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Report to the Council and the European Parliament on the execution of the four-year development programme relating to the environmental component of Community statistics adopted under Council Decision 94/808/EC of 15 December 1994

(presented by the Commission)

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1. SUMMARY

Council Decision 94/808/EC of 15 December 1994 established a four-year programme to develop the environmental component of Community statistics.

Under this programme, the Commission is establishing the regular official statistics needed to measure both the **pressures** on the environment resulting from human activities, and also the economic and societal **responses** aimed at reducing these pressures. These statistics are to be collected and transmitted to Eurostat by national statistical services using harmonized definitions and methodologies. Special emphasis is given to the requirement for integrating environment statistics into other Community statistics and to the use of international statistical standards, as well as to coordination with the European Environment Agency.

The present report is submitted in accordance with Article 6 of the Decision. It describes the actions undertaken, and the results achieved, in each of the areas of work defined in the Decision. It also provides an overall evaluation of the programme.

The review of actions and results shows that the Commission and the Member States have succeeded in developing the frameworks, including harmonized definitions and methodologies, needed to proceed with the regular transmission of official statistics in several of the most important work areas listed in the Decision, notably waste statistics and environmental expenditures. However, progress on establishing regular data flows has been slower than expected, due both to the amount of preparatory work involved and to lack of resources in Member States.

The report also draws attention to the successful coordination which has been achieved with the European Environment Agency. As foreseen in the Decision, the Agency is making extensive use of statistics obtained via the official statistical systems of Member States in order to carry out its own tasks, notably that of regular reporting on the state of the environment.

The report concludes that, in order to complete the various methodological projects currently under way, notably in the areas of environmental indicators and green national accounting, and also to establish regular data flows, it would be appropriate to propose a prolongation of the four-year programme.

2. BACKGROUND AND OBJECTIVES

The increasing number and coverage of existing and proposed Community actions on environment in the late 1980s produced a strong demand for data and information relating to environment policy. Several developments aimed at satisfying this demand:

- in 1985, the Council adopted a Decision setting up the CORINE Programme.
- in 1987, a specialised unit for environment statistics was established within the Commission, in Eurostat.
- in 1989, the Commission put forward a proposal for a European Environment Agency (EEA) and a European Information and Observation Network (EIONET).
- in 1989, the Commission proposed a four year development programme directed at the statistical data related to environment.

The Council Decision adopting a 4-year programme on environment statistics was finally adopted by the Council in December 1994. Its objective is to develop the environmental component of official statistics and to be available in all Member States.

Under Article 6, the Decision requires a report to the European Parliament and the Council; the present report sets out to fulfil this obligation by providing

- a description of the actions undertaken by the Commission, together with the results achieved so far;
- an evaluation of the development programme,

In this context, "official statistics" refers to those data which are normally collected by or under the responsibility of national statistical services, which in most Member States have the primary legal responsibility for collecting statistical data from individuals, enterprises and other economic entities as well as from public administrations. Within the Commission, statistics are formally the responsibility of Eurostat.

In proposing this development programme, the Commission saw the need to encourage the transfer of expertise on environment statistics between national statistical services, taking advantage of the already well-developed capabilities of certain Member States. This would lead to a situation in which all national statistical services would have the capacity to collect, process and validate a wide range of environmentally-relevant statistics. For maximum efficiency, the collection of environment statistics would be integrated as far as possible into existing data collection mechanisms such as the existing surveys and registers for industry and agriculture.

In addition, the Commission proposed to promote the use of agreed common methodologies in order to harmonize such environment statistics. Wherever possible, these methodologies would also be agreed at an international level so that

the resulting statistics would be comparable at a global level, while taking account of Community interests.

Both data collection and methodological harmonization would, within the limits of the available resources, cover the full range of statistical variables and economic activities set out in Annex A of the Decision.

It was envisaged that such official statistics and information collected by the EEA via EIONET would be complementary, thereby satisfying the Community's very broad information needs in relation to environment policy and to the environmental aspects of other policies. The Decision therefore contains specific provisions for co-ordination between Eurostat and the EEA (Art. 1, 4, 6 and Annex B).

3. POLICY CONTEXT: ENVIRONMENT

The present environment policy objectives of the EU are set out in the Fifth Environmental Action Programme (5EAP)[1].

