

Non classifié/Unclassified

ENV/EPOC/SE(2007)1



Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

06-Mar-2007

English, French

**DIRECTION DE L'ENVIRONNEMENT
ENVIRONMENT DIRECTORATE
COMITE DES POLITIQUES D'ENVIRONNEMENT
ENVIRONMENT POLICY COMMITTEE**

**Sous-groupe sur l'information et les perspectives environnementales
Working Group on Environmental Information and Outlooks**

**DÉPENSES DE LUTTE CONTRE LA POLLUTION DANS LES PAYS DE L'OCDE
POLLUTION ABATEMENT AND CONTROL EXPENDITURE IN OECD COUNTRIES**

OECD Environment Directorate - Environmental Performance and Information Division
Myriam Linster, Tone Smith, Frédérique Zegel, e-mail: edi.contact@oecd.org

JT03223130

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format

**ENV/EPOC/SE(2007)1
Non classifié/Unclassified**

English, French

FOREWORD

The Organisation for Economic Co-operation and Development, in carrying out its task of promoting economic development in member countries, is concerned with both the qualitative and quantitative aspects of economic growth. The OECD's programme of work relating to environmental matters focuses on the interdependence between the economy and the environment. It emphasises the importance of sustainable development and calls for a more systematic and effective integration of environmental and economic decision-making.

To carry out this programme, the availability of reliable environmental data, including economic data on the environment, is essential. In a recommendation on environmental indicators and information adopted in 1991, member country governments agreed, to ensure through appropriate co-ordination the development of objective, reliable and comparable environmental statistics and information at international level. They agreed in particular to intensify their efforts to link environmental and economic information through work on pollution abatement and control expenditure, and on environmental accounting. This was further reinforced in 1998 at the ministerial meeting of the OECD Environment Policy Committee, where member country governments agreed to further improve environmental information and to provide appropriate access to it.

The OECD reports on Pollution Abatement and Control expenditure in OECD countries respond to these objectives. They supplement the OECD Environmental Data Compendium and contribute to the factual basis that supports the work of the Environment Policy Committee, in particular the measurement of environmental indicators and the assessment of countries' environmental performance.

The Working Group on Environmental Information and Outlooks contributed, with data and expert advice, to the elaboration of the present document, which is published on the responsibility of the Secretary-General of the OECD.

AVANT-PROPOS

L'Organisation de Coopération et de Développement Économiques, dans son effort pour promouvoir le développement économique des pays membres, se préoccupe à la fois des aspects qualitatifs et quantitatifs de la croissance économique. Le programme de travail de l'OCDE sur l'environnement s'intéresse à l'interdépendance qui existe entre l'économie et l'environnement. Il met l'accent sur l'importance d'un développement durable et préconise une intégration plus systématique et plus efficace des décisions concernant l'environnement et l'économie.

Pour mener à bien ce programme, la disponibilité de données fiables sur l'environnement, y compris des données économiques, est essentielle. Dans la Recommandation sur les indicateurs et l'information environnementale adoptée en 1991, les gouvernements des pays membres ont convenu d'assurer par une coordination appropriée l'obtention, au niveau international, d'informations et de statistiques sur l'environnement objectives, fiables et comparables. Ils ont convenu en particulier d'intensifier leurs efforts pour lier les informations environnementales et économiques grâce aux travaux sur les dépenses de lutte contre la pollution, et la comptabilité environnementale. Ceci fut renforcé en 1998 à l'occasion de la réunion ministérielle du Comité des politiques d'environnement de l'OCDE, où les gouvernements des pays membres ont convenu d'améliorer encore l'information environnementale et de fournir un accès approprié à cette information.

Les rapports de l'OCDE sur les dépenses de lutte contre la pollution dans les pays de l'OCDE répondent à ces objectifs. Ils complètent le Compendium de données OCDE sur l'environnement et contribuent à la base factuelle qui soutient les travaux du Comité des politiques d'environnement, et plus particulièrement le calcul d'indicateurs d'environnement et l'évaluation des performances environnementales des pays.

Le Sous-groupe sur l'information et les perspectives environnementales a contribué, grâce aux données qu'il a fournies et à son expertise, à l'élaboration de ce document qui est publié sous la responsabilité du Secrétaire général de l'OCDE.

Data in this report largely come from country replies to the "2004 questionnaire on Environmental Expenditure and Revenues" jointly operated by the OECD and the Statistical Office of the European Communities (Eurostat). These data are harmonised through the work of the OECD Working Group on Environmental Information and Outlooks (WGEIO) and through related work by Eurostat. Some were updated or revised on the basis of comments from national Delegates as received by November 2006.

In many countries, the collection of economic data on the environment has a short history or is done on an ad hoc basis. These data are often derived from information collected for other purposes. In addition, definitions and methodologies for the compilation of such data have often changed over time. When reading this report, one should thus keep in mind that definitions and methodologies may vary significantly among countries and that intercountry comparisons and comparisons over time require great caution.

Les données de ce rapport proviennent essentiellement des réponses des pays au "Questionnaire 2004 sur les dépenses et les revenus de protection de l'environnement" exploité conjointement par l'OCDE et l'Office Statistique des Communautés Européennes (Eurostat). Elles ont été harmonisées grâce au travail du Sous-groupe de l'OCDE sur l'information et les perspectives environnementales (WGEIO) et aux travaux afférents d'Eurostat. Certaines données ont été mises à jour ou révisées sur la base de commentaires reçus de Délégués nationaux avant novembre 2006.

Dans de nombreux pays, la collecte de données économiques sur l'environnement est une activité soit récente, soit réalisée de façon irrégulière. Souvent ces données sont dérivées d'informations collectées pour d'autres objectifs. De plus, les définitions et méthodologies qui s'appliquent à la collecte de ces données ont souvent changé au cours du temps. En lisant ce rapport, il faut donc garder à l'esprit que les définitions et les méthodes de mesure peuvent varier de façon significative d'un pays à l'autre et que toute comparaison entre pays et dans le temps doit se faire avec beaucoup de prudence.

Dépenses de lutte contre la pollution dans les pays de l'OCDE Pollution abatement and control expenditure in OECD countries

Table des matières Table of contents

FOREWORD	2
AVANT-PROPOS	3
PART I. INTRODUCTION AND METHODOLOGY	7
Introduction	8
PAC expenditure: Concept and methodology.....	9
Definitions.....	9
Conceptual issues	10
Dimensions of PAC and other EP expenditure	12
Interpretation and limits.....	15
PARTIE I. INTRODUCTION ET MÉTHODOLOGIE	19
Introduction	20
Dépenses de lutte contre la pollution : Principe et méthodologie	21
Définitions.....	21
Problèmes conceptuels.....	22
Structure des dépenses de lutte contre la pollution et de protection de l'environnement	24
Interprétation et limites.....	27
PART II. SUMMARY TABLES (English only)	31
PART III. COUNTRY TABLES (English only)	41
ANNEX	139
REFERENCES	145

PART I. INTRODUCTION AND METHODOLOGY

INTRODUCTION

- Mandate** The work the OECD has been carrying out since the 1970s on environmental economics, aims at supporting member countries' governments in developing, harmonising and implementing effective and sustainable environmental policies based, inter alia, on a systematic integration of environmental and economic decision-making. This was reiterated during several G-7 Economic Summits, as well as by several meetings of the OECD Environment Policy Committee at Ministerial level and in the OECD Environmental Strategy for the First Decade of the 21st Century, adopted by OECD Environment Ministers in May 2001.
- The 1991 Recommendation of the OECD Council on Environmental Indicators and Information, in particular, made explicit reference to work on pollution abatement and control (PAC) expenditure statistics to link environmental and economic information. This was further reinforced in April 1998 at the ministerial meeting of the OECD Environment Policy Committee, where member country governments agreed to further improve environmental information and to provide appropriate access to it.
- Chronology of work on PAC expenditure** This mandate reinforced the work on pollution abatement and control expenditure that has been pursued in the OECD since the late 1970s. The first questionnaire on PAC expenditure was sent to member countries in 1980 under the auspices of the OECD Group on Environment and Economic Policy Integration. In 1991, this Group agreed on a revised questionnaire and data was subsequently collected in association with the two-yearly data collection on the state of the environment under the auspices of the Working Group on Environmental Information and Outlook^{**}. Since 1996, the questionnaire is used jointly by the OECD and the Statistical Office of the European Communities (Eurostat). The current version has been revised jointly by the OECD and Eurostat in 2000-2001 to further harmonise the definitions and classifications used, to foster comparability among countries and to minimise reporting efforts in European countries. It has been approved by member countries in October 2001.
- OECD publications on PAC expenditure** Data on PAC expenditure in OECD countries have been published regularly since 1990. They supplement the biennial OECD Compendium of Environmental Data and contribute to the quantitative information base for the OECD's environmental programme and policy analysis. They especially respond to information needs for the OECD programmes on country environmental performance reviews, and on environment and economic policy integration, and contribute to the development of environmental indicators.
- Structure of the document** This document consists of three parts. Part 1 deals with concepts and methodological principles that apply to the compilation and interpretation of PAC and other environmental protection expenditure data. Part 2 and Part 3 present the results of the 2004 survey: Part 2 includes summary tables covering all countries; Part 3 includes detailed tables for individual countries. Each country table is accompanied by a note on country-specific methodology and data sources.
- Data sources** This report is based on data and information made available to the OECD Secretariat up to November 2006. Data on environmental expenditure largely come from country replies to the "2004 OECD questionnaire on environmental expenditure and revenues (EPER)" jointly operated with the Statistical Office of the European Communities (Eurostat). Whenever possible, selected data from country replies to earlier editions of the questionnaire were added to give an indication of developments over time. Economic and population data used in this report come from other internal OECD sources.

^{**}. former Group on the State of the Environment.

PAC EXPENDITURE: CONCEPT AND METHODOLOGY

DEFINITIONS

Pollution Abatement and Control versus Environmental Protection

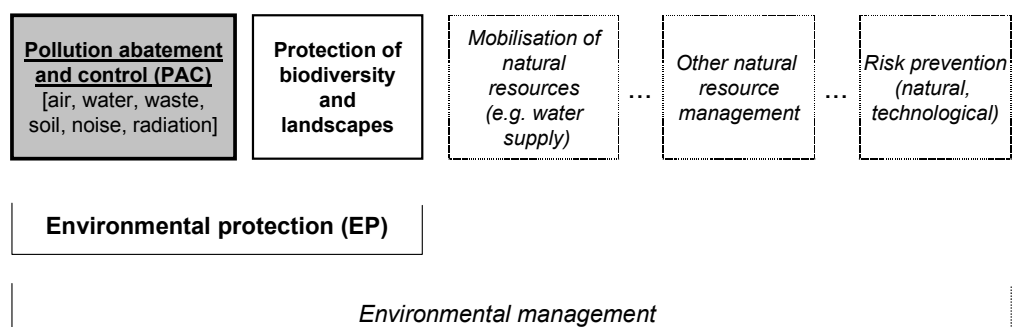
This report focuses on pollution abatement and control (PAC) expenditure. PAC activities are defined as purposeful activities aimed directly at the prevention, reduction and elimination of pollution or nuisances arising as a residual of production processes or the consumption of goods and services.

This definition excludes expenditure on natural resource management and prevention of natural disasters and hazards¹, on nature protection (such as the protection of endangered species, the establishment of natural parks and green belts) and on the exploitation and mobilisation of natural resources (such as the supply of drinking water). Other exclusions are expenditure that primarily satisfy health and safety requirements (such as expenditure intended for workplace protection) or expenditure on the improvement of the production process for commercial or technical reasons, even when they have environmental benefits.

In total, PAC expenditure comprises the flow of investment, internal current expenditure, subsidies and fees that is directly aimed at pollution abatement and control, and which is incurred by the public sector, the business sector, private households and specialised producers of PAC services. Excluded are:

- ◆ calculated cost items such as depreciation (consumption of fixed capital) or the cost of capital (only actual outlays are recorded);
- ◆ payments of interest, fines and penalties for non-compliance with environmental regulations or compensations to third parties etc., as they are not directly linked with a PAC activity.

PAC expenditure together with expenditure related to the protection of biodiversity and landscapes (nature protection) form part of environmental protection (EP) expenditure. EP activities include all purposeful activities aimed directly at the prevention, reduction and elimination of pollution or any other degradation of the environment resulting from the production process or from the use of goods and services. The scope of EP is defined according to the Classification of Environmental Protection Activities (CEPA), which distinguishes nine different environmental domains. (Table 2).



1. covered under other broader frameworks such as SERIEE (Eurostat, 1994 and 2002) and the SEEA (UN et al., 2003).

CONCEPTUAL ISSUES

There are three major conceptual issues associated with the statistical treatment of PAC expenditure, including:

- ◆ definition of a baseline for PAC expenditure;
- ◆ treatment of integrated pollution control technologies;
- ◆ treatment of specialised producers;
- ◆ avoidance of double counting.

These issues are important for the correct compilation, use and interpretation of PAC expenditure data. The following sections consider each of them in turn.

Defining the baseline

Expenditure can have positive environmental effects without being directly motivated by environmental concerns. One example is investment in energy-saving equipment that is carried out because of increases in energy prices. Thus, investment in environmentally friendly equipment by firms may be part of normal, profit-maximising business behaviour. This type of expenditure can be distinguished from other expenditure that is directly incurred for PAC purposes (e.g. as a consequence of government environmental policies and regulations).

The question arises whether PAC expenditure data should include only expenditure directly incurred for PAC purposes or all expenditure with positive environmental effects. The answer depends on the use of PAC expenditure data.

- ◆ If PAC expenditure data are used to identify the financial consequences of government environmental policy, then only expenditures incurred directly for PAC purposes should be included.
- ◆ If the objective of collecting PAC expenditure data is to assess the overall links between capital formation and pollution burden or to identify the share of overall expenditure which has positive effects for the environment, then all expenditure with positive environmental effects should be included in PAC expenditure.

Most OECD member countries, in their statistical approaches, include only expenditure that is directly aimed at environmental protection. This approach was also adopted in the OECD/Eurostat questionnaire in which activities such as energy and material saving are only included to the extent that they mainly aim at environmental protection.

In statistical practice, the identification of such expenditure is difficult, particularly in the business sector, where firms may be unable to distinguish between the different investment motives. It is difficult to identify when pollution abatement is the actual motivation behind less wasteful use of raw materials; therefore, the measurement of air and water pollution abatement and of waste management expenditure may differ from this baseline.

Treatment of end-of-pipe and integrated technologies

The abatement and control of residuals from production processes can be done either by end-of-pipe technology attached to a given production process, or by changing the process itself. Investments in end-of-pipe technologies do not affect the production process itself, and the amount of pollution generated, instead they serve to treat pollution already generated. The difficulty associated with investments in integrated technologies is establishing what proportion of the total investment expenditure should be allocated to pollution abatement and control. When a new production process is introduced, the expenditure consists of the outlays over and above what would have been paid for a cheaper, viable, but less environmentally benign equipment. Where an existing plant is modified, the investment is equal to the total outlays for the environmental adaptation. There is, however, no easy way to handle this problem in statistical practice. One possibility is to pose this question explicitly in business surveys. Experience from a number of OECD countries shows that respondents often find it difficult to deliver accurate replies.

The problem of accounting for investments in integrated technology has become more important as Government's environmental policies and business' strategies have been moving from curative to preventive approaches, thus increasing the relevance of integrated technologies as opposed to end-of-pipe solutions. In Portugal, for instance, process integrated investments accounted for 22% of industrial PAC investments in 1994 and for 38% in 2004.

Treatment of specialised producers

PAC and other EP activities can be done either directly by the considered economic entities, or indirectly by the purchase of PAC or EP services from public or private specialised producers. Such specialised producers have grown in importance in the last years, mainly because of the trend in the public sector to privatise responsibilities such as waste collection, waste treatment, or sewage treatment, and the trend in the business sector to outsource certain activities to other firms or to external consultants.

Experience shows considerable variations among countries in the way PAC activities are organised and executed, and in the statistical treatment of related expenditure. In practice, it is not always easy to distinguish the activities carried out through specialised producers from those carried out directly by the public and the private sectors, nor to track the financial flows among the different entities. Furthermore, business surveys collecting PAC expenditure data from enterprises do not cover systematically expenditure by specialised producers.

This can affect the level of total expenditure in areas such as waste and sewage management, and lead to reduced comparability of the data reported. Estimates have shown that in the European Union specialised producers could account for as much as one third of total expenditure on environmental protection depending on the degree of privatisation of certain public services and the degree of outsourcing in the private sector (see also “avoiding double counting” below).

Avoiding double counting: evaluation framework

As economic agents interact, the same pollution control activity can be recorded by several agents, thus making double counting a possibility. One example is private sector PAC expenditure that is subsidised by the government. Unless a clear distinction is made between the execution and the financing of the PAC activity, both the public sector and the firm will report the expenditure for PAC purposes, resulting in double counting. It is, therefore, important to distinguish between the execution or production of an environmental service (*abater principle*) and the financing of the environmental service (*financing principle*).

The OECD/Eurostat questionnaire, used for collecting data on environmental protection expenditure in member countries, follows a structure that distinguishes and links these two approaches. Its framework is based on double entry bookkeeping, where each activity and expenditure item has an abater (producer) and a financing side. All financing flows should be recorded twice, both at the paying and the receiving sector. (Table 1)

- ◆ Expenditure according to the abater principle (EXP I), includes all expenditure that the sector has for measures they themselves execute. Any economic benefits directly linked with the environmental protection activities (Receipts from by-products) are deducted in order to calculate the net amount of money spent by the sector for its own activities.
- ◆ The financing principle (EXP II) measures how much money a particular sector (directly) contributes to overall environmental protection activities, wherever they are executed. This means that the part of EXP I that was directly financed by others (through subsidies, fees or payments received) should be deducted, while the part of EXP I in other sectors that this sector finances directly (through subsidies or fees paid) should be added.

More and more countries evaluate expenditure according to both principles. Their work shows a significant difference between different economic sectors' expenditure calculated according to the abater principle and that based on the financing principle. For instance in France in 2002, PAC expenditure for public sector amounted to EUR 3,593 million according to the abater principle and to EUR 5,423 million according to the financing principle.

Table 1: Evaluation framework for environmental protection expenditure

	PUBLIC SECTOR 1	BUSINESS SECTOR 2	HOUSEHOLDS 3	SPECIALISED PRODUCERS 4	TOTAL ECONOMY
A	Investment expenditure	Investment expenditure	--	Investment expenditure	1+2+4
	--	<i>of which end-of-pipe</i>	--	--	
B	Internal current expenditure	Internal current expenditure	Connected and adapted products	Internal current expenditure	1+2+3+4
C	Receipts from by-products	Receipts from by-products	--	Receipts from by-products	1+2+4
ABATER PRINCIPLE	Expenditure I (A+B-C)	Expenditure I (A+B-C)	Expenditure I (B)	Expenditure I (A+B-C)	1+2+3+4
D	Subsidies, transfers (paid)	Subsidies, transfers (received)	Subsidies, transfers (received)	Subsidies, transfers (received)	zero*
E	Fees, purchases (paid for EP services)	Fees, purchases (paid for EP services) <i>of which paid to public sector</i>	Fees, purchases (paid for EP services) <i>of which paid to public sector</i>	Fees, purchases (paid for EP services) <i>of which paid to public sector</i>	1+2+3+4
F	Revenues (for EP services)	--	--	Revenues (from EP services)	1+4
FINANCING PRINCIPLE	Expenditure II (EXP I +D+E-F)	Expenditure II (EXP I -D+E)	Expenditure II (EXP I -D+E)	Expenditure II (EXP I -D+E-F)	1+2+3+4 (=EXP I)

* The equilibrium will not hold e.g. when transfers are received from or given to the rest of the world, or when EP services are exported or imported.

DIMENSIONS OF PAC AND OTHER EP EXPENDITURE

PAC, as well as other EP expenditure have several dimensions, each with a particular interpretation. Expenditure can be disaggregated by:

- ◆ environmental domains (e.g. air, water, waste, noise);
- ◆ economic sector (public sector, business sector, specialised producers and households);
- ◆ type of expenditure (investment, internal current expenditure, receipts from by-products, subsidies and transfers, fees and purchases, and revenues).

Environmental domains

Disaggregation of PAC expenditure by environmental media or domain indicates whether pollution control efforts are directed towards waste management, noise reduction, or protection of air or water. The scope of PAC and other environmental protection expenditure is defined according to the Single European Standard Statistical Classification of Environmental Protection Activities that distinguishes nine environmental domains (CEPA², Table 2).

Six of the CEPA domains are directly related to PAC activities:

① protection of ambient air and climate; ② wastewater management; ③ waste management; ④ protection and remediation of soil, groundwater and surface water; ⑤ noise and vibration abatement; ⑥ protection against radiation.

Two other domains, grouping transversal activities such as ⑦ R&D, and ⑧ general administration and management, including education and information, are also relevant, though not limited to PAC.

