environment Action Programme (2179/98/ EC of 24/09/1998) which Article 7 refers to the promotion of satellite accounts to national accounts:

http://eur-lex.europa.eu/LexUriServ/site/en/oj/1998/l_275/l_27519981010en00010013.pdf

- the renewed SDS adopted by the European Council in June 2006, Ref: paragraph 17 of European Council Conclusions,

http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec/90111.pdf and: _Renewed SDS:

http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec/90111.pdf

Furthermore, the Council of Europe has adopted recommendation number 1653 in 2004 for promoting environmental accounts as a sustainable development tool.

comparable accounts for air emissions, economy-wide material flow accounts and environmental expenditure and revenue accounts for all European countries. A second set of priorities is to achieve good coverage for the accounts on waste, water and environmental taxes. The European countries have been specifically active in the development of methodology of different environmental accounts and for quite a number of additional areas environmental accounts have been developed. Along with Eurostat a number of European countries are active in the development and revision of the environmental accounting framework, SEEA, expected to be finalised in 2012.

For the last 10 years, a strong effort is being done by the European Commission to encourage the European countries to compile Environmental Accounts both providing methodological and financial support to pilot projects. The environmental accounts framework is now mature and robust enough for comprehensive implementation and analysis of environmental data.

In 2007, Eurostat is performing a study regarding the state of play of Environmental Accounts in the European countries. Out of 29 countries interviewed during the summer 2007, 25 have benefited from EU funding for the purpose of pilot studies. 22 countries have a programme on environmental accounting. Some of the main results from the interview survey are depicted in the figure below.

With respect to the three priority areas, the activities in the European countries are quite comprehensive. 24 countries have developed **air emission accounts**, while 2 more are contemplating to do so in the near future. A total of 23 countries are involved in compiling **economy-wide material flow accounts** or are planning to do so (6). 21 countries are collecting data on **environmental expenditure** and 2 more will follow in the near future.

In a bit more than half of the countries the Environmental Accounts have been used for research purposes and/or for monitoring environmental performance (i.e. indicators). Environmental Accounting was used for analysis and assessment of environmental policies (e.g. regulations, taxes, international agreements) in 7 European countries, and for raising public awareness of environmental problems in 8 countries.

While many countries have been involved in pilot studies, only some countries are presently compiling the accounts on a regular basis. For the three priority areas, 15 countries are compiling accounts for air emissions, 10 for economy-wide material flow accounts, and another 10 countries are active in compiling environmental expenditure statistics as part of **official published statistics**.

During the interviews, the Statistical Institutes were asked if they are encountering obstacles to the work. The main reason for not compiling (more comprehensive) environmental accounts is the lack of resources to do so (24 countries), while lack of appropriate data is experienced to be a major barrier in 21 countries. In a number of countries, the lack of political decision (11) and the lack of legal background (9) to compile the accounts were experienced too as barriers. The interviewed parties in 17 countries were in favour of a legal base for the European Community for the collection of data on Environmental Accounting in order to bypass these difficulties.

SUMMARY

Compared to other areas of statistics, Environmental Statistics and Accounts are rather new, but the area is emerging fast. Conceptual frameworks, availability of harmonised data, coordination between the different actors, they all still need to be further developed, but first robust results are now available to support policy making. The activities in Europe (and worldwide) on Environmental Accounting has been quite extensive in the last decade². Still the first challenge is to further develop and ensure the data availability for Integrated Economic and Environmental Accounting.

Further challenges will be to enable the framework to include the comparison of pressures on the environment with the carrying capacity, accounting for eco-system-service, valuation, additional focus on environmental revenues (besides expenditures), tools to analyse how degradation of the environment harms the economy (today and in the future).