In particular, the 5EAP refers to the importance of "exploiting and strengthening the experiences and capacities [...] traditional official statistics in the economic and social fields". There is a direct link between the role of statistics and the 5EAP's emphasis on target sectors and on instruments. In fact, statistical information is itself identified as an "instrument" in the section of the 5EAP on "broadening the range of instruments".

4. POLICY CONTEXT: STATISTICS

Current Community policy on statistics in general is set out in the Council Decision 93/464/EEC[2] adopting a framework programme for priority actions in the field of statistical information 1993-1997 (the "Statistical Programme"), and in Council Regulation (EC) No 322/97[3] on the role of Eurostat as regards the production of Community Statistics. These texts include, inter alia, provision for the Commission to be assisted by the Statistical Programme Committee (SPC) established under Decision 89/382/EEC, Euratom[4]

Decision 93/464/EEC on the Statistical Programme foresees the need for "specific implementing" actions in various domains. The SPC provides a channel by which the services of Member States which are responsible for implementing statistical actions can express their opinions regarding the desirability and feasibility of such

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[1] Resolution of the Council and the Representatives of the Governments of the Member States, meeting within the Council of 1 February 1993 on a Community programme of policy and action in relation to the environment and sustainable development. OJ No C138, 17.5.1993, p1.

[2] OJ No L219, 28.8.1993, p1.

[3] Council Regulation (EC) No 322/97 of 17 February 1997. OJ No L52, 22.2.1997

[4] OJ No L181, 28.6.1989, p47.

actions. For the development of environment statistics, the present Decision contains provisions for the Commission itself to adopt certain types of measures after consulting the SPC. However, before the Decision was adopted, the Commission gave assurances to the Council that this provision would be used sparingly, and without any intention of by-passing the decision-making powers of the Council and the European Parliament. In fact, up until now, the Commission has not made any use of this provision.

5. RESOURCES

The financial statement attached to the Decision on the four-year development programme for environment statistics indicated planned expenditure (commitments) of 9 Mio ECU over the period 1994-1997, using the normal budget resources for statistics in Chapter B5-6 (see Table 5). The total resources actually available were slightly higher (about 10.4 Mio ECU). Resources available from Chapter B5-6 were lower than intended, but additional resources were made available from Chapter B4-3 (environment) and other budget lines, as shown in Table 5. The extra resources from Chapter B4-3 were made available principally to support the rapid execution of the actions listed in the Communication on environmental indicators and green national accounting (see Point 9).

6. ACTIONS AND RESULTS

Actions under the present Decision can be classified in two ways, by a distinction (Article 2(3)) between information on:

- the pressures on the environment resulting from human activities;
- economic and societal responses to environmental policies and to changes in the state of the environment;

as well as

- by work area (Annex A(2));
- by type of data (Annex A(2));
- by type of action or method (Art. 2(4) and Annex A(3)).

For clarity, this report presents actions classified by "pressures" and "responses" and by work area. Cross references to "type of data" and "type of action" are provided in summary tables (Table 2, Table 3).

7. PRESSURES RESULTING FROM HUMAN ACTIVITIES

7.1 Common projects

Common projects on pressures resulting from human activities include work on **emissions**, on **waste statistics** and on **water statistics**. They also include work to

develop **pressure indicators and indices** capable of measuring the pressures resulting from all economic activities (see 9.1).

7.2 Emissions

Emissions: Eurostat collects data on emissions of some air pollutants via the regular joint Eurostat-OECD questionnaire on the state of the environment (see 10.1).

Eurostat also provides statistics and related technical information as input to the CORINAIR air emissions inventory which is managed by the European Environment Agency. CORINAIR provides a harmonized framework for compiling air emissions data in all Member States, with close links to national emissions inventories.

In addition, Eurostat and the European Environment Agency are working on a set of "common tools" for a future Integrated Emissions Inventory, which will cover emissions to air, water and land for a wide range of pollutants. Within this project, Eurostat has developed a draft standard statistical Nomenclature for Sources of Emissions (NOSE), which facilitates the linking of emissions data to economic activities defined according to NACE.

For emissions from industrial sources, it is foreseen that a Pollutant Emissions Register (PER) will be developed under the provisions of Article 15 of the Directive on Integrated Pollution Prevention and Control which was adopted by the Council in 1996. The use of common nomenclatures would enable the PER information to be used in the future Integrated Emissions Inventory.