2. The CEPA was prepared jointly by UNECE and Eurostat in 1994 and revised in 2000 to take into account recent developments at national and international level. CEPA 1994 was adopted by the Conference of European Statisticians at its forty-second plenary session in Paris, 13-17 June 1994. CEPA 2000 was accepted by the United Nations Expert Group on International Economic and Social Classifications at its meeting on 18-20 June 2001 in New York, as a member of the Family of International Economic and Social Classifications. The full CEPA, including explanatory notes, can be downloaded from: <http://europa.eu.int/comm/eurostat/ramon>

Economic sectors	Disaggregation of PAC expenditure by economic sector indicates, first of all, the sector, where the PAC activity occurs (abater principle). When financial transfers between different sectors are taken into account, disaggregation of PAC expenditure by economic sector points to the sector paying for the PAC activity (financing principle). The economic sectors distinguished are the public sector, the business sector, households and specialised producers of environmental services.
Public sector	<p>The <u>public sector</u> includes central, regional and local governments, authorities, communities and government agencies (mainly ISIC/NACE75: public administration and defence; compulsory social security). Data reported should be net of any transfers between these government bodies. It is important to make a clear distinction between Public sector and public specialised producers that include the publicly owned enterprises specialised in the provision of EP services and waste and wastewater departments in large municipalities (which can be separately identified and are thus recorded under ISIC/NACE 90 in the business register).</p> <p>In this report, data on expenditure by the public sector include expenditure by public specialised producers.</p>
Business sector	<p>Total <u>business sector</u> includes all activities in ISIC/NACE 01-99, excluding public sector (mainly ISIC/NACE 75) and specialised producers (mainly ISIC/NACE 90, and parts of ISIC/NACE 37)³.</p> <p><u>Please note:</u> Abater expenditure (investments and internal current expenditure) should be related to measures taken to treat or prevent pollution from the operating activity of the company. Measures to treat pollution generated from the operating activity of other companies should not be included as part of business sector: i.e. expenditure for secondary ISIC/NACE90 activities.</p>
Specialised producers	<p>The <u>specialised producers of EP services</u> include enterprises (both privately or publicly owned) and some departments of large municipalities. These are mainly activities within ISIC/NACE 90 (90.01 Collection and treatment of sewage; 90.02 Collection and treatment of solid waste; 90.03 Sanitation, remediation and similar activities). Specialised producers <u>could also include</u> environmental management activities provided by environmental consultants, the activities of e.g. volunteer environmental organisations or secondary environmental activities in e.g. ISIC/NACE37 Recycling.</p> <p>Expenditure by enterprises for producing market environmental goods (environmental protection equipment, materials and other parts of the environment industry) are <u>excluded</u>.</p> <p>Expenditure recorded for the specialised producers (and their revenues) should be matched by fees/purchases in other sectors.</p>
Private households	<p><u>Household</u> PAC expenditure according to the <u>abater principle</u> (EXP I) include only purchases of connected and adapted products such as:</p> <ul style="list-style-type: none"> ◆ purchase, operation and maintenance of air pollution control devices for motor vehicles e.g. extra costs for use of more environmentally friendly goods such as unleaded petrol, or service costs for proper adjustments of engines; ◆ purchase of sewage treatment facilities such as septic tanks; ◆ purchase of goods used in connection with waste management: e.g. bins, bags, composts. <p>No distinction is made between investments and current expenditure. Household purchases are viewed as current, in line with the national accounts, and result directly in EXP I.</p> <p>According to the <u>financing principle</u> household expenditure include all payments and fees for services purchased from municipalities and public or private specialised producers of environmental protection services. These include mainly payments for the collection and treatment of waste or wastewater.</p>

3. for more details see: <http://unstats.un.org/unsd/cr/registry/> or annex.

Type of expenditure	The distinction between investment and internal current expenditure helps in identifying patterns of abatement and control efforts over time. Typically, when PAC measures are first implemented, investment expenditure accounts for a large share of total PAC expenditure. Over time, internal current expenditure becomes increasingly important.
Investment expenditure	<u>Investment expenditure</u> include all outlays in a given year (purchases and own-account production) for machinery, equipment and land used for PAC purposes. Total investments in a sector or industry is the sum of end-of-pipe investments and investments in integrated technologies. They includes purchases of connected and adapted capital goods such as septic tanks (end-of-pipe) and catalytic converters (integrated).
Internal current expenditure	<u>Internal current expenditure</u> includes the use of energy, material, maintenance and own personnel for measures made by the sector to protect the environment. A large part of it is related to operating environmental protection equipment. There are also other internal expenditure such as general administration, education, information, environmental management and certification, research and development. It includes purchases of connected and adapted non-capital goods such as extra cost for low sulphur fuels but <i>excludes</i> purchases of environmental protection services bought from the public sector or from specialised producers such as waste collection, sewage treatment, environmental consultancy services, or surveillance fees. Such purchases are reported under fees/purchases as they finance EXP I produced by other sectors.
Receipts from by-products	PAC activities can produce <u>by-products</u> that have an economic value. These could either be sold and generate revenues, or be used internally and lead to reductions in costs. Examples include energy generated or material recovered, as a result of waste treatment. There should always be a specific PAC activity (and expenditure) that these receipts stem from. Receipts from by-products is the sum of the sales value and the value of the cost-saving (if used internally) related to these by-products. Energy or material savings due to more efficient processes and other productivity gains resulting from PAC activities are not included in Receipts from by-products.
Subsidies and transfers	<u>Subsidies and transfers</u> include all types of transfers financing PAC activities in other sectors, including transfers to or from other countries. These constitute part of financing expenditure for the paying sector, and reduce the financing of EXP I in the receiving sector. Included are payments of so called "earmarked" environmental taxes (e.g. general pollution taxes), which are not payments for a bought service but where the revenues are ear-marked for financing environmental protection measures. Payments of general environmental or green taxes (such as energy taxes) where the revenues are not earmarked for financing environmental protection measures are excluded.
Fees and purchases	<u>Fees and purchases</u> includes all purchases of PAC services, both from public and private producers. These payments are clearly linked with an environmental protection activity done outside the enterprise and exclude fines and penalties. They include: <ul style="list-style-type: none"> ◆ payments to specialised producers (enterprises) for waste and wastewater collection and treatment and payments to environmental consultants linked e.g. with environmental management and education; ◆ payments to public sector for waste and wastewater collection and treatment (whatever the name of the payments – fees, charges etc) as well as permits and surveillance fees. Payments of taxes directly used for financing environmental protection expenditure – so called earmarked environmental taxes are excluded here, but included under Subsidies/Transfers. Payments of general environmental or green taxes (such as energy taxes) are completely <u>excluded</u> .
Revenues	<u>Revenues</u> are the payments public sector and specialised producers receive for bought PAC and other EP services.

INTERPRETATION AND LIMITS

PAC expenditure is the first-order, out-of-pocket expenditure of those economic entities that implement control measures and undertake compliance activities. As such, PAC expenditure does not provide any more, or any less information than, for example, health or education expenditure.

Total PAC expenditure provides a general indication of a country's financial efforts directed at pollution abatement and control. However, as absolute figures, the relevance of these data for policy purposes is limited; PAC expenditure has to be related to other variables. A common way of comparing PAC expenditure data across countries is to relate them to GDP or to total gross fixed capital formation (see Summary Tables).

Measuring economic effects

PAC expenditure is not the same as the cost of pollution abatement and control, but the cost can be calculated from PAC expenditure data. Capital goods are used over a number of years and their cost is spread over their service life. Expenditure data, on the other hand, shows the total value of the capital goods in the year of acquisition and does not, therefore, reflect accurately the economic effects over time. The calculation of the PAC cost requires appropriate assumptions about service lives, interest rates and several other parameters. For the purposes of assessing the economic impact of environmental policies, it would be preferable to look at cost rather than expenditure.

A different use of PAC expenditure data is to calculate PAC shares in total cost or total turnover for particular industries. Cost shares are a useful indicator for assessing the effects of environmental regulation on industry competitiveness. In industries where PAC cost shares are small, the impact of environmental policies will be felt less than in industry branches where these shares are high.

PAC expenditure data are also an important aid in identifying the positive economic effects of environmental policies. Measures to protect the environment create demand for abatement and clean production technologies and environmental consulting services, and spur environment-related R&D. National and international statistics on PAC expenditure provide the basic information needed to estimate the size and evolution of markets and potential for the environment industry.

Caveats

The relationship between PAC expenditure and the state of the environment can be explored only as part of the overall context of a country, and with the aid of supplementary information. Out of context, high PAC expenditure can be associated both with low environmental quality (indicating that such levels of expenditure are necessary) and with high environmental quality (indicating improvement as a result of high PAC expenditure).

PAC expenditure measures the economic effort to control pollution; it does not measure the cost of environmental damage. As such, PAC data should not be generalised to wider cost-benefit analysis, or used to decide whether abatement is justified. In deciding whether to undertake abatement, damage costs should be used. These are often very different from control costs.

All significant changes in a country's PAC expenditure must be reviewed with care. PAC expenditure may increase because of improved sectoral coverage (e.g. local government expenditure was not included before) or the inclusion of investments in integrated technology (e.g. only investments in end-of-pipe technology were reported earlier).

Data presented in this report

The remainder of this report presents the main results from the 2004 survey of Environmental Protection Expenditure and Revenues in OECD member countries carried out by OECD in cooperation with Eurostat.

Thanks to the contributions and expertise of the OECD Working Group on Environmental Information and Outlooks (WGEIO), efforts were made to:

- ◆ harmonise the data presented as far as possible;
- ◆ document the data presented for each country with information about national data sources, national use of EPER statistics, definitions and surveying methodologies.

Whenever possible, results from earlier surveys have been added to give an indication of developments over time. It has however to be noted that due to changes in the methodologies and definitions applied to PAC expenditure statistics and to the recent revision of the OECD/Eurostat questionnaire, the coherence of the time series is not always guaranteed. Changes over time should thus be interpreted with caution and taking account of accompanying notes.

Over the past ten years, country coverage and the international comparability of data have improved. In many instances, however, definitions and methodologies remain diverse across countries. International comparisons should, therefore, be limited to orders of magnitude.

Progress to be made

More than for other environmental data, the establishment of reliable and internationally comparable data on environmental expenditure calls for continuous monitoring, analysis, treatment and checking. Despite important progress in the number of OECD countries that have launched work in this field and in the international harmonisation of definitions and compilation methods, much remains to be done to produce data of better quality. Continued efforts are needed to in particular to:

- ◆ promote the regular compilation of environmental expenditure data in all OECD countries and ensure continuity in existing activities;
- ◆ increase comparability among countries;
- ◆ ensure a better coherence of the data over time;
- ◆ better document the data provided so as to facilitate their interpretation and their use in policy analysis and indicator development.

Table 2: Environmental domains - CEPA 2000**

<p>1 Protection of ambient air and climate</p> <p>Protection of ambient air and climate comprises measures and activities aimed at the reduction of emissions into the ambient air or ambient concentrations of air pollutants as well as to measures and activities aimed at the control of emissions of greenhouse gases and gases that adversely affect the stratospheric ozone layer.</p> <p>1.1 Prevention of pollution through in-process modifications for the protection of ambient air, and of climate and ozone layer</p> <p>1.2 Treatment of exhaust gases and ventilation air for the protection of ambient air, and for the protection of climate and ozone layer</p> <p>1.3 Measurement, control, laboratories and the like</p> <p>1.4 Other activities</p> <p><u>Excluded</u> are measures undertaken for cost saving reasons (e.g. energy saving).</p> <p>2 Wastewater management (includes prevention of emission to surface water)</p> <p>Wastewater management comprises activities and measures aimed at the prevention of pollution of surface water through the reduction of the release of wastewater into inland surface water and seawater. It includes the collection and treatment of wastewater including monitoring and regulation activities. Septic tanks are also included.</p> <p>2.1 Prevention of pollution through in-process modifications</p> <p>2.2 Sewerage networks</p> <p>2.3 Waste water treatment</p> <p>2.4 Treatment of cooling water</p> <p>2.5 Measurement, control laboratories and the like</p> <p>2.6 Other activities</p> <p><u>Excluded</u> are actions and activities aimed at the protection of groundwater from pollutant infiltration and the cleaning up of water bodies after pollution (see CEPA 4).</p> <p>3 Waste management</p> <p>Waste management refers to activities and measures aimed at the prevention of the generation of waste and the reduction of its harmful effect on the environment. Includes the collection and treatment of waste, including monitoring and regulation activities. It also includes recycling and composting, the collection and treatment of low level radioactive waste, street cleaning and the collection of public litter.</p> <p>3.1 Prevention of pollution through in-process modifications</p> <p>3.2 Collection and transport</p> <p>3.3 Treatment & disposal of hazardous waste: thermal treatment, landfill, other</p> <p>3.4 Treatment & disposal of non-hazardous waste: incineration, landfill, other</p> <p>3.5 Measurement, control, laboratories and the like</p> <p>3.6 Other activities</p> <p><u>Excluded</u> are activities related to the management of high-level radioactive waste (see CEPA 7).</p> <p>4 Protection and remediation of soil, groundwater and surface water (includes all cleaning-up activities)</p> <p>Protection and remediation of soil, groundwater and surface water refers to measures and activities aimed at the prevention of pollutant infiltration, cleaning up of soils and water bodies and the protection of soil from erosion and other physical degradation as well as from salinisation. Monitoring, control of soil and groundwater pollution is included.</p> <p>4.1 Prevention of pollutant infiltration</p> <p>4.2 Cleaning up of soil and water bodies</p> <p>4.3 Protection of soil from erosion and other physical degradation</p> <p>4.4 Prevention and remediation of soil salinity</p> <p>4.5 Measurement, control, laboratories and the like</p> <p>4.6 Other activities</p> <p><u>Excluded</u> are wastewater management activities (see CEPA 2), as well as activities aimed at the protection of biodiversity and landscape (see CEPA 6).</p> <p>5 Noise and vibration abatement (excluding workplace protection)</p> <p>Noise and vibration abatement refers to measures and activities aimed at the control, reduction and abatement of industrial and transport noise and vibration. Activities for the abatement of neighbourhood noise (soundproofing of dancing halls, etc.) as well as activities for the abatement of noise in places frequented by the public (swimming pools, etc.), in schools, etc., are included.</p> <p>5.1 Preventive in-process modifications at the source from: road and rail traffic, air traffic, industrial and other noise</p> <p>5.2 Construction of anti noise/vibration facilities for road and rail traffic, air traffic, industrial and other noise</p> <p>5.3 Measurement, control, laboratories and the like</p> <p>5.4 Other activities</p> <p><u>Excluded</u> is the abatement of noise and vibration for purposes of protection at the workplace.</p>
--

Table 2 cont.: Environmental domains - CEPA 2000

<p>6 <u>Protection of biodiversity and landscape</u></p> <p>Protection of biodiversity and landscape refers to measures and activities aimed at the protection and rehabilitation of fauna and flora species, ecosystems and habitats as well as the protection and rehabilitation of natural and semi-natural landscapes. The separation between 'biodiversity' and 'landscape' protection may not always be practical. For example, maintaining or establishing certain landscape types, biotopes, eco-zones and related issues (hedgerows, lines of trees to re-establish 'natural corridors') have a clear link to biodiversity preservation.</p> <p>6.1 Protection and rehabilitation of species and habitats</p> <p>6.2 Protection of natural and semi-natural Landscapes</p> <p>6.3 Measurement, control, laboratories and the like and other activities</p> <p><u>Excluded</u> is the protection and rehabilitation of historic monuments or predominantly built-up landscapes, the control of weed for agricultural purposes as well as the protection of forests against forests fire when this predominantly responds to economic reasons. The establishment and maintenance of green spaces along roads and recreational structures (e.g. golf courses, other sports facilities) are also excluded.</p> <p>Actions and expenditure related to urban parks and gardens would not normally be included but may be related in some cases to biodiversity – in such cases the activities and expenditure should be included.</p> <p>7 <u>Protection against radiation (excluding external safety)</u></p> <p>Protection against radiation refers to activities and measures aimed at the reduction or elimination of the negative consequences of radiation emitted from any source. Included is the handling, transportation and treatment of high level radioactive waste, i.e. waste that, because of its high radionuclide content, requires shielding during normal handling and transportation.</p> <p>7.1 Protection of ambient media</p> <p>7.2 Transport and treatment of high level radioactive waste</p> <p>7.3 Measurement, control, laboratories and the like and other activities</p> <p><u>Excluded</u> are activities and measures related to the prevention of technological hazards (e.g. external safety of nuclear power plants), as well as protection measures taken at workplaces. Also excluded are activities related to collection and treatment of low-level radioactive waste (see CEPA 3).</p> <p>8 <u>Research and Development</u></p> <p>Includes all research and development (R&D) with an Environmental Protection objective both in the public and business sector: identification and analysis of sources of pollution, mechanisms of dispersion of pollutants in the environment as well as their effects on human beings, the species and the biosphere. This heading covers R&D for the prevention and elimination of all forms of pollution, as well as R&D oriented towards equipment and instruments of pollution measurement and analysis. When separable all R&D activities even when referring to a specific class have to be classified under this position.</p> <p><u>Excluded</u> are R&D activities related to the management of natural resources.</p> <p>9 <u>Other environmental protection activities</u></p> <p>Other environmental protection activities refers to all environmental protection activities which take the form of general environmental administration and management activities or training or teaching activities specifically oriented towards environmental protection or which consist of public information, when they are not classified elsewhere in CEPA. It also includes activities leading to indivisible expenditure, as well as activities not elsewhere classified.</p> <p>9.1 General environmental administration and management including: General administration, regulation and the like, Environmental management</p> <p>9.2 Education, training and information</p> <p>9.3 Activities leading to indivisible expenditure and Activities not elsewhere classified</p>

** For further details see <http://europa.eu.int/comm/eurostat/ramon> .

PARTIE I. INTRODUCTION ET MÉTHODOLOGIE

INTRODUCTION

- Mandat** Le travail réalisé depuis les années 70 par l'OCDE sur les aspects économiques de l'environnement, vise à soutenir les pays membres dans l'élaboration, l'harmonisation et la mise en oeuvre de politiques environnementales efficaces et durables, fondées entre autres sur une intégration systématique des décisions dans le domaine de l'environnement et de l'économie. Cette demande a été réitérée à l'occasion de plusieurs sommets économiques du G7, ainsi que lors de plusieurs sessions du Comité des politiques d'environnement de l'OCDE au niveau ministériel et dans la stratégie de l'environnement de l'OCDE pour les dix premières années du XXème siècle, adoptée en mai 2001 par les ministres de l'environnement de l'OCDE.
- La recommandation du Conseil de l'OCDE de 1991 sur les indicateurs et les informations concernant l'environnement fait explicitement référence aux statistiques relatives aux dépenses de lutte contre la pollution (LCP) comme un moyen d'associer les informations environnementales et économiques. Cet objectif fut renforcé en avril 1998 à l'occasion de la réunion ministérielle du Comité des politiques d'environnement de l'OCDE, où les gouvernements des états membres se sont mis d'accord pour améliorer encore l'information environnementale et fournir un accès approprié à cette information.
- Historique des travaux sur les dépenses de LCP** Ce mandat a renforcé les travaux de l'OCDE sur les dépenses LCP menés depuis la fin des années 70. Le premier questionnaire relatif à ces dépenses a été envoyé aux pays membres en 1980 sous les auspices du Groupe de l'OCDE sur l'intégration des politiques économiques et de l'environnement. En 1991, ce Groupe a adopté un questionnaire révisé et les données ont ensuite été recueillies dans le cadre de la collecte biennale de données sur l'état de l'environnement sous les auspices du Groupe sur l'information et les perspectives environnementales*. Depuis 1996, ce questionnaire est utilisé conjointement par l'OCDE et l'Office Statistique des Communautés Européennes (Eurostat). La version actuelle a été révisée conjointement par l'OCDE et Eurostat en 2000-2001 afin d'harmoniser les définitions et les classifications utilisées, d'améliorer la comparabilité entre pays et de minimiser les efforts de reporting par les pays européens. Elle a été approuvée par les pays membres en octobre 2001.
- Les publications de l'OCDE sur les dépenses de LCP** Les données sur les dépenses LCP dans les pays de l'OCDE sont publiées régulièrement depuis 1990. Elles complètent la publication biennale "Compendium de données OCDE sur l'environnement" et contribuent à la base chiffrée qui soutient le programme sur l'environnement et l'analyse politique de l'OCDE. Elles répondent en particulier au besoin d'informations pour les programmes sur les examens des performances environnementales des pays membres et sur l'intégration des politiques économiques et environnementales, et contribuent à l'élaboration d'indicateurs de l'environnement.
- Structure du document** Ce document comprend trois parties : la partie 1 traite des concepts et principes méthodologiques applicables à la compilation et à l'interprétation des statistiques relatives aux dépenses LCP et autres dépenses de protection de l'environnement. La partie 2 et la partie 3 présentent les résultats de l'enquête 2004 : d'abord par des tableaux récapitulatifs regroupant les divers pays puis, par des tableaux plus détaillés par pays accompagnés de notes méthodologiques.
- Source des données** Ce rapport est basé sur des données et des informations transmises au Secrétariat de l'OCDE avant novembre 2006. Les données sur les dépenses environnementales proviennent essentiellement des réponses des pays au "Questionnaire OCDE 2004 sur les dépenses et les revenus de protection de l'environnement (DRPE)" exploité conjointement avec l'Office Statistique des Communautés Européennes (Eurostat). A chaque fois que possible, des données provenant des réponses des pays à des versions antérieures du questionnaire ont été ajoutées. Les données économiques et démographiques utilisées dans ce rapport proviennent d'autres sources internes de l'OCDE.

* ancien Groupe sur l'état de l'environnement.

DÉPENSES DE LUTTE CONTRE LA POLLUTION : PRINCIPE ET MÉTHODOLOGIE

DÉFINITIONS

Lutte contre la pollution et protection de l'environnement

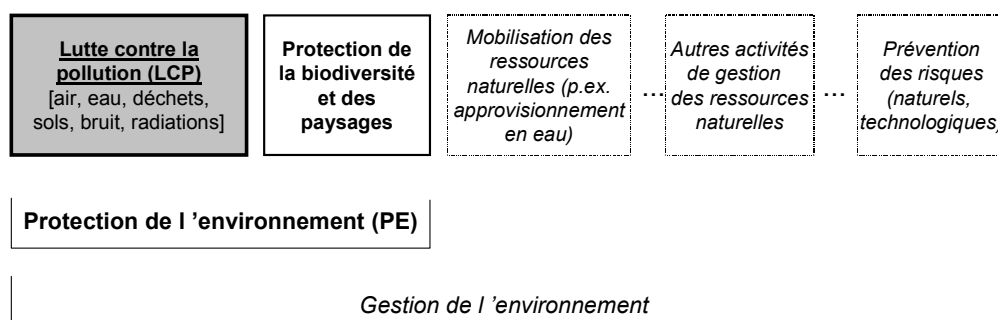
Le présent rapport porte sur les dépenses de « lutte contre la pollution » (LCP). Par LCP, on entend ici des activités axées directement sur la prévention, la réduction et l'élimination de la pollution ou des nuisances qui résultent des processus de production ou de la consommation de biens et services.