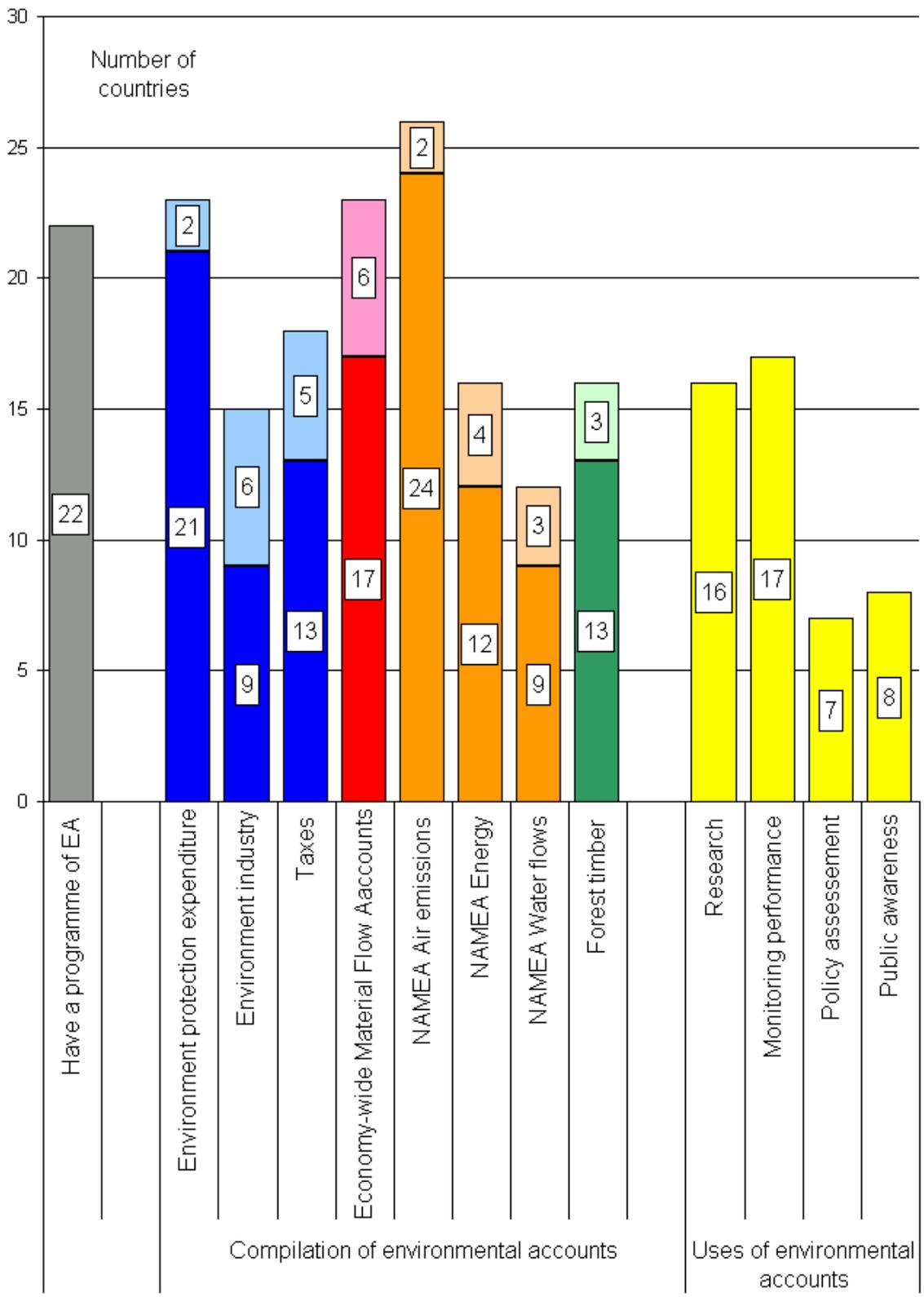
The development of such methodologies will continue to take place not only in cooperation with the European countries but also in cooperation with e.g. the Statistical Division of the United Nations; the connected expert groups, the London Group and the UNCEEA³; and the OECD as it has been the case with the development of the of Integrated Environmental and Economic Accounting (SEEA) and the methodology of Economy Wide Material Flow Accounting.

² To get more information on the Environmental Accounts; developments, projects and pilot studies of the European Countries, please consults the Eurostat dedicated section on Environmental Accounts on

http://epp.eurostat.ec.europa.eu/pls/portal/url/page/PGP_DS_ENVACC/PGE_DS_ENVACC

³ Please refer to: <http://unstats.un.org/unsd/envaccounting/londongroup/> and <http://unstats.un.org/unsd/envaccounting/ceea/default.asp>

Environmental Accounts developed in 29 European Member States and EFTA Countries, the plans for the near future and uses of the Environmental Accounts



Source: Interview survey carried out on behalf of Eurostat in June/July 2007