7.3 Waste statistics

Since 1988, statistics on waste generation and waste management have been collected regularly by Eurostat as part of the regular joint Eurostat-OECD questionnaire on the state of the environment (see 10.1). In order to bring about needed improvements in the coverage and comparability of these statistics, Eurostat has been working with Member States to develop an improved common approach to waste statistics. Several years of studies and pilot surveys led to a draft proposal for a Council Regulation on waste statistics which is to be transmitted by the Commission to the Council and the European Parliament later in 1997.

The draft proposal provides for the regular transmission of statistics on the generation, collection and treatment of waste, including waste recovery and recycling. It covers wastes from all types of economic activity except agriculture, forestry and fishing, together with wastes generated by households. For statistical reporting purposes, wastes are classified according to an aggregated and restructured version of the European Waste Catalogue. The draft proposal also includes detailed coding schemes for waste handling and treatment operations.

This proposal, if adopted, would result in a regular flow of harmonized statistics on waste; in order to minimize the burden on enterprises and other data providers, the proposal has been simplified to include only the essential data needed for the development and monitoring of waste policy.

The Commission also included statistical provisions in its revised proposal for a Directive on landfills, which has already been sent to the Council and Parliament in 1997.

The adoption of legal bases for statistics on waste would signal the willingness of Member States to support a more regular flow of information on waste than is the case at present.

7.4 Water statistics

Since 1988, statistics on water have been collected regularly by Eurostat as part of the regular joint Eurostat-OECD questionnaire on the state of the environment (see 10.1). During the period 1994-1997, effort has focused on improving the completeness and comparability of data on **water resources, sectoral water use** and **waste water treatment**, as well as in developing appropriate indicators. Eurostat proposed improved definitions for these statistics, and requested to Member States to review all data already supplied to Eurostat. In addition, Eurostat is supporting the development of water statistics in Member States where such statistics have not up to now been regularly compiled.

Methodological studies in this area are continuing. One such study has resulted in a methodology for obtaining harmonized estimates of renewable water resources by catchment or administrative area, with the possibility of monitoring available resources on a seasonal basis.

The work already completed should lead to a significant improvement in the quality of the the regular water statistics produced by Eurostat.

7.5 Production and consumption of agricultural and industrial products

In addition to the common projects mentioned above, **pesticide use** and **nutrient balances** have been identified as key areas for improving statistics which measure environmental pressures from agriculture.

Pesticide use: Eurostat has started to compile more detailed statistics on pesticide use than were previously available. In order to improve the availability of data, Eurostat has supported the exchange of information between Member States on the methodology of pesticide use surveys directed to farmers. As a tool for these surveys, a database linking commercial pesticide names to chemical names has been produced. A first publication on pesticide statistics was issued in 1996.

Nutrient balances: Eurostat has started to compile regular nutrient balances for NUTS 3 regions, using a harmonized methodology based on the experience of Member States. These balances are based on the detailed agricultural statistics (livestock numbers and fertiliser use) already collected by Eurostat. The balances provide information on nitrogen surpluses on agricultural land and thus on trends in the potential emissions of nitrogen and other substances to surface and groundwater, and also to the air.

Pesticide and nutrient balance data, together with other data provided by Member States, will be used to produce a set of regular **agro-environment indicators**. These indicators are fully compatible with other Community agricultural statistics,

and together will provide a balanced picture of the economic and social importance of the agricultural sector as well as of the environmental pressures resulting from agricultural production.

7.6 Energy production and consumption

Making use of its already well-developed energy statistics, Eurostat publishes annual statistics on **carbon dioxide emissions** from fossil fuel combustion. These statistics are estimates based on final energy consumption data supplied by Member States, and a set of common emission factors; from 1997, Eurostat uses the default emission factors of the Intergovernmental Panel on Climate Change (IPCC). These statistics can be used to validate both the national inventories of carbon dioxide emissions supplied by Member States under Council Decision 389/93 and also the more detailed CORINAIR emissions inventories (see 7.1).

Other emissions data linked to energy production and consumption are covered by the work on emissions described above.

Although not part of the development programme covered by the present Decision, it may be noted here that since 1994, Eurostat has extended its regular energy statistics to cover renewable energy sources, including biomass, solar energy and wind power (hydroelectric energy has always been included), with data extending backwards to 1989.