Cette définition exclut les dépenses de gestion des ressources naturelles et de prévention des risques⁴, les dépenses de protection de la nature (comme la protection des espèces menacées, ou l'aménagement de parcs naturels et de ceintures vertes), ainsi que les dépenses d'exploitation et de mobilisation de ressources naturelles (comme l'approvisionnement en eau potable). Elle exclut également les dépenses engagées principalement pour répondre à des exigences de santé et de sécurité (comme la protection du lieu de travail p.ex.) et celles portant sur l'amélioration du processus de production pour motif commercial ou technique, même si elles ont une incidence positive sur l'environnement.

Au total, les dépenses imputées à la LCP correspondent au flux de dépenses d'investissement, de dépenses courantes internes, de subventions et de redevances visant directement à lutter contre la pollution et supportées par le secteur public, le secteur des entreprises, les ménages et les entreprises spécialisées dans les services de LCP. Sont exclus :

- ◆ les postes de coût calculés tels que l'amortissement (consommation de capital fixe) ou le coût du capital (seules les dépenses réelles sont considérées) ;
- ◆ les paiements d'intérêts, d'amendes et de pénalités pour non-respect des réglementations environnementales ainsi que l'indemnisation de tiers, car ils ne sont pas directement liés à une activité de LCP.

Associées aux dépenses de protection de la biodiversité et des paysages (protection de la nature), les dépenses de LCP forment les dépenses de protection de l'environnement (PE). Par PE, on entend toutes les activités visant directement à la prévention, la réduction et l'élimination de la pollution ou de toute autre dégradation de l'environnement résultant de processus de production ou de l'utilisation de biens et services. Le champ couvert par la PE est défini conformément à la classification des activités de protection de l'environnement (CAPE) qui distingue neuf domaines environnementaux (tableau 2).



4. couverts sous d'autres cadres de référence comme le SERIEE (Eurostat, 1994 et 2002) et le SEEA (UN et al., 2003).

PROBLÈMES CONCEPTUELS

Le traitement statistique des dépenses LCP pose quatre problèmes conceptuels :

- ◆ définir des critères de base pour apprécier les dépenses LCP ;
- ◆ préciser le traitement appliqué aux technologies intégrées de LCP ;
- ◆ préciser le traitement appliqué aux prestataires spécialisés ;
- ◆ éviter le double comptage.

Ces différents points, examinés dans les sections suivantes, sont déterminants si l'on veut utiliser et interpréter correctement les données relatives aux dépenses LCP.

Définition des critères de base

Les dépenses des agents économiques peuvent avoir des effets positifs sur l'environnement sans être motivées par des considérations environnementales. Par exemple, les investissements en faveur des économies d'énergie réalisées suite à une hausse des prix de l'énergie. Ainsi, l'achat d'équipements respectueux de l'environnement peut s'inscrire dans le cadre d'un comportement classique de recherche du profit. Ces dépenses se distinguent de celles directement consacrées à la LCP (par exemple, suite à la mise en œuvre de réglementations environnementales des pouvoirs publics).

Il faut se demander si les dépenses de LCP doivent inclure exclusivement les activités entreprises à ce titre ou englober l'ensemble des dépenses qui entraînent des effets favorables sur l'environnement. La réponse provient de l'utilisation des données sur les dépenses de LCP :

- ◆ si ces données doivent contribuer à évaluer les conséquences financières des politiques d'environnement adoptées par les pouvoirs publics, seules les dépenses directement liées à la lutte contre la pollution sont à prendre en compte ;
- ◆ si l'objectif de la collecte des données sur les dépenses de LCP est d'évaluer les relations entre la formation de capital et la charge polluante ou de déterminer la part des dépenses globales qui a des effets favorables pour l'environnement, il conviendrait de prendre en compte toutes les formes de dépenses LCP ayant un effet positif sur l'environnement.

Dans leurs méthodes statistiques, la plupart des pays membres de l'OCDE ne prennent en compte que les dépenses directement destinées à protéger l'environnement. Le même principe a été retenu dans le questionnaire OCDE/Eurostat dans lequel les activités telles que les économies d'énergie et de matières ne sont prises en compte que dans la mesure où elles visent essentiellement la protection de l'environnement.

Dans la pratique, il demeure difficile de cerner ces dépenses, notamment dans le secteur des entreprises où la distinction entre les divers motifs d'investissement n'est pas aisée. Étant donné les problèmes rencontrés pour déterminer dans quels cas la réduction du gaspillage des matières premières entre dans le cadre de la lutte antipollution, la mesure des dépenses de lutte contre la pollution de l'air et de l'eau peut s'éloigner des critères de base.

Technologies en bout de chaîne et intégrées

On peut réduire et contrôler les résidus des processus de production, soit par des technologies installées en bout de chaîne liées à un processus de production donné, soit en modifiant le processus lui-même. Les investissements en bout de chaîne n'ont pas de répercussions sur le processus de production lui-même, ni sur le volume de pollution généré, mais ils servent à éliminer la pollution déjà existante. Lorsqu'il s'agit de technologies intégrées, le problème consiste à identifier la part de LCP dans l'investissement total. Lorsqu'un nouveau processus de production est mis au point, les dépenses LCP correspondent aux montants excédant ceux qui auraient été dépensés pour acheter un équipement moins cher, viable, mais plus dangereux pour l'environnement. Lorsqu'un site de production fait l'objet de travaux, les investissements de LCP sont égaux au total des sommes dépensées pour l'adaptation environnementale. Dans la pratique, il n'y a pas de solution simple à ce problème statistique. On peut poser explicitement la question dans les enquêtes menées auprès des entreprises. L'exemple d'un certain nombre de pays de l'OCDE montre que les déclarants ont souvent des difficultés à apporter des réponses précises.

Le problème de la comptabilisation des technologies intégrées a pris de l'importance au fur et à mesure que les politiques des pouvoirs publics et les stratégies des entreprises en matière d'environnement sont passées d'une approche curative à une approche préventive, se traduisant par un intérêt accru pour les technologies intégrées au détriment des solutions appliquées en bout de chaîne. Au Portugal, par exemple, les investissements dans les technologies intégrées représentaient 22% des investissements industriels de LCP en 1994, et 38% en 2004.

Prestataires spécialisés

Les activités de LCP et de PE peuvent être réalisées soit directement par les entités économiques considérées, soit indirectement à travers l'acquisition de services de LCP et de PE auprès de prestataires spécialisés publics ou privés. Ces dernières années, ces prestataires spécialisés ont pris de l'importance principalement en raison de la tendance dans le secteur public de privatiser des services comme la collecte et le traitement des déchets ou le traitement des eaux usées, et de la tendance dans le secteur des entreprises de soustraire certaines activités à d'autres entreprises ou à des consultants extérieurs.

L'expérience montre qu'il y a des différences importantes entre pays quant à la façon dont les activités de LCP sont organisées et exécutées et quant au traitement statistique des dépenses afférentes. Dans la pratique, il n'est pas toujours aisé de distinguer les activités réalisées par l'intermédiaire de prestataires spécialisés de celles réalisées directement par le secteur public et le secteur des entreprises, ni de suivre les flux financiers entre les différentes entités. De plus, les enquêtes de conjoncture utilisées pour collecter des données sur les dépenses de LCP des entreprises, ne couvrent pas systématiquement les dépenses des prestataires spécialisés.

Ceci peut affecter le niveau affiché des dépenses totales dans des domaines comme la gestion des déchets et des eaux usées, et réduire la comparabilité des données rapportées. Des estimations ont montré que dans l'Union Européenne les prestataires spécialisés peuvent représenter jusqu'à un tiers des dépenses totales de protection de l'environnement selon le degré de privatisation de certains services publics et le degré de sous-traitance dans le secteur privé (voir aussi "éviter les doubles comptages" ci-après).

Éviter les doubles comptages : cadre d'évaluation

Compte tenu des interactions entre les agents économiques, la même activité de LCP peut être imputée à plusieurs agents, d'où la possibilité d'un double comptage. Les dépenses effectuées par le secteur privé mais subventionnées par le secteur public en offrent un exemple. Si une distinction claire n'est pas faite entre l'exécution et le financement de l'activité de LCP, le secteur public comme les entreprises imputeront cette dépense à la LCP et un double comptage se produira. Aussi, il est important de distinguer l'exécution ou la production d'un service lié à l'environnement ("principe d'exécution") du financement du service en question ("principe de financement").

Le questionnaire OCDE/Eurostat, utilisé pour collecter les données sur les dépenses de protection de l'environnement auprès des pays membres, est structuré de façon à distinguer et lier ces deux approches. Son cadre d'évaluation est basé sur un système de comptabilité en partie double, où chaque dépense pour chaque activité comporte un aspect exécution et un aspect financement. Tous les flux financiers doivent être enregistrés deux fois : par le secteur qui les verse et par le secteur qui les reçoit (tableau 1).

- ◆ Les dépenses ventilées selon le principe d'exécution (DÉP I) comprennent l'ensemble des sommes que le secteur dépense pour ses propres mesures. Tout bénéfice économique tiré directement d'activités de PE (recettes de sous-produits) est déduit afin de calculer le montant net dépensé par le secteur pour ses propres activités ;
- ◆ Le principe du financement (DÉP II) mesure la contribution financière (directe) d'un secteur à l'ensemble des activités de PE, quel que soit leur lieu d'exécution. En d'autres termes, la fraction de DÉP I qui est directement financée par d'autres parties (à travers la perception de subventions, de redevances ou de paiements) doit être déduite, alors que la fraction de DÉP I versée à d'autres secteurs, que le secteur étudié finance directement (au moyen du versement de subventions ou de redevances), doit être prise en compte.

De plus en plus de pays membres évaluent les dépenses de LCP selon les deux principes. On peut obtenir des résultats sensiblement différents pour les dépenses dans les différents secteurs selon le principe d'imputation adopté. Ainsi, en France en 2002, la dépense de LCP du secteur public s'élevaient à 3 594 millions d'euros selon le principe d'exécution et à 5 423 millions d'euros selon le principe de financement.

Tableau 1 : Cadre d'évaluation des dépenses de protection de l'environnement

	SECTEUR PUBLIC 1	SECTEUR DES ENTREPRISES 2	MÉNAGES 3	PRESTATAIRES SPÉCIALISÉES 4	TOTAL DE L'ÉCONOMIE
A	Dépenses d'investissement --	Dépenses d'investissement <i>dont en bout de chaîne</i>	--	Dépenses d'investissement --	1+2+4
B	Dépenses courantes internes	Dépenses courantes internes	Produits connexes et adaptés	Dépenses courantes internes	1+2+3+4
C	Recettes de sous- produits	Recettes de sous- produits	--	Recettes de sous- produits	1+2+4
Principe d'exécution	Dépenses I (A+B-C)	Dépenses I (A+B-C)	Dépenses I (B)	Dépenses I (A+B-C)	1+2+3+4
D	Subventions, transferts (versés)	Subventions, transferts (reçus)	Subventions, transferts (reçus)	Subventions, transferts (reçus)	zéro*
E	Redevances, acquisitions (versées pour des services de PE)	Redevances, acquisitions (versées pour des services de PE) <i>dont versés au secteur public</i>	Redevances, acquisitions (versées pour des services de PE) <i>dont versés au secteur public</i>	Redevances, acquisitions (versées pour des services de PE) <i>dont versés au secteur public</i>	1+2+3+4
F	Recettes (de services de PE)	--	--	Recettes (de services de PE)	1+4
Principe du financement	Dépenses II (DÉP I +D+E-F)	Dépenses II (DÉP I -D+E)	Dépenses II (DÉP I -D+E)	Dépenses II (DÉP I -D+E-F)	1+2+3+4 (=DÉP I)

* L'équilibre peut être rompu quand des transferts sont reçus du reste du monde ou versés à celui-ci, ou quand des services de PE sont exportés ou importés.

STRUCTURE DES DÉPENSES DE LUTTE CONTRE LA POLLUTION ET DE PROTECTION DE L'ENVIRONNEMENT

Les dépenses LCP peuvent être envisagées de différents points de vue; elles peuvent être détaillées :

- ◆ par domaine environnemental (p.ex. air, eau, déchets, bruit) ;
- ◆ par secteur économique (public, entreprises, ménages, prestataires spécialisés) ;
- ◆ par catégorie de dépenses (investissements, dépenses courantes internes, recettes de sous-produits, subventions, redevances et recettes) :

Domaines environnementaux

La ventilation des dépenses totales LCP par domaine permet d'indiquer si les efforts visent la protection de l'air, de l'eau, la gestion de déchets ou la réduction du bruit. Les différents domaines de protection de l'environnement sont définis dans la classification européenne type des activités de protection de l'environnement qui comporte neuf domaines environnementaux (CAPE⁵, voir tableau 2).

Six des domaines CAPE concernent directement des activités LCP :

① protection de l'air ambiant et du climat; ② gestion des eaux usées; ③ gestion des déchets; ④ protection et assainissement du sol, des eaux souterraines et de surface; ⑤ lutte contre le bruit et les vibrations; ⑥ protection contre les rayonnements.

Deux autres domaines, regroupant des activités transversales comme ⑦ la R&D, et ⑧ l'administration et la direction générale, comprenant les activités d'éducation et d'information, sont aussi pertinents, bien que pas limités à la LCP.

5. La CAPE a été préparée conjointement par la CEE-NU et Eurostat en 1994 et a été révisée en 2000 afin d'intégrer les développements récents aux plans national et international. La CAPE 1994 a été adoptée par la Conférence des Statisticiens Européens lors de sa 42^{ème} réunion plénière (Paris, 13-17 juin 1994). La CAPE 2000 a été acceptée comme membre de la Famille des Classifications Internationales Economiques et Sociales par le Groupe d'Expert des Nations Unies sur les Classifications Internationales Economiques et Sociales lors de sa réunion à New York en juin 2001. Le détail de la CAPE ainsi que des notes explicatives peuvent être téléchargés à l'adresse suivante : <http://europa.eu.int/comm/eurostat/ramon>

Secteurs économiques	La répartition par secteur économique des dépenses LCP met en évidence les secteurs où les activités LCP s'effectuent (principe d'exécution). Lorsque les transferts financiers entre secteurs sont pris en compte, la répartition par secteur permet d'identifier les secteurs qui financent ces activités (principe de financement). On distingue le secteur public, les entreprises, les ménages et les prestataires spécialisés de services environnementaux.
Secteur public	Le <u>secteur public</u> comprend les administrations publiques centrales, régionales et locales, les collectivités et les organismes publics (principalement CITI/NACE75 : administration publique et défense ; sécurité sociale obligatoire). Les données déclarées doivent être nettes de tous transferts entre ces organes. Il importe d'établir une distinction claire entre le secteur public et les prestataires spécialisés. L'ensemble des activités CITI/NACE 90 doit être intégré dans le tableau des prestataires spécialisés (tableau 4), y compris les entités liées au secteur public telles que les entreprises détenues par l'État et les services des déchets et des eaux usées des grandes villes (qui peuvent être identifiés séparément et, par conséquent, enregistrés dans le répertoire des entreprises sous la division CITI/NACE 90).
Entreprises	Le secteur des <u>entreprises</u> comprend l'ensemble des activités de la CITI/NACE 01-99, à l'exclusion du secteur public (essentiellement CITI/NACE 75) et des prestataires spécialisés (principalement CITI/NACE 90, et des parties de CITI/NACE 37) ⁶ . Remarque : Les dépenses d'exécution (investissements et dépenses courantes internes) doivent se rapporter aux mesures prises pour traiter ou prévenir la pollution générée par l'activité opérationnelle de l'entreprise. Les mesures prises pour traiter la pollution générée par l'activité opérationnelle d'autres entreprises ne doivent pas être incluses dans le secteur des entreprises, mais dans les dépenses relatives aux activités secondaires de la CITI/NACE 90.
Prestataires spécialisés	Les <u>prestataires spécialisés dans la fourniture de services de protection de l'environnement</u> comprennent les entreprises (publiques ou privées) et certains services municipaux des grandes villes dont les activités principales relèvent de la division 90 de la CITI/NACE (90.01 collecte et traitement des eaux usées ; 90.02 collecte et traitement des déchets solides ; 90.03 assainissement, remise en état et activités similaires). Les prestataires spécialisés <u>peuvent aussi inclure</u> les activités de gestion environnementale des consultants en environnement, les activités d'organisations environnementales bénévoles et les activités environnementales secondaires telles que celles de la division CITI/NACE 37 "Recyclage". Les dépenses des entreprises pour produire des biens de marché environnementaux (équipements de protection de l'environnement, matériels et autres éléments de l'industrie de l'environnement) sont <u>exclus</u> . Les dépenses enregistrées par les prestataires spécialisés (ainsi que leurs recettes) doivent coïncider avec les redevances/acquisitions dans d'autres secteurs.
Ménages	Les dépenses de protection de l'environnement des <u>ménages</u> établies selon le principe d'exécution (DÉP I) ne comprennent que les achats de produits connexes et adaptés tels que : <ul style="list-style-type: none"> ♦ achat, gestion et entretien de dispositifs de contrôle de la pollution de l'air destinés aux véhicules automobiles, frais supplémentaires liés à l'utilisation de produits moins polluants (tels que l'essence sans plomb) et frais liés au réglage des moteurs ; ♦ achat d'installations de traitement des eaux usées telles que les fosses septiques ; ♦ achat de biens utilisés dans le cadre de la gestion des déchets, p.ex poubelles, sacs poubelle, compost. Aucune distinction n'est faite entre les investissements et les dépenses courantes. Les acquisitions des ménages sont considérées comme des acquisitions courantes, conformément aux comptes nationaux, et elles s'inscrivent directement sous la rubrique «Dépenses I». Les dépenses des ménages ventilées d'après le principe du financement comprennent l'ensemble des redevances se rapportant aux services achetés auprès des municipalités et des producteurs publics ou privés spécialisés dans les services de protection de l'environnement. Il s'agit essentiellement des paiements au titre de la collecte et du traitement des déchets et des eaux usées.

6. pour plus de détails voir : <http://unstats.un.org/unsd/cr/registry/> ou l'annexe.

Catégories de dépenses	La distinction entre dépenses courantes et dépenses d'investissement permet de dégager les tendances des mesures de lutte contre la pollution au fil des ans. En règle générale, au moment de l'instauration de mesures de ce type, les dépenses d'investissement représentent une large part des dépenses totales LCP. La part des dépenses courantes augmente ensuite progressivement.
Dépenses d'investissement	Les <u>dépenses d'investissement</u> comprennent toutes les dépenses d'une année donnée (acquisitions et production pour compte propre) pour des machines, des équipements et des terres utilisés à des fins de LCP. L'investissement total dans un secteur ou une industrie est la somme des investissements en bout de chaîne et des investissements intégrés. Ils comprennent les achats de biens d'équipement connexes et adaptés tels que des fosses septiques (en bout de chaîne) et les convertisseurs catalytiques (intégrés).
Dépenses courantes internes	Les <u>dépenses courantes internes</u> comprennent l'utilisation d'énergie, de matières, d'entretien et de personnel propre pour des mesures prises par le secteur concerné pour protéger l'environnement. Une grande partie des dépenses internes se rapporte à l'exploitation des équipements de protection de l'environnement. D'autres dépenses internes concernent l'administration générale, l'éducation, l'information, la gestion et la certification environnementales ainsi que la recherche et le développement. Les dépenses courantes internes comprennent les acquisitions de biens de consommation connexes et adaptés tels que les frais supplémentaires pour des combustibles à faible teneur en soufre, mais excluent les acquisitions de services de protection de l'environnement auprès du secteur public ou de prestataires spécialisés tels que la collecte des déchets, le traitement des eaux usées, le conseil en environnement ou les redevances de surveillance environnementale. Ces acquisitions sont reportées sous la rubrique "Redevances/acquisitions", car ils financent la DÉP I « produit » dans d'autres secteurs.
Recettes des sous-produits	Les activités de protection de l'environnement produisent parfois des <u>sous-produits</u> ayant une valeur économique. Ces produits peuvent être vendus et générer des recettes ou être utilisés en interne et déboucher sur une réduction des coûts. On peut citer la production d'énergie ou la récupération de matières résultant du traitement des déchets. Ces recettes doivent toujours provenir d'une activité (et d'une dépense) de LCP spécifique. Les recettes des sous-produits correspondent à la somme de la valeur des ventes et de la valeur des économies réalisées (si ces sous-produits sont utilisés en interne). Les économies d'énergie ou de matières dues à des processus plus efficaces ou à d'autres gains de productivité résultant d'activités de LCP ne sont pas incluses dans les recettes des sous-produits.
Subventions et transferts	Les <u>subventions et transferts</u> , incluent tous les transferts finançant des activités de LCP dans d'autres secteurs, y compris les transferts en provenance ou à destination d'autres pays. Ils font partie intégrante des dépenses de financement du secteur payeur et réduisent le financement de la DÉP I dans le secteur bénéficiaire. Sont compris, les paiements de taxes environnementales préaffectées (par exemple, taxe de pollution générale) qui ne servent pas à acheter un service, mais dont les recettes sont prédestinées à financer des mesures de protection de l'environnement. Les taxes environnementales générales - ou taxes vertes (comme les taxes énergétiques) - dont les recettes ne sont pas destinées au financement de mesures de protection de l'environnement sont exclues
Redevances/acquisitions	<p>Les <u>redevances/acquisitions</u> comprennent l'ensemble des achats de services de LCP auprès des producteurs publics et privés. Ces paiements sont clairement liés à une activité de protection de l'environnement réalisée en dehors de l'entreprise et doivent exclure les amendes et pénalités. Ils incluent :</p> <ul style="list-style-type: none"> ◆ les sommes versées à des prestataires spécialisés (entreprises) pour la collecte et le traitement des déchets et des eaux usées ainsi que les sommes versées à des consultants en environnement, notamment pour la gestion et l'éducation environnementale ; ◆ les sommes versées au secteur public pour la collecte et le traitement de déchets et d'eaux usées (quel que soit le libellé de ces versements : redevances, charges, etc.) ainsi que les redevances pour l'obtention de permis et les frais de surveillance. <p>Les paiements de taxes directement utilisées pour financer des dépenses de protection de l'environnement (taxes environnementales préaffectées) sont exclus ici, mais sont rapportés comme "subventions/transferts". Les paiements de taxes environnementales générales ou taxes vertes (telles que les taxes sur l'énergie) sont totalement <u>exclus</u>.</p>
Recettes	Les <u>recettes</u> correspondent aux sommes reçues par le secteur public et les prestataires spécialisés en échange de services de protection de l'environnement.