7.7 Transport

A range of indicators measuring environmentally-relevant trends in transport and pressures linked to transport has been included for several years in Eurostat publications such as the regular compendium *Environment Statistics* and *Europe's Environment: The Dobris Assessment.* In addition, data on transport-related pressures were compiled for the publication *Road transport and the environment in the European Union.*

7.8 Other domains

The other domains listed in Annex A of the Decision are:

- extraction and consumption of raw materials
- construction and settlement
- leisure and tourism
- population growth, households and social welfare
- public services

These domains are included within the common projects on **emissions, waste statistics** and **water statistics,** as well as on **pressure indicators and indices.**

8. ECONOMIC AND SOCIETAL RESPONSES

8.1 Production and consumption of agricultural and industrial products

A conceptual framework, SERIEE, for statistics on **expenditure on environmental protection**, linked to national accounts has been developed and tested via studies and pilot surveys (see 9.3). Some data on environmental expenditure by industry have been collected via a voluntary questionnaire sent to Member States in 1996, and also via the joint Eurostat-OECD questionnaire on pollution abatement and control expenditure (see 10.1). While availability of such data in Member States has improved since 1994, the data remain incomplete.

In early 1997, the Council adopted a Regulation on Structural Business Statistics[5] which provides a legal base for regular transmission by Member States of statistics on "end of pipe" investments for environmental protection, within the framework of regular industrial statistics, starting with data for 1995. The Regulation also provides for pilot surveys on investments in integrated technologies and on current expenditure for environmental protection. It is hoped that the adoption of this legal base signals an improvement in the ability of Member States to supply data on a regular basis; however, most Member States have requested derogations from the obligation to supply statistics for the year 1995.

Environmental expenditure is a measure of the consumption of certain categories of environmental goods and services. In parallel, Eurostat, in collaboration with OECD, has developed internationally agreed definitions of the **eco-industries** which produce goods and services used for environmental protection. An initial study in 1996, using these definitions, produced estimates of turnover and employment in eco-industries in the EU; it is intended to follow this work by regular data collection in collaboration with Member States.

Eurostat has also collaborated with other Commission services and with OECD in order to arrive at agreed definitions to permit the compilation of statistics on **eco-taxes** and other economic instruments related to environmental protection.

8.2 Waste management

Provisions for statistics on waste management are included within the proposed Council Regulation on waste statistics and the proposed Directive on landfills, and also within the Council Regulation on Structural Business Statistics (see 7.1). The necessary technical preparations have been included within the work on waste statistics in general and, for economic data, within the work on environmental protection expenditure.

8.3 Transport

A set of economic and fiscal indicators related to transport was compiled for the first time in 1996 and published in *Road transport and the environment - energy and fiscal aspects.*

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[5] Council Regulation (EC, Euratom) No 58/97 of 20 December 1996 concerning structural business statistics. OJ No L14, 17.1.1997, p1.

8.4 Public services

SERIEE also provides a conceptual framework for statistics on **expenditure on environmental protection** by public administrations. In this context, environmental protection activities include, *inter alia*, waste water treatment (see 7.4) and waste management (see 7.3 and 8.2). Data have have been collected via a voluntary questionnaire sent to Member States in 1996, and also via the joint Eurostat-OECD questionnaire; as for environmental expenditures by industry, the information provided by Member States is somewhat incomplete, although for different reasons.

A study on expenditure on environmental protection by the EU has been completed and the results will be published in 1997.

Statistics on public budgets for **research and development on the environment** are included in Eurostat's regular statistics on research and development budgets. The standard statistical classification used (NABS) was revised in 1994, in collaboration with OECD, with some improvement of the references to environmental research.

Proposals have been formulated for the inclusion of environmental expenditure in the standard statistical Classification of the Functions of Government (COFOG), which is part of the European System of Accounts (ESA).

8.5 Population growth, households and social welfare

Social and demographic indicators are collected and published regularly by Eurostat, and have not been directly the subject of actions under the present Decision. It may be noted that considerable effort has been invested by Eurostat in the improvement of population projections, which are of special interest for environment policy.

Proposals have been formulated for the inclusion of specific items of environmental expenditure by households in the standard statistical Classification of Individual Consumption by Purpose (COICOP), which is part of the European System of Accounts (ESA).

9. FRAMEWORKS

According to the Decision (Annex A), the programme included, as a priority, work on:

- defining an accounting framework for integrating economic data on the environment in overall accounting systems such as environmental satellite accounts and their links with the System of National Accounts and with natural resource accounting;

- contributing to the development of natural resource accounting.

Given the importance attached to this work area, Eurostat and other Commission services engaged during 1993-94 in a fundamental review of options for work in this area. The outcome of this review was the strategy described in the

Communication to the Council and the Parliament on environmental indicators and green national accounting[6], which was adopted by the Commission in December 1994.

This strategy is based on three ideas:

- the objective is to construct statistical instruments for policy guiding and for public information. These instruments should link pressures, policy fields and economic activities;
- physical as well as monetary information should be included;
- the accepted concepts of national accounting should be used as far as possible.

In order to achieve the stated objective, the Commission is working on five parallel actions:

Action 1	Production of a Handbook laying out an agreed common framework for "green national accounting"
Action 2	Establishment of a European System of Environmental Pressure Indices (see 9.1)
Action 3	Establishment of a European System of Integrated Economic and Environmental Indices (see 9.2)
Action 4	Establishment of environmental satellite accounts to the national accounts (see 9.3).
Action 5	Improving the methodology and enlarging the scope of monetary valuation of environmental damage. This Action is being carried out primarily within the Community RDT programme and does not form part of Eurostat's work programme under the present Decision.

These Actions are being carried out in parallel, starting in 1995, with results becoming available in stages between 1997 and 1999. Such parallel approaches were considered indispensable on technical grounds, since this work involves many methodological innovations and it would have been dangerous to rely on any single approach.

9.1 Pressure Indices Project

The objective of the Pressure Indices Project is to produce a set of indices measuring aggregated environmental pressures for each of the ten policy fields listed in Table 1, which are broadly identical with those listed in the 5EAP. (See Point 3).

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[6] COM(94)670 final.

Each of the ten indices will be a weighted combination of at least five pressure indicators relevant to that field. The selection of indicators and the assessment of weighting factors are achieved through a series of surveys of experts in the particular policy field.

The expert surveys are being carried out in stages over the period 1995-1997 and the results of the second round of indicator selection were available in early 1997. Work on weighting factors will proceed over the period 1997-1998 and the first results of the project will be published in 1998.

In order to link the pressure indices to economic activities, it is intended that the selected pressure indicators should be capable of measuring the contribution of the "sectors" used in the 5EAP, that is, energy, industry, transport, agriculture, tourism and waste management. For each of these sectors, studies have been made to identify relevant indicators and to evaluate data sources.

In order to provide the capacity to estimate and store the necessary data on environmental pressures, the Envstat database (see Databases) is being extended to form an Environmental Pressure Information System (EPIS).

9.2 Integration of economic and environmental data

For the integration of economic and environmental data, Eurostat is working towards a system in which environmental variables will be included in a national accounting matrix. Such an approach has already been used by several Member States, including the Netherlands NAMEA (National Accounting Matrix including Environmental Accounts) and similar systems in Denmark, Germany, Austria and Sweden. All Member States are now working on NAMEA-like systems which will, initially, be based on a a subdivision of the economy into 60-70 branches (production activities plus final consumption by households) and environmental variables including emissions and environmental protection expenditures. Such a framework is in principle capable of being expanded to include a wider range of indicators and aggregated pressure indices, linked to policy fields as described above (see 9.1).

Coordinated work by Member States started in 1995 and new results in the form of pilot NAMEA-like systems from some countries will become available in late 1997, although it will take longer for full integration of the national tables into a common Community framework.

9.3 Environmental satellite accounts

Satellite accounts are foreseen in the ESA[7] as the normal tool for accommodating specific data needs within the overall conceptual framework of national accounts. Satellite accounts provide tools for the development and monitoring of specific policies, for example health care, education, social welfare and environment. They can serve such data needs by including extra detail, by changing basic concepts and by enlarging the scope of the accounting framework with non-monetary information.

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[7] European System of Accounts, 1995.

Eurostat is working with national statistical services to produce two classes of environmental satellite accounts:

- the Environmental Protection Expenditure Account (EPEA) as defined within SERIEE. This makes use of data on environmental protection expenditures together with data on eco-industries and eco-taxes, and other data on financing flows in Member States (see 8.1 and 8.4). EPEA provides policy-makers with information on the impact of environmental protection expenditures on the economy (including employment) at national and EU level.

- natural resource accounts for forests, water, and sub-soil assets, as defined within the System of Integrated Environmental and Economic Accounting (SEEA)[8]. These accounts integrate data on physical stocks and flows together with data on related economic transactions. The natural resource accounts provide policy-makers with information on the interaction between resource use and the economy, which is directly relevant for an evaluation of policies in terms of sustainability criteria.

Work on satellite accounts has been on-going since 1993 with pilot accounts for an increasing range of domains and of Member States being produced, limited by the availability of staff and resources in the Member States.