INTERPRÉTATION ET LIMITES

Les dépenses LCP sont supportées en premier lieu directement par les entités économiques qui mettent en oeuvre des mesures antipollution et entreprennent des activités de mise en conformité. Par elles-mêmes, ces dépenses ne donnent ni plus ni moins d'informations que les autres types de dépenses, consacrées par exemple à la santé ou à l'éducation.

Le total des dépenses LCP donne une **indication générale des efforts financiers déployés en la matière par les pays considérés**. Exprimées en valeur absolue, ces données ne présentent toutefois qu'un intérêt limité pour l'action des pouvoirs publics et doivent être reliées à d'autres paramètres. Pour effectuer des comparaisons entre pays, on rapporte fréquemment les dépenses LCP au PIB ou à la formation brute de capital fixe (voir tableaux récapitulatifs).

Mesure des effets économiques

Les dépenses LCP doivent être distinguées des coûts LCP, mais les données sur les dépenses LCP peuvent servir à calculer les coûts correspondants. L'utilisation des biens d'équipement se prolonge pendant plusieurs années et leur coût est réparti sur l'ensemble de cette période. En revanche, les dépenses d'investissement sont comptabilisées uniquement pour l'année à laquelle est effectué l'achat des biens d'équipement considérés ; les effets économiques dans le temps ne sont donc pas pris en compte comme il convient. Il importe de retenir des hypothèses satisfaisantes sur la durée de vie des équipements, les taux d'intérêt et plusieurs autres paramètres pour calculer les coûts LCP. Pour évaluer l'incidence économique des politiques d'environnement, mieux vaut se référer aux coûts qu'aux dépenses.

On peut aussi employer les données sur les dépenses LCP pour calculer leur part dans le coût total ou dans le chiffre d'affaires pour telle ou telle activité. La part des coûts LCP est un indicateur utile pour apprécier les effets des réglementations d'environnement sur la compétitivité industrielle. Dans les branches d'activité où cette part est faible, l'effet des politiques d'environnement sera moindre que dans celles où elle est élevée.

Les données sur les dépenses LCP peuvent aussi aider à identifier les effets économiques favorables des politiques d'environnement. Les mesures de protection de l'environnement suscitent une demande de techniques antipollution, de technologies propres et de services de conseil en environnement, tout en stimulant les activités de R&D liées à l'environnement. Les statistiques nationales et internationales sur les dépenses LCP fournissent les informations indispensables pour estimer la taille et l'évolution des marchés, ainsi que les perspectives qui s'offrent aux éco-industries.

Précautions à prendre

Le lien entre les dépenses LCP et l'état de l'environnement ne peut être examiné qu'en fonction de la situation générale du pays considéré et à l'aide d'informations supplémentaires. Hors contexte, des dépenses élevées peuvent aussi bien signifier une qualité de l'environnement médiocre (qui rendrait ces dépenses indispensables) qu'une qualité de l'environnement satisfaisante (améliorée grâce aux dépenses LCP).

Les dépenses LCP mesurent les efforts économiques déployés pour maîtriser la pollution, mais non les coûts des dommages. Aussi, les données sur les dépenses ne devraient-elles pas être utilisées dans le cadre d'une analyse coûts-avantages ou pour déterminer si une lutte antipollution se justifie. Pour décider s'il y a lieu d'entreprendre cette lutte, il convient de se référer aux coûts des dommages. Ceux-ci sont souvent très différents des coûts de la lutte antipollution.

Tout changement significatif des dépenses LCP d'un pays doit être interprété avec prudence. Ces dépenses peuvent augmenter avec l'amélioration de la couverture d'un secteur (par exemple si les dépenses des administrations locales n'étaient pas couvertes auparavant) ou avec l'inclusion des technologies intégrées (si seuls les investissements en bout de chaîne étaient rapportés lors de l'évaluation précédente).

Données présentées dans ce rapport

On trouvera ci-après les principaux résultats de l'enquête sur les dépenses et revenus de protection de l'environnement dans les pays de l'OCDE réalisée en 2004 par l'OCDE en collaboration avec Eurostat.

Grâce aux contributions et à l'expertise du Sous-groupe de l'OCDE sur l'information et les perspectives environnementales, un effort a été fait pour :

- ◆ harmoniser autant que possible les données présentées dans ce rapport ; et
- ◆ accompagner les données présentées pour chaque pays de notes méthodologiques et d'informations sur les sources nationales, l'usage national de la statistique et les définitions utilisées.

A chaque fois que possible, des données provenant des réponses des pays à des versions antérieures du questionnaire ont été ajoutées pour donner une indication des évolutions dans le temps. Il faut cependant noter qu'en raison de l'évolution des méthodologies et définitions qui s'appliquent aux statistiques sur les dépenses LCP et de la révision récente du questionnaire OCDE/Eurostat, la cohérence des séries temporelles n'est pas toujours garantie. Tout changement dans le temps doit donc être interprété avec prudence et en tenant compte des notes d'accompagnement.

Ces dix dernières années, le nombre de pays et les domaines et types de dépenses couverts par les données ont progressé. Dans bien des cas, cependant, les définitions et les méthodes demeurent disparates d'un pays membre à l'autre. Les comparaisons internationales devraient par conséquent porter uniquement sur des ordres de grandeur.

Progrès à faire

Plus encore que pour d'autres données environnementales, l'établissement de données fiables et comparables sur le plan international sur les dépenses environnementales exige un travail continu de suivi, d'analyse, de traitement et de vérification. Malgré d'importants progrès quant au nombre de pays de l'OCDE qui entreprennent des travaux dans ce domaine et quant à l'harmonisation internationale des définitions et méthodes de collecte de ces données, beaucoup reste à faire pour aboutir à des données de meilleure qualité. Il faut en particulier intensifier les efforts pour :

- ◆ promouvoir et assurer la compilation régulière de données sur les dépenses environnementales dans tous les pays membres de l'OCDE ;
- ◆ augmenter la comparabilité entre pays ;
- ◆ assurer une meilleure cohérence des données dans le temps ;
- ◆ renforcer la documentation des données de façon à faciliter leur interprétation et leur utilisation dans l'analyse des politiques et l'élaboration d'indicateurs.

Tableau 2 : Domaines environnementaux - CAPE 2000**

<p>1 Protection de l'air ambiant et du climat</p> <p>La protection de l'air ambiant et du climat englobe les mesures et activités qui ont pour but la réduction des rejets dans l'air ambiant ou des concentrations ambiantes de polluants atmosphériques ainsi que les mesures et activités qui ont pour but le contrôle des émissions de gaz à effet de serre et de gaz ayant un effet négatif sur la couche d'ozone stratosphérique.</p> <p>1.1 Prévention de la pollution par des modifications au stade de la production (pour la protection de l'air ambiant, du climat et de la couche d'ozone)</p> <p>1.2 Traitement des gaz rejetés et de l'air de ventilation (pour la protection de l'air ambiant, du climat et de la couche d'ozone)</p> <p>1.3 Mesure, contrôle, laboratoires, etc. et autres activités</p> <p><u>Sont exclues</u> : les mesures prises dans le but de réduire les coûts (par exemple économies d'énergie).</p> <p>2 Gestion des eaux usées (y compris prévention de l'émission de polluants dans les eaux de surface)</p> <p>La gestion des eaux usées comprend les activités et mesures visant à prévenir la pollution des eaux de surface grâce à la réduction des rejets d'eaux usées dans les eaux de surface intérieures et la mer. Elle comprend le captage et le traitement des eaux usées, y compris les activités de contrôle et de réglementation. Les fosses septiques sont également incluses.</p> <p>2.1 Prévention de la pollution grâce à des modifications au stade de la production</p> <p>2.2 Réseau d'assainissement</p> <p>2.3 Traitement des eaux usées</p> <p>2.4 Traitement de l'eau de refroidissement</p> <p>2.5 Mesure, contrôle, laboratoires, etc. et autres activités</p> <p><u>Sont exclues</u> : les actions et activités ayant pour but la protection des eaux souterraines contre l'infiltration de polluants et la décontamination des eaux polluées (voir CAPE 4).</p> <p>3 Gestion des déchets</p> <p>La gestion des déchets désigne les activités et mesures visant à prévenir la production de déchets et à réduire son incidence dommageable sur l'environnement. Elle comprend la collecte et le traitement des déchets, y compris les activités de contrôle et réglementation. Elle inclut également le recyclage et le compostage, la collecte et le traitement des déchets radioactifs de faible activité, le nettoyage des voiries et la collecte des détritiques.</p> <p>3.1 Prévention de la pollution à travers des modifications de procédés</p> <p>3.2 Collecte et transport des déchets</p> <p>3.3 Traitement et élimination des déchets dangereux : traitement thermique, mise en décharge et autres méthodes</p> <p>3.4 Traitement et élimination des déchets non dangereux : incinération, mise en décharge et autres méthodes</p> <p>3.5 Mesure, contrôle, laboratoires, etc.</p> <p>3.6 Autres activités</p> <p><u>Sont exclues</u> : les activités de gestion des déchets fortement radioactifs (voir CAPE 7)</p> <p>4 Protection et assainissement du sol, des eaux souterraines et des eaux de surface (y compris activités de nettoyage)</p> <p>La protection et l'assainissement du sol, des eaux souterraines et des eaux de surface englobent les mesures et activités ayant pour objectif la prévention des infiltrations polluantes, la décontamination des sols et des eaux et la protection du sol contre l'érosion et toute autre dégradation physique ainsi que contre la salinisation. La surveillance et le contrôle de la pollution du sol et des eaux souterraines sont inclus.</p> <p>4.1 Prévention des infiltrations polluantes</p> <p>4.2 Décontamination des sols et des eaux</p> <p>4.3 Protection du sol contre l'érosion et toute autre dégradation physique</p> <p>4.4 Prévention et assainissement de la salinité du sol</p> <p>4.5 Mesure, contrôle, laboratoires, etc.</p> <p>4.6 Autres activités</p> <p><u>Sont exclues</u> : les activités de gestion des eaux usées (voir CAPE 2), de même que les activités visant à protéger la biodiversité et le paysage (voir CAPE 6).</p> <p>5 Lutte contre le bruit et les vibrations (à l'exclusion de la protection des lieux de travail)</p> <p>La lutte contre le bruit et les vibrations désigne les mesures et activités qui ont pour objectif le contrôle, la réduction et la suppression des bruits et vibrations dus à l'activité industrielle et aux transports. Sont incluses les activités relatives à la lutte contre les bruits de voisinage (insonorisation de dancings, etc.) et les activités relatives à la lutte contre le bruit dans les lieux publics (piscines, etc.), les écoles, etc.</p> <p>5.1 Modifications préventives à la source, au stade de la production : trafic routier, ferroviaire, aérien, bruit industriels et autres</p> <p>5.2 Construction de dispositifs anti-bruit/vibration : trafic routier, ferroviaire, aérien, bruit industriels et autres</p> <p>5.3 Mesure, contrôle, laboratoires, etc.</p> <p>5.4 Autres activités</p> <p><u>Est exclue</u> : la lutte contre le bruit et les vibrations motivée par la protection du lieu de travail.</p>

Tableau 2 suite : Domaines environnementaux - CAPE 2000**

6 Protection de la biodiversité et du paysage

La protection de la biodiversité et du paysage désigne les mesures et activités visant à protéger et à régénérer les espèces animales et végétales, les écosystèmes et les habitats ainsi qu'à protéger et à régénérer les paysages naturels et semi-naturels. Il n'est pas toujours possible de distinguer la protection de la "biodiversité" de celle du "paysage". Par exemple, l'entretien ou la création de certains types de paysage, de biotopes, d'écozones et d'autres aspects s'y rapportant (haies, rangées d'arbres destinées à reconstituer des "couloirs naturels") ont un lien évident avec la préservation de la biodiversité.

- 6.1 Protection et régénération des espèces et des habitats
- 6.2 Protection des paysages naturels et semi-naturels
- 6.3 Mesure, contrôle, laboratoires, etc.
- 6.4 Autres activités

Sont exclues : la protection et la restauration de monuments historiques ou de paysages fortement construits, la lutte des mauvaises herbes à des fins agricoles de même que la protection des forêts contre les incendies lorsque celle-ci répond surtout à des considérations économiques. La création et l'entretien d'espaces verts le long des routes et équipements de loisir (tels que les golfs et les autres infrastructures sportives) sont également exclus.

Les actions et dépenses afférentes aux parcs et jardins urbains sont normalement exclues, mais peuvent, dans certains cas, avoir un rapport avec la biodiversité et doivent alors être incluses.

7 Protection contre les radiations (à l'exclusion de la sécurité extérieure)

La protection contre les radiations désigne les activités et mesures qui visent à réduire ou à éliminer les conséquences négatives des radiations, quelle qu'en soit la source. Sont inclus : la manutention, le transport et le traitement des déchets fortement radioactifs, à savoir les déchets qui, en raison de leur forte concentration de radionucléides requièrent un bouclier au cours des opérations normales de manutention et de transport.

- 7.1 Protection du milieu ambiant
- 7.2 Transport et traitement des déchets fortement radioactifs
- 7.3 Mesure, contrôle, laboratoires, etc.
- 7.4 Autres activités

Sont exclues : les activités et mesures relatives à la prévention des risques technologiques (par exemple : sécurité externe des centrales nucléaires) ainsi que les mesures de protection prises sur le lieu de travail. Sont également exclues : les activités relatives à la collecte et au traitement de déchets radioactifs de faible activité (voir CAPE 3).

8 Recherche et développement

Comprend toute activité de recherche et de développement (R&D) dans les secteurs public et privé visant à la protection de l'environnement : identification et analyse des sources de pollution, mécanismes de dispersion des polluants dans l'environnement ainsi que leurs effets sur les êtres humains, les espèces et la biosphère. Cette catégorie comprend les activités de R&D relatives à la prévention et à l'élimination de toute forme de pollution ainsi que celles relatives aux équipements et instruments de mesure et d'analyse de la pollution. Lorsqu'elles sont isolables, toutes les activités de R&D, même si elles se rapportent à une autre catégorie particulière, doivent être classées dans cette catégorie.

Sont exclues : les activités de R&D qui ont trait à la gestion des ressources naturelles.

9 Autres activités de protection de l'environnement

Les autres activités de protection de l'environnement englobent toutes les activités de protection de l'environnement qui prennent la forme d'activités d'administration et de gestion générales de l'environnement ou d'activités de formation ou d'éducation spécifiquement orientées vers la protection de l'environnement ou l'information du public, lorsqu'elles ne sont pas classées dans une autre catégorie de la CAPE. Elles incluent également les activités entraînant des dépenses indivisibles ainsi que les activités qui ne sont classées nulle part ailleurs.

- 9.1 Administration et gestion générales de l'environnement, y compris : administration générale, réglementation, gestion
- 9.2 Éducation, formation et information
- 9.3 Activités se traduisant par des dépenses indivisibles
- 9.4 Activités non classées ailleurs

** Pour plus de détails voir : <http://europa.eu.int/comm/eurostat/ramon>

PART II.

SUMMARY TABLES (English only)

	<u>Page:</u>
.....	
Table 1: PAC expenditure by the public sector, business and specialised producers, latest available year	32
Table 2: PAC expenditure as a percentage of GDP, 1990-2004	33
Table 2a: Total PAC expenditure ^a	33
Table 2b: PAC expenditure ^a by the public sector ^b	34
Table 2c: PAC expenditure ^a by the business sector ^b	35
Table 2d: PAC expenditure ^a by specialised producers	36
Table 3: PAC investment expenditure as a percentage of Total Gross Fixed Capital Formation, 1990-2004	37
Table 4: PAC expenditure by environmental domain, latest available year, selected countries	39
Table 4a. Expenditure on wastewater	39
Table 4b. Expenditure on waste	39
Table 4c. Expenditure on air	40

Table 1: PAC expenditure by the public sector, business and specialised producers, latest available year

			% of GDP		
	Year	Total	Public sector ^a	Business sector ^b	Private specialised producers
Canada (CAN) ^c	2002	1.2	0.6	0.6	..
Mexico (MEX)	♦ 2000	0.7	0.5	..	..
United States (USA)	1994	1.6	0.7	0.9	..
Japan (JPN)	1999	1.4	0.6	0.8	..
Korea (KOR)	2003	1.8	0.8	0.6	0.4 ^d
Australia (AUS)	1997	0.5	0.3	0.3	..
New Zealand (NZL)	♦ 2003	0.9	0.7	0.2	..
Austria (AUT)	2001	2.0	1.1	0.3	0.6 ^d
Belgium (BEL)	2002	1.1	0.5	0.6	..
Czech Republic (CZE)	♦ 2002	0.6	0.3	0.3	0.0
Denmark (DNK)	♦ 1998	1.8	1.4	0.2	0.2
Finland (FIN) ^c	2000	1.0	0.5	0.5	..
France (FRA)	2002	1.3	0.6	0.2	0.5
Germany (DEU) ^c	2003	1.6	1.3	0.3	..
Greece (GRC)	♦ 1995	0.8	0.5	0.3	..
Hungary (HUN)	2002	1.5	0.6	0.4	0.5 ^e
Iceland (ISL)	2003	..	0.3	..	..
Ireland (IRL) ^c	1998	0.6	0.4	0.2	..
Italy (ITA) ^c	1997	1.9	1.0	0.1	0.8
Luxembourg (LUX)	1997	..	0.6	..	..
Netherlands (NLD)	2003	2.1	1.1	0.5	0.4
Norway (NOR)	♦ 1990/2002	1.2	0.6	..	..
Poland (POL)	2004	1.5	0.8	0.6	0.2
Portugal (PRT)	1998	0.8	0.5	0.2	0.2 ^e
Slovak Republic (SVK)	2003	0.8	0.1	0.7	0.0
Spain (ESP) ^c	♦ 1999/2004	0.8	0.6	0.3	..
Sweden (SWE) ^c	♦ 1999/2000	1.1	0.2	0.3	0.4
Switzerland (CHE) ^c	2003	1.1	0.7	0.4	..
Turkey (TUR) ^c	1997	1.1	0.9	0.2	..
United Kingdom (GBR) ^c	2003	0.6	0.4	0.2	..

Notes:

- a) Data include public specialised producers.
- b) Coverage of business sectors vary among countries. For AUS, CZE, HUN, KOR, POL, SVK, the data cover all businesses. For ITA, CHE, the data cover all businesses except ISIC/NACE 01-05. For USA, AUT, FIN, FRA, DEU, GRC, PRT, SWE, GBR, the data cover ISIC/NACE 10-41. For NLD, the data cover ISIC/NACE 01-02, 10-41, and 60-62. For JPN, ESP, the data cover ISIC/NACE 10-40. For CAN, the data cover ISIC/NACE 02, and 10-40. For BEL, the data cover ISIC/NACE 10-36. For IRE and TUR, the data cover ISIC/NACE 15-41.
- c) Totals might be overestimated due to a lack of elimination of transactions between different sectors.
- d) Private specialised producers are included in the business sector.
- e) Includes both public and private specialised producers.

N.B.: Figures in italics are derived from earlier surveys or OECD Environmental Performance Reviews.

♦Country notes:

- MEX) Total PAC data are estimates for 2000 from the 2003 OECD Environmental Performance Review of Mexico.
- NZL) Business sector data are derived from the 2007 OECD Environmental Performance Review of New Zealand (forthcoming).
- CZK) Figures cover only investments.
- DNK) Business sector data are estimates from the 1998 OECD Environmental Performance Review of Denmark.
- GRC) Business sector data are estimates for 1995 from the 2000 OECD Environmental Performance Review of Greece.
- NOR) Total PAC data are estimates for the year 1990 from the 1993 OECD Environmental Performance Review of Norway. Public sector data refer to 2002.
- ESP) Total PAC data are estimates for the year 1999 from the 2004 OECD Environmental Performance Review of Spain. Public sector data refer to 1999, while business sector data refer to 2004.
- SWE) Total PAC data are estimates for the year 2000 from the 2004 OECD Environmental Performance Review of Sweden. Public sector data refer to 2000, and do not include the municipal level of the public sector. Data for the business sector and private specialised producers refer to 1999.

Source: OECD.

Table 2: PAC expenditure as a percentage of GDP, 1990-2004
Table 2a: Total PAC expenditure^a

	% of GDP														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
CAN ^b	..	..	..	..	1.2	1.2	1.2	1.1	1.1	..	1.0	..	1.2	..	..
MEX	♦	..	..	..	..	..	..	..	..	..	0.7	..	..	..	..
USA	1.4	1.5	1.5	1.5	1.6	..	..	..	..	..	..	..	..	..	..
JPN	..	..	1.2	..	1.4	1.3	1.4	1.3	1.3	1.4	..	..	..	..	..
KOR	♦	..	1.5	1.5	1.5	1.5	1.5	1.6	1.4	1.4	1.4	1.8	1.8	1.8	..
AUS	♦	..	0.6	0.8	0.9	0.8	0.8	0.9	0.5	..	..	0.4	..	..	..
NZL	♦	..	..	..	..	..	..	..	..	..	..	..	..	0.9	..
AUT	♦	2.1	2.2	..	1.8	2.0	1.8	2.6	2.7	2.4	1.9	2.0	..	..	..
BEL	..	..	..	..	..	..	0.9	0.9	..	..	..	..	1.1	..	..
CZE	♦	1.0	1.2	1.9	1.8	2.2	2.2	2.3	1.8	1.4	0.9	0.8	0.6	..	..
DNK	♦	..	..	..	..	..	..	..	1.8	..	..	..	..	..	..
FIN ^b	..	..	..	..	1.0	1.1	1.2	1.1	1.0	0.9	1.0	..	..	..	..
FRA	1.0	..	..	..	..	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	..	..
DEU ^b	♦	..	1.4	1.5	1.4	1.9	2.0	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.6
GRC	♦	..	..	..	..	0.8	..	..	..	..	..	..	..	..	..
HUN	♦	..	..	0.6	0.5	0.8	0.5	0.6	1.0	1.4	..	..	1.5	1.5	..
ISL	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
IRL ^b	..	..	..	..	..	..	..	..	0.6	..	..	..	..	..	..
ITA ^b	♦	..	..	..	..	..	..	1.9	..	..	..	1.4	..	..	..
LUX	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
NLD	♦	1.6	1.7	1.8	..	1.8	..	2.2	2.0	2.0	2.1	2.1	..	2.1	..
NOR	♦	1.2	..	..	..	..	..	..	..	..	..	..	..	..	..
POL	♦	..	..	..	..	..	..	..	2.6	2.3	1.9	1.8	1.4	1.5	1.5
PRT	..	..	..	..	..	..	0.9	0.9	0.8	0.7	0.8	0.7	0.6	0.6	0.6
SVK	..	..	..	..	..	..	..	..	..	2.0	0.8	1.0	1.2	0.8	..
ESP ^b	♦	..	..	0.8	..	..	..	..	..	0.8	..	..	..	..	..
SWE ^b	♦	..	1.1	..	..	..	..	..	..	0.8	1.1	..	..	..	..
CHE ^b	♦	..	..	1.2	..	..	..	..	..	..	..	..	..	1.1	..
TUR ^b	..	..	..	..	..	..	..	1.1	..	..	..	..	..	..	..
GBR ^b	0.7	..	..	..	..	..	..	0.9	..	0.7	0.9	0.6	0.5	0.6	..

Notes:

a) Data refer to expenditure that the sector has for measures it executes itself (i.e. Expenditure 1 based on the abater principle: see page 11 and Table 1). This definition does not include financial transfers such as fees and purchases of PAC services.

"Total expenditure" refers to the sum of expenditure by the public sector, the business sector and specialised producers. Household expenditure is not included. Business sector coverage varies among the countries. See country sheets for details of industry coverage.

b) Data might be overestimated due to a lack of elimination of transactions between different sectors.

N.B.: Figures in italics are derived from earlier surveys or OECD Environmental Performance Reviews, and may not be fully comparable to more recent data.

♦Country notes:

MEX) 2000 data on total PAC expenditure are estimates from the 2003 OECD Environmental Performance Review of Mexico.

KOR) Since 2001, data include private specialised producers. 1998-2000 business sector data include fees and purchases.

AUS) 1991-96 and 2001 data include fees and purchases. 1997 data were compiled according to the SERIEE framework. 2001 data are partial.

NZL) Business sector data are derived from the 2007 OECD Environmental Performance Review of New Zealand (forthcoming).

AUT) 1990-1996 data do not include private specialised producers.

CZE) Data refer to investment expenditure only. Since 1997, specialised producers are included.

DNK) Business sector data are estimates from OECD Environmental Performance Review 1998.

DEU) 1991-1993 data do not include public specialised producers.

GRC) Business sector data for 1995 are estimates from the 2000 OECD Environmental Performance Review of Greece.

HUN) 1992-1998 data refer to investment expenditure only. Since 1997, specialised producers are included.

ITA) 1997 data include specialised producers and are based on the SERIEE framework, while 2001 data are based on the Classification of Functions of Government (COFOG).

NLD) Since 1997, data include expenditure by private specialised producers. 1990-98 data include fees and purchases.

NOR) Data refer to estimates from the 1993 OECD Environmental Performance Review of Norway.

POL) 1998-2001 data include fees and payments of PAC services produced by others. Since 2002, specialised producers are included.

ESP) Data refer to estimates from the 2004 OECD Environmental Performance Review of Spain.

SWE) 1999 data do not include the municipal level of the public sector. 1991 and 2000 data refer to estimates from the 2004 OECD Environmental Performance Review of Sweden.

CHE) 1993 data refer to estimates from the 1998 OECD Environmental Performance Review of Switzerland.

Source: OECD.

Table 2b: PAC expenditure^a by the public sector^b

	% of GDP														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
CAN ^c	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	..	..
MEX ♦	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.4	0.5	0.5	0.5	0.5	0.5
USA	0.6	0.6	0.6	0.6	0.7	..	..	..	..	..	..	..	..	..	..
JPN	0.3	..	0.3	..	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.4
KOR ♦	..	..	0.8	0.8	0.8	0.7	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.8	..
AUS ♦	..	0.4	0.5	0.5	0.5	0.5	0.6	0.3	0.2	0.2	0.2	0.2	..	0.2	..
NZL ^c	..	..	..	..	..	..	..	..	..	..	..	0.8	0.8	0.7	..
AUT	1.1	1.1	1.1	1.2	0.9	1.4	1.3	1.4	1.5	1.3	0.9	1.1	..	..	..
BEL	..	..	..	..	..	..	0.5	0.5	..	..	..	..	0.5	..	..
CZE ♦	..	..	..	0.5	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.3	..	..
DNK ^c	..	1.3	1.3	1.4	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3
FIN ^c	..	..	..	..	0.6	0.5	0.6	0.6	0.5	0.5	0.5	..	..	..	..
FRA	0.5	..	..	..	..	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	..	..
DEU ^c ♦	..	0.9	0.9	0.9	1.4	1.5	1.5	1.4	1.3	1.3	1.3	1.2	1.3	1.3	..
GRC ^c	..	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	..	..	..	..	..
HUN ♦	..	..	0.2	0.3	0.6	0.4	0.3	0.2	0.5	..	..	0.5	0.6	..	..
ISL ♦	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	..
IRL ^c	..	..	..	..	..	..	..	..	0.4	..	..	..	..	..	..
ITA ^c ♦	..	..	..	..	..	0.7	0.7	1.0	0.7	0.7	0.8	0.8	0.8	..	..
LUX	..	..	..	..	..	..	..	0.6	..	..	..	..	..	..	..
NLD ♦	0.9	1.1	1.1	..	..	1.3	..	1.1	1.1	1.2	1.1	1.2	..	1.1	..
NOR ♦	..	..	..	0.5	0.6	..	0.5	..	..	..	..	0.5	0.6	..	..
POL ♦	..	..	..	..	..	..	..	..	0.8	0.8	0.7	0.7	0.6	0.7	0.8
PRT ♦	..	..	..	..	..	..	0.6	0.7	0.5	0.5	0.5	0.5	0.5	0.4	0.4
SVK ♦	4.0	2.3	1.8	1.3	0.8	..	..	..	..	0.5	0.1	0.1	0.2	0.1	..
ESP ^c	..	..	..	..	0.6	0.6	0.5	0.6	0.6	0.6	..	..	..	..	..
SWE ^c ♦	..	0.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	..	..
CHE ^c	0.7	..	1.0	0.6	..	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7	..
TUR ^c	..	..	..	..	..	..	..	0.9	1.1	..	..	..	..	0.9	0.9
GBR ^c	0.4	..	..	..	..	..	..	0.4	0.4	0.4	0.4	0.4	0.4	0.4	..

Notes:

- a) Data refer to expenditure that the sector has for measures it executes itself (i.e. Expenditure 1 based on the abater principle: see page 11 and Table 1). This definition does not include financial transfers such as fees and purchases of PAC services.
- b) Data include public specialised producers
- c) Data also include fees and purchases of PAC services produced by others.

♦Country notes:

- MEX) Data include only expenditure by the federal government, the capital city government, and two public enterprises.
- KOR) Data include only expenditure by the central government. 1992-2000 data include fees and purchases of PAC services produced by others.
- AUS) Since 1998, data include only municipalities. 1997 data were compiled according to the SERIEE framework, but covers only general government. 1991-97 data include fees and purchases of PAC services produced by others.
- CZE) Data refer to investment expenditure only.
- DEU) 1991-1993 data do not include public specialised producers.
- HUN) 1992-1998 data refer to investment expenditure only.
- ISL) Data refer to expenditure on waste and wastewater only.
- ITA) Change in methodology between 1992 and 1995. Public specialised producers are included only for the year 1997.
- NLD) 1990-1998 data include fees and purchases of PAC services produced by others.
- NOR) Since 2001, data refer to the whole public sector. Data for previous years refer to waste and wastewater expenditure by the municipal sector only. 1993-1996 data include fees and purchases of PAC services produced by others.
- POL) 1998-2001 data include fees and purchases of PAC services produced by others.
- PRT) 1996-1997 data include expenditure by public specialised producers. Since 1998, expenditure by public specialised producers are excluded from the public sector data.
- SVK) 1990-1994 data include fees and purchases of PAC services produced by others.
- SWE) 1991 data refer to a Secretariat estimate for the whole public sector including public specialised producers. Since 1992, data refer to central government only.

Source: OECD.

Table 2c: PAC expenditure^a by the business sector^b

	% of GDP														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
CAN ^c	0.5	0.5	0.6	0.5	0.5	..	0.5	..	0.6	..	..
MEX
USA ♦	0.8	0.8	0.9	0.9	0.9	..	..	..	..	0.3	..	..	..	..	..
JPN	..	0.9	0.9	1.0	0.9	0.8	0.9	0.8	0.8	0.8	..	..	..	..	..
KOR ♦	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	..
AUS ♦	..	0.2	0.3	0.4	0.3	0.3	0.4	0.3	..	..	..	0.2	..	..	..
NZL ♦	0.2	..
AUT	1.0	1.0	..	..	0.8	0.6	0.6	0.6	0.5	0.5	0.4	0.3	..	..	..
BEL ♦	0.4	0.4	..	..	..	..	0.6	..	..
CZE ♦	1.3	1.5	1.4	1.4	1.5	1.1	0.8	0.5	0.3	0.3	..	..
DNK ♦	0.2	..	..	..	..	..	..
FIN ♦	0.6	0.6	0.5	0.5	0.6	0.5	0.4	0.4	0.5	..	..	..	..
FRA	0.3	..	..	..	..	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	..	..
DEU ♦	..	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.3	..
GRC ♦	0.3	..	..	..	..	..	..	..	..	..
HUN ♦	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	..	..	0.6	0.4	..	..
ISL
IRL ^c	0.2	..	..	..	..	..	..
ITA ♦	0.1	..	..	..	0.6	..	..	..
LUX
NLD ♦	0.7	0.7	0.7	..	..	0.5	..	0.6	0.5	0.5	0.5	0.5	..	0.5	..
NOR
POL ♦	1.8	1.7	1.8	1.5	1.2	1.1	0.7	0.7	0.6
PRT	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2
SVK	1.5	0.6	0.9	1.0	0.7	..
ESP ^c	0.3
SWE	..	0.3	..	..	..	..	..	..	..	0.3	..	0.3	0.3	0.3	..
CHE ♦	0.6	..	..	..	..	..	..	..	..	..	0.4	..
TUR ^c	0.2	..	..	..	..	..	..	..
GBR ♦	0.3	..	..	..	0.3	..	..	0.5	..	0.3	0.4	0.2	0.1	0.2	..

Notes:

- a) Data refer to expenditure that the sector has for measures it executes itself (i.e. Expenditure 1 based on the abater principle: see page 11 and Table 1). This definition does not include financial transfers such as fees and purchases of PAC services.
- b) See country tables for details on coverage of industries.
- c) Data include fees and purchases of PAC services produced by others.

N.B.: Figures in italics are derived from earlier surveys or OECD Environmental Performance Reviews, and may not be fully comparable to more recent data.

♦Country notes:

- USA) The break between 1994 and 1999 is due to major changes in the survey methods. The figures presented here include both pollution treatment, pollution prevention, recycling and disposal, and general environmental administration, monitoring and control. See country table for details.
- KOR) 1992-2000 data include fees and purchases of PAC services produced by others.
- AUS) 1991 and 2001 data cover the Mining and Manufacturing sectors only. 1991-96 and 2001 data include fees and purchases.
- NZL) 2003 data are estimates from the 2007 OECD Environmental Performance Review of New Zealand (forthcoming).
- BEL) Since 2002, data include fees and purchases of PAC services produced by others
- CZE) Data refer to investment expenditure only.
- DNK) Data are estimates from the 1998 OECD Environmental Performance Review of Denmark.
- FIN) 1992-1998 data include on fees and purchases of PAC services produced by others.
- DEU) Data do not include expenditure for integrated investments.
- GRC) Business sector data are estimates for 1995 from the 200 OECD Environmental Performance Review of Greece.
- HUN) 1990-1998 data refer to investment expenditure only.
- ITA) 1997 data do not include expenditure for integrated investments.. 2001 data include fees and purchases of PAC services produced by others.
- NLD) 1990-1998 data include fees and purchases of PAC services produced by others.
- POL) 1996-2001 data include fees and purchases of PAC services produced by others.
- CHE) 1993 data include fees and purchases of PAC services produced by others.
- GBR) 1990-1994 data include fees and purchases of PAC services produced by others.

Source: OECD.

Table 2d: PAC expenditure^a by specialised producers

	% GDP														
Selected countries	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Korea
- of which private	0.3	0.3	0.4	..
Austria	1.9	1.9	1.8	1.3	1.6	..	..	..
- of which public	1.2	1.3	1.2	0.8	1.0	..	..	..
- of which private	0.7	0.6	0.6	0.5	0.6	..	..	..
Czech Republic	0.6	0.6	0.5	0.6	0.5	0.5	..	..
Denmark	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5
- of which public	..	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
- of which private	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2
Finland
- of which public	0.1	0.1	0.1	0.1	0.1	..	..	..	..
France	0.5	..	..	..	..	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	..	..
- of which public	0.3	..	..	..	..	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	..	..
- of which private	0.3	..	..	..	..	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	..	..
Germany
- of which public	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	..
Hungary	0.5	0.6	0.6	0.6	0.5	0.5	..	..
Italy	1.1	..	..	..	..	..	..	..
- of which public	0.3	..	..	..	..	..	..	..
- of which private	0.8	..	..	..	..	..	..	..
Netherlands
- of which private	0.6	0.4	0.4	0.4	0.4	..	0.4	..
Norway
- of which public	0.1	0.1	..	..
Poland	0.3	0.4	0.6
- of which public	0.2	0.3	0.4
- of which private	0.1	0.2	0.2
Portugal	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Slovak Republic	0.0	0.0	..
- of which public	0.0	0.0	..
- of which private	0.0	0.0	..
Sweden	0.4	0.4	0.4	..	..	..	..	..
Turkey
- of which public	0.4	0.4

Note:

a) Data refer to expenditure that the sector has for measures it executes itself (i.e. Expenditure 1 based on the abater principle: see page 11 and Table 1). This definition does not include financial transfers such as fees and purchases of PAC services.

Source: OECD.

Table 3: PAC investment expenditure as a percentage of Total Gross Fixed Capital Formation, 1990-2004

		% GFCF														
		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
CAN	Public sector	1.0	1.0	1.1	1.0	1.0	1.2	1.1	0.9	..	..	..	..	..	..	..
	♦ Business sector	0.9	0.9	0.9	0.8	1.1	1.4	1.3	1.0	0.9	..	1.0	..	1.3	..	..
	Specialised producers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	♦ All PAC investment	1.9	1.9	2.0	1.8	2.1	2.7	2.4	1.9	..	..	..	..	..	..	..
MEX	♦ Public sector	0.9	0.5	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.9	1.1	0.9	0.8	0.9	0.8
USA	Public sector	1.1	1.1	1.1	1.0	1.0	..	..	..	..	..	..	..	..	..	..
	♦ Business sector	1.7	2.0	2.1	2.1	2.2	..	..	..	..	0.3	..	..	..	..	..
	Specialised producers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	All PAC investment	2.8	3.1	3.1	3.1	3.3	..	..	..	..	..	..	..	..	..	..
JPN	Business sector	..	0.6	0.8	1.3	0.8	0.6	0.8	0.7	0.6	0.6	..	..	..	..	..
KOR	Public sector	..	..	1.3	1.4	1.3	1.2	1.2	1.6	1.6	1.6	1.4	1.7	1.6	1.6	..
	Business sector	..	..	1.0	0.8	0.9	0.9	0.9	0.9	0.7	0.7	0.5	1.0	1.1	1.0	..
	Specialised producers	..	..	..	..	..	..	..	..	..	..	..	0.1	0.2	0.1	..
	All PAC investment	..	..	2.3	2.2	2.2	2.1	2.1	2.4	2.3	2.3	1.9	2.7	2.8	2.7	..
AUS	Public sector	..	1.3	1.2	1.3	1.0	1.3	1.1	0.2	0.3	0.3	0.4	0.4	..	0.3	..
	Business sector	..	0.5	0.5	0.5	0.2	0.2	0.4	0.6	..	..	..	0.4	..	..	..
	Specialised producers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	All PAC investment	..	1.8	1.8	1.7	1.2	1.5	1.6	0.9	..	..	..	0.7	..	..	..
NZL	Public sector	..	..	..	..	..	..	..	..	..	..	1.3	1.5	1.2	..	
AUT	Public sector	2.1	2.0	2.3	2.4	2.2	2.7	2.3	0.1	0.1	0.1	0.1	0.1	..	..	..
	Business sector	2.5	2.4	..	..	1.5	0.8	0.9	1.0	0.7	0.6	0.3	0.5	..	..	..
	Specialised producers	..	..	..	..	..	..	..	2.7	2.6	2.2	2.5	2.8	..	..	..
	All PAC investment	4.7	4.4	..	..	3.6	3.5	3.2	3.7	3.4	2.8	2.9	3.4	..	..	..
BEL	Public sector	..	..	..	..	..	..	0.8	0.8	..	..	..	..	0.9	0.8	..
	Business sector	..	..	..	..	..	..	0.8	0.8	..	..	..	..	0.4	..	..
	Specialised producers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	All PAC investment	..	..	..	..	..	..	1.6	1.6	..	..	..	..	1.3	..	..
CZE	Public sector	..	..	..	1.7	2.7	2.3	2.3	2.2	1.8	1.9	1.6	1.7	1.1	..	..
	Business sector	..	..	..	4.6	5.2	4.5	4.5	4.9	3.9	3.1	1.6	1.1	1.1	..	..
	Specialised producers	..	..	..	..	..	..	0.1	0.3	0.3	0.1	0.1	0.1	0.1	..	..
	All PAC investment	3.6	4.9	6.9	6.4	7.9	6.9	7.0	7.4	6.0	5.1	3.3	2.9	2.2	..	..
DNK	Public sector	..	1.9	2.0	2.1	2.1	1.8	1.6	1.5	1.4	1.4	1.4	1.2	1.2	1.3	1.0
	Business sector	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Specialised producers	..	..	..	..	..	0.5	0.7	0.8	0.8	0.5	0.3	0.4	0.4	0.5	0.5
	All PAC investment	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
FIN	Public sector	..	..	..	..	1.1	0.7	0.8	0.8	0.6	0.3	0.4	..	..	..	..
	Business sector	..	..	1.9	2.0	1.2	1.6	1.7	1.2	0.8	0.6	0.9	..	..	..	..
	Specialised producers	..	..	..	..	..	..	0.2	0.3	0.3	0.3	0.3	..	..	..	..
	All PAC investment	..	..	..	..	2.4	2.3	2.7	2.2	1.7	1.2	1.5	..	..	..	..
FRA	Public sector	0.2	..	..	..	..	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	..	..
	Business sector	0.4	..	..	..	..	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	..	..
	Specialised producers	1.0	..	..	..	..	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.5	..	..
	All PAC investment	1.6	..	..	..	..	1.9	1.9	2.1	2.0	2.0	1.9	2.0	2.1	..	..
DEU	Public sector	..	1.9	2.1	1.9	1.7	1.5	1.2	1.1	0.9	0.8	0.7	0.6	0.6	0.6	..
	Business sector	..	0.8	0.8	0.9	0.8	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	..
	♦ Specialised producers	..	..	..	..	1.3	1.3	1.3	1.3	1.1	1.2	1.1	1.1	1.1	1.1	..
	All PAC investment	..	2.7	2.9	2.8	3.8	3.5	3.2	2.8	2.4	2.4	2.1	2.1	2.2	2.1	..
GRC	Public sector	1.1	1.4	1.0	0.9	0.8	0.7	0.7	0.7	0.7	0.6	..	..	..	..	..
HUN	Public sector	..	..	..	..	..	..	..	0.9	2.2	..	..	2.1	2.4	..	..
	Business sector	..	..	..	..	..	..	..	1.1	1.3	..	..	1.7	1.1	..	1.0
	Specialised producers	..	..	..	..	..	..	..	..	..	..	..	0.5	0.2	..	..
	All PAC investment	..	..	..	..	..	..	..	2.0	3.5	..	..	4.3	3.7	..	..
ISL	Public sector	0.3	0.4	0.4	0.5	0.6	0.4	0.3	0.3	0.2	0.4	0.2	0.4	0.4	0.3	..