In addition, it should be noted that the ESA now provides for the inclusion of information on the depletion of certain owned natural resources in the main accounts.

10. COMMON ACTIONS

10.1 Questionnaires

Since 1988, regular general data collection from Member States has been focused on a **joint Eurostat-OECD questionnaire on the state of the environment**, with sections on air, inland waters, marine environment, forests, land use, wildlife, noise, and wastes. This questionnaire is sent to Member States every two years. The questionnaire provides a de facto standard set of tables and definitions for about 2500 environment variables for which data are requested at country level. The questionnaire is accepted as a basis for voluntary data collection by all OECD member countries and, subject to reservations about comparability for some variables, provides a basis for comparison of environmental trends between the EU and other OECD countries.

Since the joint questionnaire was fully revised in the period 1990-1992, no major changes were required during the period covered by the present Decision, although minor improvements were made for both the 1994 and 1996 questionnaires.

In 1996, an additional joint Eurostat-OECD questionnaire on **pollutant and abatement control expenditure** was added. Earlier versions of this questionnaire had been used by OECD alone, although Eurostat contributed to its development,

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[8] SEEA reference here

and as far as possible it uses concepts and definitions which are aligned with SERIEE.

In 1996, a new **regional environment questionnaire** was initiated by Eurostat, in which Member States were requested to supply data for about 50 variables at NUTS2 level. These variables are a subset of those included in the joint Eurostat-OECD questionnaires and were selected to provide indicators for assessment of environmental investments via the EU Structural Funds. This questionnaire is also being used to collect data from countries in eastern and central Europe which have applied for EU membership. The first results from this exercise will be available in late 1997.

10.2 Publications

Article 2(4) includes dissemination under the types of action to be included in the development programme for environment statistics.

During the period of the programme, Eurostat has disseminated both methodological information and statistics in a range of publications (see Table 4). In addition, selected environment statistics have been included in a number of general publications (Eurostat Yearbook, Basic Statistics of the Community, Europe in Figures, etc). Eurostat has also made substantial contributions to publications by the European Environment Agency (*Europe's Environment: the Dobris Assessment* (1995) and *Environment in the European Union 1995*).

Dissemination also involves information supplied in response to information requests received by Eurostat. In addition, the results of some studies have been disseminated to specialists in the form of working papers.

10.3 Databases

Eurostat has developed a production database, **Envstat**, as a repository for working data collected from Member States and other data providers. Envstat has facilities for handling methodological and other information alongside statistics, as a tool to improve the quality of information. It is also capable of calculating some derived statistics, allowing additional series to be estimated in certain cases.

Data for dissemination are copied into the **MILIEU** domain of the Eurostat reference database, New Cronos, to which certain outside users have direct access. MILIEU data are also made available on electronic media.

11. EUROPEAN ENVIRONMENT AGENCY

Article 4 and Annex ... f the present Decision contain provisions for coordination of the development programme on environment statistics with the work programme of the European Environment Agency (EEA).

An effective coordination has achieved through four actions:

- a Memorandum of Understanding between Eurostat and the EEA was signed in May 1995, setting out basic rules and procedures both for general cooperation between the two organizations and for implementation of the relevant

provisions of the Decision on the development programme for environment statistics and of the EEA Regulation[9].

- Eurostat has taken special care to frame its annual work programmes and to assign resources to its projects in such a way as to complement and support the projects included in the annual and multiannual work programmes of the EEA. Eurostat has also worked with the EEA to identify areas where statistical data are available or could be made available for use in EEA projects, most notably in the production of reports on the state of the environment. Eurostat provided extensive statistical support for the Dobris pan-European state of environment report project during 1992-1995, leading up to the publication in 1995 of the EEA report *Europe's environment: the Dobris assessment* and the companion *Statistical Compendium* by Eurostat, UNECE, OECD and WHO (see Table 4).

- as required by the Decision, the annual statistical work programme submitted to the Statistical Programme Committee has also been submitted to the EEA Management Board. This procedure started with the 1996 work programme, which was the first annual programme established after the adoption of the present Decision. The 1996 work programme was reviewed by the EEA Management Board on 22.9.95 and approved with only minor comments. The 1997 work programme was reviewed by the EEA Management Board on 12.12.96. In this case the Management Board requested Eurostat to modify its plans for publication of carbon dioxide emissions estimates (see 7.6) and Eurostat has agreed to this modification.