		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
IRL	Public sector	..	..	..	..	..	..	..	..	0.8	..	..	..	..	..	..
	Business sector	..	..	..	..	..	..	..	..	0.6	..	..	..	..	..	..
	Specialised producers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	All PAC investment	..	..	..	..	..	..	..	..	1.4	..	..	..	..	..	..
ITA	Public sector	0.5	0.9	0.7	..	..	0.7	0.8	0.7	0.8	0.7	0.6	0.8	0.7	..	..
	Business sector	..	..	..	..	..	..	..	0.4	..	..	..	1.7	..	..	..
	Specialised producers	..	..	..	..	..	..	..	1.9	..	..	..	..	..	..	..
	All PAC investment	..	..	..	..	..	..	..	3.1	..	..	..	2.5	..	..	..
LUX	Public sector	..	..	..	..	..	..	..	1.1	..	..	..	..	..	..	..
NLD	Public sector	0.8	1.0	1.3	..	..	1.1	..	0.8	1.0	1.0	0.9	1.1	..	1.3	..
	Business sector	1.7	1.4	1.5	..	..	1.1	..	1.4	1.0	0.8	0.8	0.9	..	0.7	..
	◆ Specialised producers	..	..	..	..	..	..	..	1.5	0.4	0.3	0.4	0.3	..	0.4	..
	All PAC investment	2.5	2.4	2.8	..	..	2.2	..	3.7	2.4	2.2	2.2	2.3	..	2.4	..
NOR	Public sector	..	..	..	0.9	1.0	..	0.7	..	..	..	..	0.6	0.7	..	..
POL	Public sector	..	..	..	..	..	1.7	2.8	2.5	2.1	2.1	1.8	1.9	1.7	1.8	1.8
	Business sector	..	..	..	..	..	3.8	4.8	4.1	4.3	3.4	2.0	1.9	1.5	1.6	1.4
	Specialised producers	..	..	..	..	..	..	..	..	..	0.1	0.1	0.2	0.1	0.1	0.1
	All PAC investment	..	..	..	..	..	5.5	7.6	6.6	6.5	5.5	3.9	3.9	3.4	3.4	3.3
PRT	Public sector	..	..	..	..	..	..	1.4	1.3	0.8	0.8	0.8	0.8	0.7	0.7	0.6
	Business sector	..	..	..	..	0.6	0.6	0.7	0.4	0.6	0.6	0.7	0.7	0.6	0.6	0.7
	Specialised producers	..	..	..	..	..	..	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	All PAC investment	..	..	..	..	..	..	2.1	1.8	1.5	1.4	1.6	1.4	1.3	1.4	1.4
SVK	Public sector	10.7	6.2	4.0	2.8	2.3	2.0	..	..	..	..	..	..	0.5	0.4	..
	Business sector	..	..	..	..	..	..	..	..	..	..	..	..	1.7	1.2	..
	Specialised producers	..	..	..	..	..	..	..	..	..	..	..	..	0.0	0.0	..
	All PAC investment	..	..	..	..	..	..	..	..	..	..	..	..	2.2	1.5	..
ESP	Public sector	..	..	..	..	0.9	0.8	0.8	1.4	1.4	1.4	..	..	..	..	..
	Business sector	..	..	..	..	..	..	..	..	0.4	0.5	0.6	0.4	0.5	0.4	0.4
	Specialised producers	..	..	..	..	..	..	0.2	0.2	0.2	0.4	..	..	..	..	..
	All PAC investment	..	..	..	..	..	..	..	..	2.0	2.2	..	..	..	..	..
SWE	Public sector	..	0.9	..	..	..	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	..	..
	Business sector	..	0.7	..	..	..	..	..	..	..	0.8	0.7	0.9	0.9	1.1	..
	Specialised producers	..	..	..	..	..	..	..	0.4	0.3	0.3	..	..	..	..	..
	All PAC investment	..	1.6	..	..	..	..	..	..	..	1.2	..	..	..	..	..
CHE	Public sector	1.0	..	1.4	..	..	1.5	1.7	1.4	1.5	1.4	1.2	1.1	1.1	..	..
	Business sector	..	..	..	1.5	..	..	..	..	..	..	..	..	..	0.9	..
	Specialised producers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	All PAC investment	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TUR	Public sector	0.6	0.9	0.9	0.6	0.7	0.5	0.6	1.3	2.1	1.4	1.3	0.7	0.4	1.1	0.8
	Business sector	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.3	0.0	0.3	0.3	0.2	..	..	..
	Specialised producers	..	..	..	..	..	..	..	..	..	..	..	..	..	1.2	1.0
	All PAC investment	0.7	0.9	1.1	0.8	0.8	0.6	0.7	1.7	2.1	1.7	1.5	0.9	..	..	..
GBR	Public sector	0.2	..	..	..	..	..	..	0.2	0.1	0.1	0.1	0.1	0.4	0.4	..
	Business sector	0.7	..	..	..	1.1	..	..	0.9	..	0.8	0.8	0.7	0.3	..	..
	Specialised producers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	All PAC investment	0.9	..	..	..	..	..	..	1.0	..	0.9	0.9	0.8	0.7	..	..

◆Country notes:

CAN) Break in 1994: Exclusion of construction, distributive trade and other service industries. Break in 1995: Inclusion of other manufacturing industries (estimated values).

MEX) Break in 1999: Data cover expenditure by the major government agencies, including the federal and state governments. Earlier data did not include state government expenditure.

USA) Break between 1994 and 1999: 1999 figures cover investment in pollution abatement (end-of-pipe) only.

KOR) Specialised producers: data refer to private specialised producers only. Data on public specialised producers are included in the public sector.

DEU) Specialised producers: data refer to public specialised producers only.

NLD) Specialised producers: data refer to private specialised producers only. Data on public specialised producers are included in the public sector.

Source: OECD.

Table 4: PAC expenditure by environmental domain, latest available year, selected countries
Table 4a. Expenditure on wastewater

	Public Sector ^a				Business Sector				Specialised producers			
	Year	Per capita ^b	% of GDP	% of GFCF ^c	Year	Per capita ^b	% of GDP	% of GFCF ^c	Year	Per capita ^b	% of GDP	% of GFCF ^c
CAN	2002	74.2	2.5	..	2000	..	..	2.1	..	..	..	..
MEX	2004	1.6	0.2	0.4	..	..	..	..	..	..	..	..
USA	1994	105.0	3.9	10.2	1999	23.4	0.7	1.0	..	..	..	..
JPN	2004	60.8	2.0	..	..	..	..	..	..	..	..	..
KOR	♦ 2003	79.6	4.1	11.4	2003	40.9	2.1	3.0	2003	18.2	0.9	0.4
AUS	2003	34.0	1.2	2.0	1997	14.7	0.7	1.8	..	..	..	..
NZL	2003	102.4	4.5	11.3	..	..	..	..	..	..	..	..
AUT	2001	184.6	6.4	14.1	2001	21.3	0.7	1.4	2001	45.1	1.6	1.6
BEL	2002	45.5	1.6	5.9	2002	50.1	1.7	0.8	..	..	..	..
CZE	2002	..	..	6.3	2002	..	..	4.6	2002	..	..	0.0
DNK	2004	138.4	4.4	9.1	..	..	..	..	2004	27.8	0.9	1.0
FIN	2000	61.3	2.4	5.5	2000	43.9	1.7	3.0	2000	29.0	1.1	2.6
FRA	..	..	..	..	2002	22.1	0.8	1.4	2002	114.6	4.0	10.1
DEU	2003	177.6	6.5	14.5	2003	47.5	1.7	1.5	..	..	..	..
GRC	1999	14.6	1.0	3.8	..	..	..	..	..	..	..	..
HUN	2002	76.1	5.3	22.5	2002	12.2	0.8	1.3	2002	39.8	2.8	0.9
ISL	2003	21.5	0.7	2.9	..	..	..	..	..	..	..	..
IRL	1998	56.3	2.3	7.6	1998	15.0	0.6	2.1	..	..	..	..
ITA	1997	24.2	1.1	0.6	2001	25.4	1.0	3.4	1997	44.4	2.0	2.8
LUX	1997	97.2	2.7	7.2	..	..	..	..	..	..	..	..
NLD	♦ 2003	133.8	4.4	10.9	2003	19.6	0.6	0.8	2003	13.0	0.4	0.0
NOR	2002	83.4	2.3	6.5	..	..	..	..	..	..	..	..
POL	2004	68.7	5.4	15.4	2004	23.9	1.9	4.0	2004	38.6	3.1	0.5
PRT	2004	30.6	1.6	4.6	2004	8.4	0.4	1.1	1998	9.5	0.6	0.9
SVK	2003	5.7	0.4	1.6	2003	17.0	1.3	1.8	2003	1.1	0.1	0.0
ESP	1999	47.2	2.4	8.1	2004	15.2	0.6	0.9	1999	..	..	2.3
SWE	1991	67.7	3.5	7.5	2003	29.6	1.0	3.3	1999	8.1	0.3	0.7
CHE	2002	134.8	4.1	9.2	2003	55.0	1.7	..	..	..	..	..
TUR	2004	12.9	1.7	8.1	1998	1.8	0.3	0.6	..	..	..	..
GBR	2003	6.7	0.2	0.1	2003	13.0	0.4	0.8	..	..	..	..

Table 4b. Expenditure on waste

	Public Sector ^a				Business Sector				Specialised producers			
	Year	Per capita ^b	% of GDP	% of GFCF ^c	Year	Per capita ^b	% of GDP	% of GFCF ^c	Year	Per capita ^b	% of GDP	% of GFCF ^c
CAN	2002	50.5	1.7	..	2000	..	..	1.3	..	..	..	..
MEX	2004	2.9	0.3	0.9	..	..	..	..	..	..	..	..
USA	1994	58.9	2.2	..	1999	8.7	0.3	0.2	..	..	..	..
JPN	2004	9.8	0.3	..	..	..	..	..	..	..	..	..
KOR	♦ 2003	52.3	2.7	2.6	2003	6.2	0.3	0.8	2003	50.2	2.6	1.0
AUS	2003	23.8	0.8	0.5	1997	20.0	0.9	1.2	..	..	..	..
NZL	2003	37.1	1.6	0.8	..	..	..	..	..	..	..	..
AUT	2001	117.1	4.1	6.8	2001	23.7	0.8	0.4	2001	126.7	4.4	3.0
BEL	2002	69.9	2.4	2.1	2002	55.7	1.9	0.5	..	..	..	..
CZE	2002	..	..	0.8	2002	..	..	0.6	..	..	..	0.6
DNK	2004	171.3	5.4	3.7	..	..	..	..	2004	132.1	4.2	3.6
FIN	2000	19.4	0.8	0.7	2000	27.9	1.1	1.2	2000	2.2	0.1	0.0
FRA	2002	59.7	2.1	3.0	2002	16.1	0.6	0.4	2002	124.8	4.4	4.8
DEU	2003	163.4	6.0	2.5	2003	38.0	1.4	0.5	..	..	..	..
GRC	1999	53.0	3.5	2.4	..	..	..	..	..	..	..	..
HUN	2002	3.9	0.3	1.0	2002	8.7	0.6	1.0	2002	32.9	2.3	0.9
ISL	2003	71.2	2.4	0.0	..	..	..	..	..	..	..	..
IRL	1998	20.4	0.8	..	1998	4.9	0.2	0.3	..	..	..	..
ITA	1997	46.1	2.1	0.5	2001	36.2	1.4	3.3	1997	191.5	8.7	16.0
LUX	1997	89.8	2.5	3.1	..	..	..	..	..	..	..	..
NLD	♦ 2003	56.3	1.9	1.7	2003	8.4	0.3	0.2	2003	108.8	3.6	0.0
NOR	2002	17.2	0.5	0.7	..	..	..	..	2002	..	..	0.0
POL	2004	17.3	1.4	1.7	2004	16.8	1.3	2.3	2004	32.3	2.6	0.8
PRT	2004	38.3	2.0	1.1	2004	-5.6	-0.3	0.4	..	..	..	..
SVK	2003	2.9	0.2	0.2	2003	14.3	1.1	0.6	2003	1.7	0.1	0.1
ESP	1999	41.8	2.2	2.8	2004	25.5	1.0	0.6	1999	..	..	1.2
SWE	1991	43.9	2.3	1.3	2003	29.7	1.0	1.7	1999	86.8	3.5	2.7
CHE	2002	82.8	2.5	1.4	2003	75.8	2.3	..	..	..	..	..
TUR	2004	23.4	3.0	1.7	1997	3.3	0.5	0.3	..	..	..	..
GBR	2003	89.0	3.0	1.2	2003	14.9	0.5	0.3	..	..	..	..

Table 4c. Expenditure on air

	Public Sector ^a				Business Sector			
	Year	Per capita ^b	% GDP	% GFCF ^c	Year	Per capita ^b	% GDP	% GFCF ^c
CAN		..	..	..	2000	..	..	5.1
MEX	2004	0.3	0.0	0.0		..	..	..
USA	1994	8.9	0.3	0.2	1999	31.3	0.9	1.9
JPN	2004	53.0	1.8	..		..	..	..
KOR	2003	1.9	0.1	0.0	2003	55.1	2.9	4.7
AUS	1997	2.0	0.1	0.0	1997	10.5	0.5	1.9
NZL		..	..	..		..	..	..
AUT	2001	2.6	0.1	0.1	2001	19.6	0.7	1.5
BEL	2002	1.0	0.0	0.0	2002	26.8	0.9	1.0
CZE	2002	..	..	2.4	2002	..	..	4.0
DNK	2004	7.0	0.2	0.5		..	..	..
FIN	1998	9.4	0.4	0.9	2000	32.2	1.3	3.5
FRA	2002	0.9	0.0	0.0	2002	17.6	0.6	1.1
DEU	2003	0.3	0.0	0.0	2003	40.5	1.5	1.6
GRC	1999	..	..	0.0		..	..	..
HUN	2002	0.5	0.0	0.1	2002	17.5	1.2	4.3
ISL		..	..	..		..	..	..
IRL		..	..	..	1998	11.1	0.5	1.4
ITA	1997	2.3	0.1	0.6	2001	34.4	1.3	5.7
LUX	1997	0.4	0.0	0.0		..	..	..
NLD	2003	30.0	1.0	0.0	2003	69.2	2.3	4.8
NOR	2002	5.0	0.1	0.0		..	..	..
POL	2004	1.9	0.1	0.8	2004	25.4	2.0	6.4
PRT	2004	0.1	0.0	0.0	2004	26.5	1.4	5.4
SVK	2003	5.3	0.4	1.6	2003	36.8	2.8	4.4
ESP	1999	1.0	0.0	0.1	2004	16.4	0.7	1.6
SWE		..	..	..	2003	31.4	1.1	5.3
CHE	2002	5.8	0.2	0.2	2003	36.0	1.1	0.0
TUR	2004	0.0	0.0	..	1997	7.8	1.2	2.6
GBR	2003	4.6	0.2	0.2	2003	12.2	0.4	1.2

Notes:

- a) Public sector data include expenditure by public specialised producers.
b) Figures are expressed in units of USD per person at current purchasing power parities (PPP).
c) Investments as per mille of GFCF.

◆Country notes:

KOR) Only private specialised producers are included in the category specialised producers.

NLD) Only private specialised producers are included in the category specialised producer.

Source: OECD.

PART III. COUNTRY TABLES (English only)

CANADA.....	42
MEXICO.....	45
UNITED STATES.....	48
JAPAN.....	51
KOREA.....	53
AUSTRALIA.....	57
NEW ZEALAND.....	60
AUSTRIA.....	61
BELGIUM.....	66
CZECH REPUBLIC.....	69
DENMARK.....	72
FINLAND.....	75
FRANCE.....	79
GERMANY.....	83
GREECE.....	87
HUNGARY.....	90
ICELAND.....	94
IRELAND.....	97
ITALY.....	98
LUXEMBOURG.....	103
NETHERLANDS.....	104
NORWAY.....	108
POLAND.....	111
PORTUGAL.....	116
SLOVAK REPUBLIK.....	120
SPAIN.....	124
SWEDEN.....	127
SWITZERLAND.....	131
TURKEY.....	133
UNITED KINGDOM.....	135

As definitions and methodologies remain diverse across member countries, comparisons across countries should be limited to orders of magnitude. Focus is given to pollution abatement and control expenditure. Whenever available, data on other environmental protection expenditure, i.e. those related to biodiversity and landscapes, are shown for information. Due to changes in the definitions and methodology applied to the compilation of expenditure data, data for recent years may not be fully comparable to data for earlier years.

CANADA

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by Statistics Canada⁷ (SC)
- ◆ are released annually for the public sector and published every two years for the business sector
- ◆ were published for the first time in the mid-1960s
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ differ in some parts from the CEPA definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The main clients for statistics on environmental protection expenditures include Statistics Canada itself; in particular the Input-Output division (Environmental accounts). Other clients are departments of the federal government, in particular Industry Canada, Natural Resources Canada and Environment Canada; provincial government departments, industry associations and other institutions.

► DATA SOURCES AND TYPES OF EXPENDITURE

Public sector:

Public expenditure data are based on public accounts, a survey of local government expenditure, and a time series of government capital expenditure based on the Capital and Repairs Expenditure Survey. Data refer to total government expenditure associated with PAC. Public sector data are available online in CANSIM⁸, Statistics Canada's socio-economic database. The data used for the OECD questionnaire are specially tabulated for the Environmental Protection Expenditure Account and are only available in CANSIM in aggregated form. The total expenditure data for the public sector were consolidated for all years until 1995, but not for later years.

Business sector:

The Survey of Environmental Protection Expenditures collects information on investments (called "capital expenses"), end-of-pipe and process-integrated, and current expenditure (called "operating expenses") made by businesses to comply with or anticipate domestic and international environmental regulations or conventions that apply to Canada. This definition of environmental protection expenditure differs from the OECD/Eurostat definition, where all expenditure for all activities having environmental protection as their main purpose is considered environmental protection expenditure.

The survey also collects information on environmental management practices and the use of clean technologies. Since 1998 (reference year), the survey is being conducted every two years. Until 1993, data on business sector PAC expenditure only covered investments estimated on the basis of (i) the Capital and Repairs Expenditure Survey and (ii) additional data from electric power utilities.

Consolidation of sector accounts:

There is a risk of double counting when adding the expenditures for the business and the public sector, since the specific transfers between the sectors are not identified.

Activities:

Canada's data on environmental protection expenditure are compiled according to "activities"; a breakdown by environmental media is available for some activities only. For the business sector the activities are divided into the following categories: environmental monitoring, environmental assessments and audits, reclamation (site clean-up) and decommissioning, wildlife and habitat protection, purchased waste management and sewerage service, end-of pipe investments, process-integrated investments, fees/fines/licences, and other expenditures for administration or training. This diverges from the OECD questionnaire framework where there is no dimension that corresponds to "activity". Some of the activities in the Canadian tables correspond to economic variables while others correspond to environmental domains within the OECD framework.

7. Statistics Canada (2004): *Environmental Protection Expenditures in the Business Sector (2002)*, 16F0006XIE, Ottawa. (Statistique Canada (2004): *Dépenses de protection de l'environnement du secteur des entreprises (2002)*, 16F0006XIF, Ottawa).

8. CANSIM, Statistics Canada's socio economic database available online at www.statcan.ca

► ENVIRONMENTAL DOMAINS

Canada's statistics on environmental protection expenditure cover most of the CEPA domains. The expenditure data are however broken down by different environmental domains depending on the sector.

Public sector:

The data are broken down by 4 categories only: Sewage collection and disposal, Waste collection and disposal, Other pollution control activities, and Other environmental services. The two "Other" categories cover expenditure for activities such as construction, installation and operation of cleanup equipment other than waste and sewage treatment facilities; management of PAC programmes for air, water (including underground water) and soil; assistance and research grants; expenditures for services such as environmental assessments, administration of the environment department, education, and wildlife and habitat protection.

Business sector:

The data are broken down by the following categories: Environmental monitoring; Environmental assessments and audits; Reclamation and decommissioning; Wildlife and habitat protection; Waste management and sewerage services; PAC end-of-pipe processes; PAC integrated processes; Fees, fines and licenses; and Other environmental protection expenditures. These categories (called "activities"), do however not correspond to the OECD framework for PAC expenditure. The data presented here are therefore broken down by only two categories: total PAC and biodiversity & habitat. Also, the category "fees, fines and licences" has been excluded here for a closer matching with the OECD definitions.

There is a break in the time series in 1993/94, since until 1993 the data from both sectors on investment expenditure covered a much narrower range of environmental domains.

► ECONOMIC SECTORS

Public sector:

Public sector expenditure includes outlays by federal, provincial, territorial and local governments. Public specialised producers are not included.

Business sector:

Canada does not use the ISIC/NACE classification, but the NAICS (2002 North American Industry Classification System). However, the industries covered in the 2000 Environmental Protection Expenditure Survey correspond approximately⁹ ISIC/NACE C (Mining and quarrying), most of D (Manufacturing) and part of E (only ISIC/NACE 40 – Electricity, gas, steam and hot water supply). In addition, the logging industry (ISIC/NACE 2) is covered.

Specialised producers:

Data for firms specialised in PAC services have been the object of specific surveys such as the Waste Management Industry Survey.¹⁰ These surveys do however not collect data on expenditures.

9. More specifically, the following industries are covered: Logging, Mining, Oil and Gas Extraction, Food, Beverage and Tobacco Products, Wood Products, Pulp, Paper and Paperboard Mills, Primary Metals, Transportation Equipment, Non-Metallic Mineral Products, Petroleum and Coal Products, Chemicals, Electric Power Generation, Transmission and Distribution, Pipeline Transportation, Natural Gas Distribution and Fabricated Metal Products.

10. Statistics Canada (2000): *Waste Management Industry Survey: Business and Government Sectors (1998)*, 16F0023XIE, Ottawa. (Statistique Canada (2000): *Enquête de l'industrie de la gestion des déchets secteur des entreprises et des administrations publiques (1998)*, 16F0023XIF, Ottawa).

Canada

Million Canadian Dollars at 2000 prices

		Pollution Abatement and Control (PAC)				Biodiversity & landscape	
		Wastewater	Waste	Air	Other (c)	Total	
PUBLIC SECTOR							
1990	Investments	..	..	..	..	1 648	..
	Expenditure 1 (b)	2 437	1 486	..	1 493	5 743	..
1995	Investments	..	..	..	..	1 844	..
	Expenditure 1 (b)	2 993	1 492	..	1 542	6 169	..
1998	Expenditure 1 (b)	2 579	1 551	..	1 551	5 775	..
1999	Expenditure 1 (b)	2 544	1 692	..	1 557	5 861	..
2000	Expenditure 1 (b)	2 581	1 738	..	1 789	6 109	..
2001	Expenditure 1 (b)	2 741	1 914	..	1 917	6 573	..
2002	Expenditure 1 (b)	2 727	1 858	..	2 022	6 607	..
BUSINESS SECTOR (d)							
1990	Investments	..	..	..	..	1 374	..
1995	Investments	..	..	..	..	2 137	..
	+ Total current expenditure (a)	..	..	..	..	2 418	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	..	..	..	4 555	..
1998	Investments	..	..	..	..	1 713	..
	+ Total current expenditure (a)	..	..	..	..	2 938	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	..	..	..	4 651	..
2000	Investments	..	..	..	..	2 155	22
	+ Total current expenditure (a)	..	..	..	..	3 008	162
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	..	..	..	5 163	184
2002	Investments	..	..	..	..	2 808	40
	+ Total current expenditure (a)	..	..	..	..	3 497	162
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	..	..	..	6 305	201

Notes:

- (a) Total current expenditure includes both in-house current expenditure and fees/purchases.
 (b) Expenditure 1 refers to total PAC expenditure or outlays (including all current expenditure).
 (c) The figures include other environmental protection activities, such as clean-up or air pollution prevention, protection of animal species, environmental assessments and administration of environmental departments.
 (d) Total business sector data include only ISIC/NACE categories C, D, and partly A and E (2 and 10-40).

Source: OECD.

MEXICO

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the National Institute of Statistics, Geography and Informatics (INEGI)
- ◆ are published annually for the public sector
- ◆ have been published regularly since 1985
- ◆ cover expenditure on PAC activities and on other EP activities¹¹
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are compiled according to the abater principle.

► DATA SOURCES AND TYPES OF EXPENDITURE

Data on public sector expenditure have been collected, in the framework of the system of economic and ecological accounts of Mexico (SCEEM: Sistema de Cuentas Económicas y Ecológicas de México).

The breakdown by type of expenditure and environmental domain is based on the analysis of different official sources such as the Accounts of the Federal Treasury and Public Finance (Cuenta de la Hacienda Pública Federal), Public Accounts of the Federal District (Cuenta Pública del Departamento Distrito Federal) and Federal Budget Appropriations (Presupuesto de Egresos de la Federación). Details on the type of expenditure are reliable, while the breakdown by domain should be considered as an approximation.

► ENVIRONMENTAL DOMAINS

The expenditure data are not broken down according to the CEPA, but can be considered to include most CEPA domains except noise and radiation. Expenditure data on biodiversity & landscape are collected since 1999.

The data are broken down by the environmental domains "wastewater and soil", "waste", "air" and "other". "Wastewater" includes the regulation of water use and the prevention of water pollution, in addition to wastewater collection and treatment. Soil is included in the same category as wastewater.

"Other" includes expenditure on various programmes and activities, such as environmental education and research, ecological programmes, regulation of human settlements and regulation and control of environmental health.

► ECONOMIC SECTORS

Only public sector expenditure figures are available at present. Since 1999, data cover expenditure by the major government agencies, including the federal and state governments. Data from earlier years did not include the state government level, but included instead expenditure by the capital city government and public enterprises such as PEMEX and CFE.

A few data are available for the household sector.

11. In the Mexican statistics environmental protection expenditure is defined as expenses incurred to avoid environmental degradation or eliminate the effects after degradation takes place.

Mexico

Million New Mexican Pesos at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater (a)	Waste	Air	Other (b)		
PUBLIC SECTOR							
1990	Investments	334	1 884	97	3 503	5 818	..
	In-house current expenditure	53	98	5	10 988	11 143	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	387	1 982	101	14 491	16 961	..
1991	Investments	1 583	465	97	1 617	3 763	..
	In-house current expenditure	1 282	2 677	61	10 177	14 199	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	2 866	3 143	159	11 795	17 962	..
1993	Investments	1 852	239	229	2 486	4 806	..
	In-house current expenditure	2 204	2 900	111	10 830	16 046	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	4 056	3 139	340	13 316	20 851	..
1995	Investments	1 281	388	31	1 700	3 401	..
	In-house current expenditure	2 108	2 282	88	8 341	12 819	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	3 390	2 671	119	10 041	16 220	..
1997	Investments	790	456	25	1 170	2 441	..
	In-house current expenditure	1 415	2 358	136	7 156	11 065	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	2 205	2 813	161	8 327	13 506	..
1999	Investments	407	1 832	25	7 283	9 547	852
	In-house current expenditure	439	221	125	12 933	13 719	4 396
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	846	2 053	150	20 216	23 266	5 248
2000	Investments	464	1 727	13	10 956	13 159	930
	In-house current expenditure	433	208	122	12 669	13 432	741
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	897	1 935	135	23 624	26 591	1 671
2001	Investments	609	1 806	2	8 104	10 521	791
	In-house current expenditure	409	224	72	14 446	15 151	613
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	1 018	2 030	74	22 550	25 672	1 404
2002	Investments	565	1 933	9	6 793	9 300	726
	In-house current expenditure	759	251	64	15 683	16 757	661
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	1 323	2 183	73	22 477	26 057	1 387
2003	Investments	385	1 671	2	7 982	10 040	1 485
	In-house current expenditure	712	235	89	15 575	16 610	1 455
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	1 096	1 905	92	23 557	26 650	2 940
2004	Investments	434	1 032	10	8 231	9 707	1 721
	In-house current expenditure	451	568	124	15 913	17 057	1 679
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	885	1 600	134	24 144	26 764	3 400

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater (a)	Waste	Air	Other (b)		
HOUSEHOLDS							
1999	Expenditure 1	..	1 657	..	..	..	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2002	Expenditure 1	..	2 894	..	..	..	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2004	Expenditure 1	..	2 182	..	..	..	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..

Notes:

- (a) Wastewater expenditure is overestimated since the category also includes activities such as regulation of water use, as well as prevention of pollution of soil & water.
- (b) Other includes expenditure on various programmes and activities, such as environmental education and research, ecological programmes, regulation of human settlements and regulation and control of environmental health.

Source: OECD.

UNITED STATES

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ have been published by the US Census Bureau¹² and the Bureau of Economic Analysis¹³
- ◆ have been published regularly since 1972 until 1994, with the exception of 1987, and then again in 1999
- ◆ cover expenditure on most PAC activities, but not on other EP activities
- ◆ do not follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

Data users include the US Environmental Protection Agency who uses the data to monitor the impact of environmental programmes, and to estimate cost projections for its regulatory impact analysis for proposed pollution regulations. The Bureau of Labor Statistics uses these data as a component of total capital expenditures when analysing investment and productivity. State and local governments, trade associations, the academic community and private businesses use these data to evaluate pollution abatement spending and local legislation of specific industries.

► DATA SOURCES AND TYPES OF EXPENDITURE

PAC expenditure data were regularly collected from 1972 until 1994, through several surveys. These efforts were suspended in 1995 because of budget cuts. In the *Survey of Current Business* (March 2000), a panel recommended to reinstate and improve the design of the collection of data on PAC expenditures for the business sector. Subsequently a new survey sponsored by the US EPA and covering 1999 data was issued in 2002. Due to changes in definitions and methodology, results from this survey can not be directly compared to results from earlier surveys. The main differences consist of:

- ◆ The elimination of some expenditure elements, such as capital depreciation costs, permit-related expenses and cost offsets (which makes the data more in line with the OECD/Eurostat definitions).
- ◆ A change in the industry classification system (from SIC to NAICS).
- ◆ A restructuring of the reporting distinguishing between (i) pollution abatement, i.e. activities related to the treatment of pollution (end-of-pipe), (ii) pollution prevention, (iii) recycling and disposal activities, and (iv) other activities. Data on these four groups of activities are collected under separate headings, each with a different structure.

US data on PAC expenditure cover activities resulting from rules and regulations restricting the release of pollutants into common property domains such as air and water. This definition is narrower than the OECD definition. Because of the restructuring of the reporting in 1999, the data collected, in particular those on pollution prevention, recycling & disposal, and other activities, did not match the breakdown by environmental media or type of expenditure of earlier surveys and of the OECD questionnaire. Hence only pollution abatement data are presented here for 1999. By adding up all expenditure data from the 1999 survey, total PAC expenditure by the business sector in the US would have amounted to USD28 774 million (0.3% of GDP). These figures can however still not be compared to earlier data due to the other changes in the survey. In a study by Becker and Shadbegian, adjustments were made so as to enable a comparison between 1994 and 1999 data¹⁴. This led to an estimated decline of 27% in environmental spending by the manufacturing industry between 1994 and 1999.

► ENVIRONMENTAL DOMAINS

The expenditure data cover mainly air, water, solid waste, noise, radiation and pesticide pollution, along with business expenditure not assigned to domains.

► ECONOMIC SECTORS

Public sector expenditure includes expenditure at the federal, state, and local levels. In this report, current and investment expenditure by government enterprises are included in the public sector expenditure. Public sector data are no longer collected.

Business sector: Prior to 1999, data for the business sector covered expenditure by manufacturing and non-manufacturing establishments, including some farm-related activities. The 1999 survey covered a sample of about 21 000 manufacturing, mining and electric utility plants.

12. US Census Bureau (2002): *Pollution Abatement Costs and Expenditures: 1999*

13. Vogan, C.R. (1996): *Pollution Abatement and Control Expenditures, 1972-94, Survey of Current Business, September 1996.*

14. Becker, R.A. and R.J. Shadbegian (2004): *A change of PACE: Comparing the 1994 and 1999 pollution abatement costs and expenditure surveys. CES 04-09, Center for Economic Studies, July 2004.*

United States

Million US Dollars at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (a)		
PUBLIC SECTOR							
1990	Investments	12 434	..	213	..	12 647	..
	+ In-house current expenditure	16 223	14 119	1 350	530	32 221	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	28 657	14 119	1 563	530	44 868	..
1991	Investments	11 942	..	192	..	12 134	..
	+ In-house current expenditure	16 950	15 163	1 705	786	34 605	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	28 892	15 163	1 898	786	46 739	..
1992	Investments	12 060	..	164	..	12 224	..
	+ In-house current expenditure	17 279	15 963	2 050	833	36 126	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	29 339	15 963	2 214	833	48 350	..
1993	Investments	12 247	..	182	..	12 428	..
	+ In-house current expenditure	16 898	16 925	2 191	843	36 857	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	29 145	16 925	2 372	843	49 285	..
1994	Investments	13 115	..	268	..	13 383	..
	+ In-house current expenditure	17 105	18 077	2 428	1 168	38 778	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	30 220	18 077	2 695	1 168	52 161	..
BUSINESS SECTOR (b)							
1990	Investments	6 180	2 608	10 314	..	19 102	..
	+ In-house current expenditure	8 844	21 347	8 859	..	39 050	..
	- Receipts from by-products	489	580	1 321	..	2 390	..
	= Expenditure 1	14 535	23 375	17 853	..	55 762	..
1991	Investments	6 343	2 775	11 838	..	21 270	..
	+ In-house current expenditure	8 275	21 497	7 567	..	38 646	..
	- Receipts from by-products	364	480	1 038	..	1 950	..
	= Expenditure 1	14 254	23 793	18 367	..	57 965	..
1992	Investments	6 466	3 656	13 057	..	23 482	..
	+ In-house current expenditure	8 492	23 227	8 015	..	42 070	..
	- Receipts from by-products	396	795	1 088	..	2 430	..
	= Expenditure 1	14 562	26 089	19 984	..	63 122	..
1993	Investments	6 253	3 810	14 936	..	25 677	..
	+ In-house current expenditure	8 345	23 166	7 832	..	42 617	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	14 598	26 975	22 768	..	68 293	..
1994	Investments	6 969	3 868	17 512	..	29 553	..
	+ In-house current expenditure	8 845	24 775	8 490	..	46 584	..
	- Receipts from by-products	328	775	829	..	2 152	..
	= Expenditure 1	15 486	27 868	25 173	..	73 986	..
1999	Investments	1 826	367	3 510	185	6 189	..
	+ In-house current expenditure	4 686	2 057	5 180	200	14 541	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	6 512	2 424	8 689	384	20 731	..

.../...

		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other (a)	Total	
Mining							
1999	Investments	160	37	80	4	281	..
	+ In-house current expenditure	213	69	185	2	469	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	373	106	265	6	750	..
Manufacturing							
1999	Investments	1 610	312	2 344	179	4 445	..
	+ In-house current expenditure	4 371	1 858	4 064	170	10 463	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	5 981	2 170	6 408	350	14 909	..
Electricity							
1999	Investments	56	17	1 085	2	1 160	..
	+ In-house current expenditure	102	130	930	27	1 189	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	158	147	2 015	29	2 349	..

Notes:

- (a) Other (and unallocated) includes noise, radiation and pesticide pollution, along with business expenditure not assigned to domains.
- (b) Total business sector data for 1999 include only ISIC/NACE C, D and parts of E (10-40). 1990-94 data covered both manufacturing and non-manufacturing establishments, including some farm-related activities. The 1999 data are based on a different and much narrower definition of PAC than in earlier years (see details on previous page under "Data sources and types of expenditure").

Source: OECD.

JAPAN

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published annually for the public and business sectors
- ◆ have been collected regularly since 1965
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The main users and audiences are the Ministry of Environment and the Ministry of Finance.

► DATA SOURCES AND TYPES OF EXPENDITURE

In Japan's surveys, PAC is defined as those activities that contribute directly to pollution control. Expenditure on integrated technologies is not covered.

There are several regular surveys on PAC expenditure in Japan.

Public sector surveys are conducted annually, since 1967 for expenditure by the central government and since 1971 for expenditure by local governments.

For the business sector, figures on PAC investment expenditure by large companies (i.e. enterprises with assets of JPY100 million or more) have been collected since 1965 for most manufacturing industries, along with the energy and mining sectors.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains of the CEPA, except radiation and research and development.

► ECONOMIC SECTORS

Public sector figures include expenditure by both the central and local governments. They have been consolidated to avoid double counting, particularly with respect to the flow of subsidies from the central government to the local governments.

PAC statistics for the business sector include outlays by companies in energy, mining and most manufacturing industries. Data on business sector expenditure for 1999 are estimated by the OECD Secretariat from the OECD Environmental Performance Review of Japan.

At present, there are no surveys on household expenditure.

Japan

Billion Yens at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other		
PUBLIC SECTOR							
1990	Expenditure 1	..	..	..	..	1 271	159
1992	Expenditure 1	..	..	..	..	1 383	180
1995	Expenditure 1	1 381	174	519	190	2 264	324
1997	Expenditure 1	1 497	199	558	203	2 458	367
1998	Expenditure 1	1 394	193	561	194	2 341	400
1999	Expenditure 1	1 695	213	851	192	2 951	629
2000	Expenditure 1	1 330	190	829	84	2 433	609
2001	Expenditure 1	1 314	212	847	88	2 460	594
2002	Expenditure 1	1 183	212	909	230	2 535	402
2003	Expenditure 1	1 125	190	980	114	2 409	396
2004	Expenditure 1	1 072	173	935	120	2 300	370
BUSINESS SECTOR (a)							
1991	Investments (end-of-pipe)	..	..	..	..	834	..
	+ In-house current expenditure	..	..	..	..	3 026	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	3 860	..
1992	Investments (end-of-pipe)	..	..	..	..	1 134	..
	+ In-house current expenditure	..	..	..	..	3 055	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	4 190	..
1993	Investments (end-of-pipe)	..	..	..	..	1 641	..
	+ In-house current expenditure	..	..	..	..	3 070	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	4 711	..
1994	Investments (end-of-pipe)	..	..	..	..	1 065	..
	+ In-house current expenditure	..	..	..	..	3 101	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	4 166	..
1995	Investments (end-of-pipe)	..	..	..	..	796	..
	+ In-house current expenditure	..	..	..	..	3 157	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	3 953	..
1996	Investments (end-of-pipe)	..	..	..	..	1 105	..
	+ In-house current expenditure	..	..	..	..	3 265	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	4 370	..
1997	Investments (end-of-pipe)	..	..	..	..	925	..
	+ In-house current expenditure	..	..	..	..	3 324	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	4 248	..
1998	Investments (end-of-pipe)	..	..	..	..	860	..
	+ In-house current expenditure	..	..	..	..	3 291	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	4 151	..
1999	Investments (end-of-pipe)	..	..	..	..	823	..
	+ In-house current expenditure	..	..	..	..	3 313	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	4 136	..

Notes:

(a) Total business sector data include only mining (ISIC/NACE C), most of the manufacturing industries (ISIC/NACE D), and energy (ISIC/NACE E).

Source: OECD.

KOREA

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by The Bank of Korea¹⁵
- ◆ are published annually for the public and business sectors
- ◆ have been published regularly since 1996
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The main users are the Korean government (e.g. the Ministry of Environment), academic circles, environment-related research institutes, and others.

► DATA SOURCES AND TYPES OF EXPENDITURE

In these surveys, PAC is defined as activities that contribute directly to pollution control. All types of expenditure are covered, except subsidies for which data are only available for the business sector as a whole, but not by industry.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA.

► ECONOMIC SECTORS

The public sector includes by the central government, six largest metropolitan areas and provinces, small cities and counties, and public enterprises which produce EP services.

The business sector includes all industries except Sewage and Refuse disposal, Sanitation and similar activities.

Private specialised producers include all private enterprises carrying out activities in the domain of Sewage and Refuse disposal, Sanitation and similar activities.

15. <http://ecos.bok.or.kr/>

Korea

100 Million Korean Won at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
PUBLIC SECTOR (d)							
1995	Investments	16 320	4 331	51	397	21 099	..
	+ Total current expenditure (a)	5 058	9 785	347	741	15 931	..
	- Receipts from by-products	0	97	0	0	97	..
	= Expenditure 1 (b)	21 379	14 018	398	1 139	36 933	..
2000	Investments	20 587	3 634	400	312	24 933	..
	+ Total current expenditure (a)	5 052	12 908	266	687	18 913	..
	- Receipts from by-products	0	102	0	0	102	..
	= Expenditure 1 (b)	25 639	16 440	666	999	43 744	..
2001	Investments	21 935	4 267	271	3 171	29 644	3 480
	+ In-house current expenditure	3 433	11 892	365	4 344	20 033	3 290
	- Receipts from by-products	0	396	0	0	396	0
	= Expenditure 1	25 367	15 763	636	7 514	49 281	6 770
	+ Subsidies	- 2 082	- 617	- 2 554	- 4 002	- 9 256	- 470
	+ Fees and payments	2 690	5 732	3	60	8 485	5
	- Revenues	6 583	5 061	2	282	11 929	263
	= Expenditure 2	19 392	15 816	- 1 917	3 290	36 581	6 042
2002	Investments	22 653	4 341	83	3 129	30 206	4 114
	+ In-house current expenditure	3 747	12 068	411	4 561	20 788	3 241
	- Receipts from by-products	0	402	0	0	402	0
	= Expenditure 1	26 400	16 007	495	7 691	50 593	7 356
	+ Subsidies	- 3 297	- 521	- 2 528	- 3 899	- 10 245	- 623
	+ Fees and payments	3 054	6 380	3	62	9 499	5
	- Revenues	7 098	5 254	2	368	12 722	244
	= Expenditure 2	19 060	16 611	- 2 033	3 486	37 124	6 493
2003	Investments	22 714	5 168	64	3 156	31 103	6 326
	+ In-house current expenditure	4 351	12 173	541	4 804	21 869	3 044
	- Receipts from by-products	0	403	0	0	403	0
	= Expenditure 1	27 066	16 938	605	7 960	52 569	9 370
	+ Subsidies	- 3 414	- 430	- 2 451	- 5 350	- 11 645	- 667
	+ Fees and payments	3 293	6 852	11	81	10 237	7
	- Revenues	7 186	5 037	3	400	12 627	260
	= Expenditure 2	19 758	18 324	- 1 838	2 290	38 534	8 450
BUSINESS SECTOR							
1995	Investments	5 800	3 272	6 584	1 390	17 046	0
	- of which End-of-pipe investments	..	..	..	..	..	..
	+ Total current expenditure (a)	6 492	6 621	4 411	972	18 496	0
	- Receipts from by-products	..	152	..	..	152	..
	= Expenditure 1 (b)	12 292	9 741	10 995	2 362	35 390	0
2000	Investments	2 778	2 237	3 863	755	9 633	0
	- of which End-of-pipe investments	..	..	..	..	..	..
	+ Total current expenditure (a)	8 016	9 748	6 899	1 390	26 053	0
	- Receipts from by-products	..	241	..	..	241	..
	= Expenditure 1 (b)	10 794	11 744	10 762	2 145	35 445	0
2001	Investments	5 558	1 305	7 543	2 823	17 229	0
	- of which End-of-pipe investments	5 298	1 161	4 443	1 291	12 193	0
	+ In-house current expenditure	7 889	3 881	9 636	2 516	23 922	0
	- Receipts from by-products	107	3 032	201	31	3 371	0
	= Expenditure 1	13 340	2 154	16 978	5 308	37 780	0
	- Subsidies	- 2 082	- 617	- 1 928	- 3 218	- 7 846	- 470
	+ Fees and payments	6 231	10 459	334	487	17 511	0
	= Expenditure 2	21 653	13 230	19 240	9 013	63 137	470

.../...