- Eurostat is an active participant in the process by which the EEA's work programmes are discussed with the Commission and the Member States. Key elements in this process are the regular meetings of the EEA National Focal Points/EIONET[10] working group, and the formal opinion on the EEA's annual work programme which the Commission adopts each year.

The overall effect of this coordination is that to date there has been very little duplication either of data collection or of methodological development between Eurostat and the EEA. In some fields, on the contrary, both organizations have taken advantage of each other's available data and expertise, so that progress is accelerated; however, further work is needed to maintain this complementarity, and, in particular, to ensure that the EEA and the European Topic Centres do not initiate new data collection exercises in areas which are already covered by Community statistics.

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[9] Council Regulation (EEC) No 1210/90 of 7 May 1990 on the establishment of the European Environment Agency and the European environment information and observation network. OJ No L120, 11.5.1990, p1.

[10] EIONET: Environment INformation and Observation NETwork.

12. EVALUATION OF THE PROGRAMME

A wide range of the environment statistics specified in this Decision are available in many Member States, and are regularly transmitted to Eurostat and made available to policy-makers and other users. In addition, the necessary standards and frameworks now exist for harmonization both of these data and, in principle, of other data which are not yet regularly transmitted to Eurostat. In certain of the most important cases where regular transmission of harmonized data has not yet been achieved, actions are under way to achieve this (notably the proposed Council Regulation on waste statistics). To this extent, the development programme under the present Decision has achieved the results intended.

Difficulties remain and should be analyzed. First, the human and financial resources available for new statistics in Member States are always limited. The resources allocated to environment statistics have increased in some Member States during the past five years. However, the departments responsible for environment statistics in most Member States are still small in relation to the workload which would be imposed by regular collection of the full range of information which is needed, whether for national policy-makers, for Community statistics or for the projects of the European Environment Agency.

Second, the new conceptual frameworks which are now being developed and tested (see point 8) will tend to result in a need for more detailed data, for example with a more detailed breakdown by economic branch (see 9.2). In some cases the required data already exist in Member States, but in other cases new data collection is needed.

A related issue is that where detailed new statistics have been submitted to Eurostat in the context of pilot projects under the present Decision, a significant further effort is required to examine and integrate these statistics and to draw conclusions in the form of proposals for regular data collection. The limiting factor in this process is often the scarcity of staff with the necessary technical expertise.

Finally, there do remain significant areas in which further development work is needed to establish harmonized methods and reach agreement with Member States on regular transmission of statistics. Such areas include, inter alia:

- economic and physical data needed for policy-relevant environmental indicators, including indicators of sustainable development, for transport, agriculture, and tourism,
- physical data on non-agricultural land use and on urban areas,
- physical data on the production and use of hazardous or scarce substances,
- economic and physical data needed to complete the planned natural resource accounts.

There is considerable scope for exploiting data from administrative sources, but additional work is needed to adapt and harmonize these data for statistical purposes. In addition, there is scope for adding more environmental data collection

to surveys in the fields of industry; agricultures, energy and transport. Progress in this direction has been slower than expected, because of pressure not to increase the complexity of surveys and the consequent burden on respondents, especially enterprises.

There is also scope for improved linkages between environmental legislation and statistical data collection. The reporting requirements attached to existing environmental legislation cannot, in the majority of cases, be used to generate regular flows of harmonized statistical data. However, in more recent legal texts (such as the IPPC Directive, the proposed Landfill Directive and the proposed Framework Directive on Water Policy), more attention is being given to the need for such regular data flows and to related statistical harmonization issues.

Overall, the Commission considers that the results obtained under the four-year programme have been good, considering the complexity of the methodological developments required by the various work areas and the continuing shortage of resources in the competent services in Member States. However, it is clearly desirable both to continue the methodological work, as outlined above, while placing new emphasis on the steps needed to achieve a regular flow of data in the areas where extensive methodological work has been completed. The Commission therefore considers it appropriate to propose an extension to the four-year programme under the present Decision; such a proposal will be prepared before the end of 1997.

TABLE 1: POLICY FIELDS FOR THE PRESSURE INDICES PROJECT

Climate change
Ozone layer depletion
Loss of biodiversity
Resource depletion
Dispersion of toxics
Waste
Air pollution
Marine environment and coastal zones
Water pollution and water resources
Urban problems, noise and odours

TABLE 2: ACTIONS CLASSIFIED BY TYPE OF DATA

	Type of data			
Work areas	Production processes, emissions	Output and handling of waste	Use of natural resources	Public and private expenditures
Extraction and consumption of raw materials	+	+	+	
Production and consumption of agricultural and industrial products	+	+	+	+
Energy production and consumption	+		+	+
Construction and settlement		+		
Leisure and tourism				
Transport	+	+		
Population growth, household and social welfare	+	+		+
Public services	+	+		+

TABLE 3: ACTIONS CLASSIFIED BY TYPE OF ACTION

	Type of Action				
Work areas	Methodological and conceptual studies	Practical studies	Pilot surveys	Data collection	Dissemination
Extraction and consumption of raw materials	+	+			+
Production and consumption of agricultural and industrial products	+	+	+	+	+
Energy production and consumption	+	+	+	+	+
Construction and settlement	+	+			
Leisure and tourism	+				
Transport	+	+		+	+
Population growth, household and social welfare	+	+			
Public services	+	+	+	+	+
Development of frameworks for integrating economic and environmental data	+	+	+		

TABLE 4: LIST OF PUBLICATIONS 1994 - MID 1997

	Compendium	**Kompendium**	**Compendium**
1997	Environment statistics 1996	Umweltstatistik 1996	Statistiques de l'environnement 1996
	Special compendiums	**Sonderkompendiums**	**Compendiums spéciaux**
1995	Europe's environment: statistical compendium for the Dobris assessment	*	*
1997	**Indicators of sustainable development: a pilot set following the methodology of the UN-CSD**	**Indikatoren für Nachhaltige Entwicklung: eine Pilotstudie gemäß der Methodologie der KNE-VN**	**Indicateurs de développement durable: une étude pilote selon la méthodologie de la CDD-NU**
	Domain-specific publications	**Spezielle Veröffentlichungen**	**Publications liées aux domaines spécifiques**
1994	SERIEE 1994 version	*	*
	Environmental protection expenditure: data collection methods in the public sector and industry	*	*
1996	The distribution of nitrogen inputs to agriculture	Verteilung des Stickstoffeintrags in den Boden durch die Landwirtschaft	La répartition des apports d'azote dans l'agriculture
	Carbon dioxide emissions from fossil fuels 1985-1993	Kohlendioxidemissionen von fossilen Brenstoffen 1985-1993	Emissions de dioxide de carbone des combustibles fossiles 1985-1993
1997	EUR 12 Trade in valuable waste materials	Abfallstoffe mit Handelswert im Auusenhandel der EUR 12	Echanges de déchets à valeur commerciale de l'EUR 12
	Statistics in Focus	**Statistik kurzgefasst**	**Statistiques en bref**
1995	Road transport and the environment in the EU	Straßenverkehr und Umwelt in der EU	Les transports routiers et l'environnement dans l'UE
1996	Overview of pesticide data in the EU	Überblick über die Pestiziddaten in der EU	Aperçu sur les données de pesticides dans l'UE
	Road transport and the environment - energy and fiscal aspects	Straßenverkehr und Umwelt - Energie- und Steueraspekte	Transport routier et environnement - aspects énergétiques et fiscaux
	Eurostat general statistics	**Eurostat allgemeine Statistik**	**Eurostat statistiques générales**
	Basic statistics of the Community	Statistische Grundzahlen der Gemeinschaft	Statistiques de base de la Communauté
	Europe in figures	Europa in Zahlen	Europe en chiffres
	Social portrait of Europe	Sozialportrait Europas	Portrait social d'Europe
	Eurostat yearbook	Eurostat Jahrbuch	Annuaire Eurostat

*=translation not yet available/Übersetzung noch nicht vorhanden/traduction pas encore disponible

TABLE 5: BUDGET RESOURCES 1994-1997

Commitments (1000 ECU)

		1994	1995	1996	1997	TOTAL
Planned	Council Decision Financial statement	1500	2200	2800	2500	9000
Outcome	B5-6 Statistics (Note 1)	1595	1150	1300	1000	5045
	B4-3 Environment (Note 2)	418	633	2000	1500	4551
	Other budget lines	-	312	150	300	762
	TOTAL Outcome	2013	2095	3450	2800	10358

Notes:
1. Includes relevant expenditure under Statistical Programme themes 88, 89 (environment) and 29 (national accounts). The budget allocated to environmental accounts under Theme 29 is about 200 KECU per year from 1995 onwards.
2. From 1996 onwards includes extra resources allocated following the Communication on environmental indicators and green national accounting.

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