		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)	Total	
2002	Investments	7 099	1 463	9 356	2 670	20 588	0
(f)	- of which End-of-pipe investments	6 824	1 266	5 360	1 314	14 765	0
+	In-house current expenditure	8 136	3 857	9 882	2 878	24 753	0
-	Receipts from by-products	122	3 427	264	79	3 892	0
=	Expenditure 1	15 113	1 893	18 974	5 469	41 449	0
-	Subsidies	- 3 297	- 521	- 1 844	- 3 088	- 8 751	- 628
+	Fees and payments	6 778	10 714	367	517	18 376	0
=	Expenditure 2	25 187	13 128	21 186	9 074	68 575	628
2003	Investments	5 958	1 541	9 404	3 184	20 087	0
+	- of which End-of-pipe investments	8 275	5 248	9 871	3 021	26 416	0
-	Receipts from by-products	137	4 555	281	51	5 025	0
=	Expenditure 1	14 097	2 233	18 994	6 154	41 478	0
-	Subsidies	- 3 414	- 430	- 1 638	- 3 878	- 9 359	- 671
+	Fees and payments	6 725	11 169	609	1 135	19 637	0
=	Expenditure 2	24 235	13 831	21 241	11 167	70 474	671
<u>Agriculture, hunting, forestry and fishing</u>							
2002	Investments	383	2	124	18	527	0
	- of which End-of-pipe investments	382	2	0	18	402	0
+	In-house current expenditure	176	10	24	550	760	0
-	Receipts from by-products	0	1	0	0	1	0
=	Expenditure 1	559	11	148	568	1 286	0
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	388	35	4	0	427	0
=	Expenditure 2	..	..	..	..	..	..
<u>Mining and quarrying</u>							
2002	Investments	16	7	14	9	46	0
	- of which End-of-pipe investments	16	7	11	9	42	0
+	In-house current expenditure	21	5	32	12	70	0
-	Receipts from by-products	0	3	0	0	3	0
=	Expenditure 1	36	10	46	21	113	0
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	1	3	1	0	6	0
=	Expenditure 2	..	..	..	..	..	..
<u>Manufacturing</u>							
2002	Investments	4 196	1 083	5 425	1 576	12 280	0
	- of which End-of-pipe investments	3 791	901	4 020	655	9 367	0
+	In-house current expenditure	6 829	3 290	7 908	1 151	19 178	0
-	Receipts from by-products	116	3 212	137	78	3 542	0
=	Expenditure 1	10 909	1 160	13 197	2 650	27 916	0
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	1 338	4 262	173	143	5 917	0
=	Expenditure 2	..	..	..	..	..	..
<u>Electricity, gas and water supply</u>							
2002	Investments	185	133	1 301	152	1 771	0
	- of which End-of-pipe investments	130	133	974	152	1 390	0
+	In-house current expenditure	125	21	924	135	1 205	0
-	Receipts from by-products	0	176	124	0	301	0
=	Expenditure 1	310	- 22	2 101	287	2 675	0
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	7	38	111	2	158	0
=	Expenditure 2	..	..	..	..	..	..
<u>Other business sector</u>							
2002	Investments	2 539	237	2 492	603	5 871	0
	- of which End-of-pipe investments	2 505	223	355	481	3 564	0
+	In-house current expenditure	986	532	994	890	3 402	0
-	Receipts from by-products	6	35	3	0	45	0
=	Expenditure 1	3 519	734	3 483	1 493	9 228	0
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	1 240	5 991	76	60	7 367	0
=	Expenditure 2	..	..	..	..	..	..

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
HOUSEHOLDS (e)							
1995	Expenditure 1	4 198	0	1 143	0	5 340	0
2000	Expenditure 1	3 050	0	874	0	3 924	0
2001	Expenditure 1	2 373	0	1 509	0	3 882	0
	- Subsidies	0	0	- 626	- 784	- 1 410	0
	+ Fees and payments	3 335	4 690	45	0	8 071	262
	= Expenditure 2	5 708	4 690	2 180	784	13 362	262
2002	Expenditure 1	2 814	0	1 773	0	4 587	0
	- Subsidies	0	0	- 684	- 840	- 1 523	0
	+ Fees and payments	3 605	4 807	53	0	8 465	244
	= Expenditure 2	6 419	4 807	2 510	840	14 575	244
2003	Expenditure 1	2 952	0	1 538	0	4 490	0
	- Subsidies	0	0	- 815	- 1 506	- 2 321	0
	+ Fees and payments	3 533	4 628	100	0	8 261	258
	= Expenditure 2	6 486	4 628	2 453	1 506	15 072	258
PRIVATE SPECIALISED PRODUCERS OF EP SERVICES							
2001	Investments	514	1 433	..	58	2 004	..
	+ In-house current expenditure	4 949	13 808	..	556	19 314	..
	- Receipts from by-products	0	0	..	0	0	..
	= Expenditure 1	5 463	15 241	..	614	21 318	..
	- Subsidies	0	0	..	0	0	..
	+ Fees and payments	156	435	..	18	608	..
	- Revenues	5 866	16 366	..	659	22 891	..
	= Expenditure 2	- 247	- 690	..	- 28	- 965	..
2002	Investments	805	2 084	..	107	2 997	..
	+ In-house current expenditure	5 461	14 138	..	577	20 176	..
	- Receipts from by-products	0	0	..	0	0	..
	= Expenditure 1	6 266	16 222	..	684	23 173	..
	- Subsidies	0	0	..	0	0	..
	+ Fees and payments	220	569	..	30	819	..
	- Revenues	6 730	17 422	..	890	25 042	..
	= Expenditure 2	- 244	- 630	..	- 176	- 1 050	..
2003	Investments	721	1 989	..	169	2 879	..
	+ In-house current expenditure	5 527	15 265	..	1 293	22 085	..
	- Receipts from by-products	0	0	..	0	0	..
	= Expenditure 1	6 247	17 255	..	1 462	24 964	..
	- Subsidies	0	0	..	0	0	..
	+ Fees and payments	279	769	..	65	1 113	..
	- Revenues	6 735	18 601	..	1 576	26 911	..
	= Expenditure 2	- 209	- 577	..	- 49	- 834	..

Notes:

- (a) Total current expenditure includes both in-house current expenditure and fees/payments.
 (b) Expenditure 1 includes total current expenditure and is therefore an expression of total outlays/expenditure on environmental protection activities.
 (c) Since 2001, item " other" includes protection against radiation and R&D.
 (d) Including expenditure of public specialised producers.
 (e) Fees and payments include subsidies.
 (f) Total figures for the business sector 2002 do not equal exactly the sum of the different industry groups, due to revision of the aggregate figures.

Source: OECD.

AUSTRALIA

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the Australian Bureau of Statistics (ABS)¹⁶
- ◆ were published for the first time in 1994, for the years 1990-91¹⁷ (by financial year¹⁸)
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The main audiences of environmental expenditure data are the Commonwealth government and State/Territory governments, industry associations, businesses, researchers and academics and environmental NGOs.

The main uses of environmental expenditure data are for environmental reporting, assisting policy development, benchmarking over time the impacts and effectiveness of government policies and regulations, comparing equivalent state/territory government agencies, comparing industries, raising awareness of environment management issues among clients, negotiating with other government agencies (governments), negotiating with government agencies (industries), assessing the extent of the market within Australia for environmental goods and services, and focusing members on environmental management issues relevant to their industry (NGOs).

► DATA SOURCES AND TYPES OF EXPENDITURE

The ABS published PAC statistics for the first time in 1994, for the financial year 1990-91. These statistics were compiled using the earlier PAC framework of the OECD. For the whole economy, these statistics were last published in 1999 for 1996-97.¹⁹ They were compiled using the SERIEE framework. EPE accounts for Australia are currently being reviewed; hence related statistics are only produced for selected sectors.

Public sector:

Between 1990-91 and 1995-96 Government Finance Statistics were a major data source for all levels of government. These statistics refer to current and capital outlays and also include Public Trading Enterprises. Additional data were sourced from Commonwealth and State Budget papers and Annual reports.

In 1996-97 all Commonwealth and State data were sourced from Commonwealth and State Budget papers and Annual reports. This was due (i) to changes to the Government Purpose Classification which resulted in more aggregated EPE data, and (ii) to the transition to the more data intensive SERIEE framework.

From 1997-98 on, Local Government EPE data were collected via a stand alone survey of local councils across Australia. This survey, along with previous pilot surveys, was also used to estimate EPE for 1995-96 and 1996-97 for the local government.

Business sector:

Data have been collected via the ABS business surveys, mostly as a supplement to these surveys. For 2000-01, a stand alone survey was made of the mining and manufacturing industries.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA, except radiation.

► ECONOMIC SECTORS

From 1997-98 (up to 2002-03) public sector covers Local Government only.²⁰ 1997 data cover only general government. Earlier figures included all entities majority-owned and/or controlled by the Commonwealth, State or local governments.

For 1997 data were collected and compiled for all industry sectors, while the years 1992-96 cover only mining, manufacturing and electricity, gas and water supply). For 1991 and 2001 only the mining and quarrying and the manufacturing industry were included.²¹

16. *Australian Bureau of Statistics (2002): Environment Protection, Mining and manufacturing industries, Australia, 2000-2001. Australian Bureau of Statistics, Catalogue No. 4603.0, and Australian Bureau of Statistics (2002): Environment Expenditure, Local government, Australia, 2000-2001. Australian Bureau of Statistics, Catalogue No. 4611.0.*

17. *ABS (Australian Bureau of Statistics) (1994): Cost of Environment Protection, Australia, Selected Industries 1990-91, A Research Project of the Australian Bureau of Statistics, Catalogue No. 4603.0.*

18. *Financial year run from 1 July to 30 June; by convention data are affected to the end of the range.*

19. *Australian Bureau of Statistics (1999): Environment Protection Expenditure, Australia, 1996-1997. Australian Bureau of Statistics, Catalogue No. 4603.0.*

20. *Australian Bureau of Statistics (2004): Environment Expenditure, Local government, Australia, 2002-2003. Australian Bureau of Statistics, Catalogue No. 4611.0.*

Australia

Million Australian dollars at 2000 prices

	Pollution Abatement and Control (PAC)					Total	Biodiversity & landscape
	Wastewater	Waste	Air	Other (e)			
PUBLIC SECTOR (a)							
1991	Investments	1 067	46	..	89	1 203	..
	+ Total current expenditure (b)	148	301	..	232	681	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (c)	1 215	348	..	322	1 885	..
1997	Investments	111	117	3	46	278	120
	+ Total current expenditure (b)	222	287	49	630	1 188	1 128
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (c)	333	405	52	676	1 466	1 248
1998	Investments	340	83	1	15	440	29
	+ In-house current expenditure	564	381	6	78	1 028	47
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	904	464	7	93	1 468	76
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	64	537	1	55	657	21
	- Revenues	917	884	1	51	1 853	41
	= Expenditure 2	..	..	..	..	..	..
2001	Investments	432	86	..	20	538	27
	+ In-house current expenditure	488	381	..	45	914	72
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	920	467	..	65	1 453	99
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	89	644	..	16	750	37
	- Revenues	1 046	1 062	..	56	2 164	57
	= Expenditure 2	..	..	..	..	..	..
2003	Investments	360	101	..	23	483	34
	+ In-house current expenditure	480	478	..	45	1 003	73
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	840	578	..	68	1 486	107
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	98	628	..	13	739	32
	- Revenues	1 089	1 197	..	36	2 322	75
	= Expenditure 2	..	..	..	..	..	..
BUSINESS SECTOR (d)							
1992	Investments	28	27	38	32	519	..
	+ Total current expenditure (b)	..	..	..	..	780	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (c)	..	..	..	..	1 299	..
1994	Investments	25	7	52	34	239	..
	+ Total current expenditure (b)	..	..	..	..	1 256	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (c)	..	..	..	..	1 495	..
1996	Investments	44	16	21	21	518	..
	+ Total current expenditure (b)	..	..	..	..	1 451	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (c)	..	..	..	..	1 969	..
1997	Investments	235	152	248	193	829	..
	+ In-house current expenditure	140	360	18	269	787	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	375	512	266	463	1 616	..
	- Subsidies	9	1	0	4	14	..
	+ Fees and payments	316	899	46	303	1 563	..
	= Expenditure 2	682	1 409	313	761	3 165	..

.../...

21. Australian Bureau of Statistics (2002): Environment Protection, Mining and Manufacturing Industries, Australia, 2000-2001. Australian Bureau of Statistics Catalogue No. 4603.0

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (e)		
Agriculture							
1997	Investments	9	1	0	41	51	..
	+ In-house current expenditure	3	2	0	78	83	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	13	3	0	118	134	..
	- Subsidies	0	0	0	4	4	..
	+ Fees and payments	9	4	0	62	76	..
	= Expenditure 2	22	7	0	176	206	..
Mining and quarrying							
1997	Investments	47	22	21	68	157	..
	+ In-house current expenditure	23	12	6	63	104	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	70	33	27	131	261	..
	- Subsidies	0	0	0	0	0	..
	+ Fees and payments	24	13	7	80	124	..
	= Expenditure 2	94	46	34	211	385	..
2001	Investments	16	52	22	12	102	..
	+ Total current expenditure (b)	24	52	40	159	275	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (c)	41	104	62	171	377	..
Manufacturing							
1997	Investments	133	89	174	37	434	..
	+ In-house current expenditure	13	28	3	34	78	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	146	118	177	71	511	..
	- Subsidies	0	1	0	0	1	..
	+ Fees and payments	138	215	35	55	442	..
	= Expenditure 2	284	331	211	126	952	..
2001	Investments	176	87	120	46	423	..
	+ Total current expenditure (b)	178	274	34	161	646	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (c)	354	361	154	208	1 070	..
Electricity, gas and water supply							
1997	Investments	23	4	41	8	76	..
	+ In-house current expenditure	16	12	8	9	45	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	39	16	49	18	121	..
	- Subsidies	9	0	..	..	9	..
	+ Fees and payments	15	12	4	5	36	..
	= Expenditure 2	45	27	53	23	148	..
Other business sector							
1997	Investments	23	35	14	40	111	..
	+ In-house current expenditure	85	306	..	85	477	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	108	342	14	125	588	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	129	655	..	101	886	..
	= Expenditure 2	..	..	..	..	..	..
Households							
1992	Expenditure 1	..	..	..	..	137	..
1994	Expenditure 1	..	..	..	..	145	..
1996	Expenditure 1	..	..	..	..	174	..

Notes:

- (a) Since 2000, the public sector includes municipal departments only. Investment expenditure also includes net transfer payments to other bodies to fund capital expenditure.
- (b) Current expenditure includes both in-house current expenditure and fees/purchases.
- (c) Expenditure 1 includes all current expenditures, and is therefore an expression for the total outlays/expenditure to environmental protection.
- (d) From 1992-96 business sector data cover ISIC/NACE 10-41, while 1997 data cover all industries.
- (e) The category other for the public sector includes air, soil & groundwater (since 2001 only soil) and noise. The category other for the business sector includes air, soil & groundwater, noise, research, and environmental impact assessments and audits.

Source: OECD.

NEW ZEALAND

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ were published for the first time in 2002
- ◆ are published by Statistics New Zealand
- ◆ cover expenditure by the public sector on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► DATA SOURCES AND TYPES OF EXPENDITURE

Data on EP expenditure by the public sector were made available for the first time in 2002,²² for the reference year 2001,²³ and were reported to the OECD for the first time in 2004. The data sources used for local government are mainly annual plans for different bodies and institutions. For central government data are taken from the National Accounts, using the COFOG (functional codes) to identify EP expenditure.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA.

► ECONOMIC SECTORS

Only public sector expenditure data are available so far. The data cover the general government, municipal departments and publicly owned companies. Public specialised producers are included in the public sector data, and are not compiled separately.

New Zealand

Million New Zealand dollars at 2000 prices

		Pollution Abatement and Control (PAC)				Biodiversity & landscape	
		Wastewater	Waste	Air	Other (c)	Total PAC	
PUBLIC SECTOR (d)							
2001	Investments	270	25	..	0	295	11
	Total current expenditure (a)	303	190	..	117	611	217
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	573	215	..	118	906	227
2002	Investments	347	25	..	1	373	4
	+ Total current expenditure (a)	262	182	..	124	568	250
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	609	207	..	124	940	254
2003	Investments	322	23	..	2	347	9
	+ Total current expenditure (a)	254	180	..	146	580	255
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	576	203	..	148	927	264

Notes:

(a) Total current expenditure includes both in-house current expenditure and fees/purchases.

(b) Expenditure 1 here includes total current expenditure, and is therefore an expression for the total outlays/expenditure related to environmental protection activities.

(c) Other includes air, soil & groundwater, noise, radiation, research and general administration.

(d) Public sector includes public specialised producers.

Source: OECD.

22. Statistics New Zealand (2002), *Environmental Protection Expenditure Account – For the Public Sector. Year ended June 2001*, Statistics New Zealand, July 2002.

23. For the financial year 1 July 2000 – 30 June 2001.

AUSTRIA

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by Austrian Central Statistical Office (ACSO)
- ◆ are published annually for the public sector and every third year for the business sector
- ◆ were published for the first time in 1974
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definition of environmental domains
- ◆ are compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

EPE data are mainly used for assessing environmental protection measures e.g. in the field of air pollution control and waste management. Since 1999, the data from the environmental accounting system are reported in an integrated NAMEA format that facilitates their use in analysing the interrelationships between the economic system and the environment.

► DATA SOURCES AND TYPES OF EXPENDITURE

Public sector: Public expenditure data are based on an analysis of budget accounts and on results from random surveys. ACSO has compiled such data since the early 1980s.

Business sector: The Austrian Chamber of Commerce has been collecting environmental protection expenditure data by industry since 1974. The surveys are carried out every three years and cover a major part, but not all relevant firms.

Specialised producers: Data on public specialised producers are obtained through budget analysis, as for the rest of the public sector. Data on private specialised producers are collected through a separate survey.

Consolidation of sector accounts:

There is a risk of double counting when adding the expenditures for the different sectors, since the specific transfers/subsidies between them are not identified. Data on fees or purchases of EP services are available, but information about the sector receiving the payment is often missing, making the link to the revenues from EP services difficult. Some double counting occurs due to the addition of wastewater fees and waste fees in both the business sector and the public sector expenditure. Also financial flows between specialised and non-specialised public sector are generally difficult to identify. In this report, estimates have been made to minimise double counting in the summary tables.

Since 1994, the EPE data are compiled in accordance with the SERIEE framework and the revised OECD/Eurostat questionnaire. This led to changes in definitions and methodology, and to a break in time series.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA.

For the business sector, figures on biodiversity & landscape also include soil & groundwater.

Household expenditure data include purchases of connected and adapted products, and final consumption of environmental services. Included are expenditure on for example: waste and wastewater services (fees and purchases from municipalities and public or private specialised producers); catalytic converters; services for proper adjustments on heating systems; purchase of goods used in connection with sewage treatment or waste management (bins, bags, composts, environmentally correct treatment of refrigerators, etc.); organic food; and noise reduction equipment (windows).

► ECONOMIC SECTORS

Public sector:

Public sector data include all levels of government (federal, provincial, municipal) and special institutions such as the ecofund. Included in the outlays are net subsidies to private sector and NPISHs. Until 1996, publicly owned enterprises providing EP services as well as public waste and wastewater departments were also included in the public sector data. As since 1997 data for public specialised producers are presented separately and no longer included under public sector, there is a large decline in the level of expenditure compared to previous years.

Business sector:

Business sector data cover the ISIC/NACE categories 10-41, i.e. C (Mining and quarrying), D (Manufacturing) and E (Electricity, gas and water supply).

Specialised producers of EP services:

Data on specialised producers are recorded separately since 1997.

◆ Public specialised producers:

Data cover publicly owned enterprises providing EP services as well as public waste and wastewater departments (associations of municipalities).

◆ Private specialised producers:

Data cover privately owned enterprises that are part of ISIC/NACE 90, as well as enterprises of ISIC/NACE 37, 45.11-00, 45.32-00, 51.57, 73, 74.11, 74.20, 74.30, 74.70-02 and 92.53, which are considered as being specialised in environmental protection services. NPISHs are not included. Some double counting in ISIC/NACE 90 exists, particularly in the waste sector, as there is a lot of subcontracting between municipalities and private enterprises and even among private companies providing environmental services.

Austria

Million Euro at 2000 prices

		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other (a,b)	Total	
PUBLIC SECTOR							
1997	Investments	7	0	3	16	27	6
	+ In-house current expenditure	42	7	20	169	239	104
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	49	7	24	186	266	110
	+ Subsidies	244	115	143	140	642	44
	+ Fees and payments	0	0	0	0	0	0
	- Revenues	14	41	9	25	89	103
	= Expenditure 2	279	80	158	301	819	50
1998	Investments	7	0	3	18	28	6
	+ In-house current expenditure	29	7	14	316	367	103
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	36	7	17	334	395	110
	+ Subsidies	243	126	158	154	681	62
	+ Fees and payments	0	0	0	0	1	0
	- Revenues	14	50	9	25	98	105
	= Expenditure 2	266	84	166	463	979	67
1999	Investments	7	0	4	19	30	5
	+ In-house current expenditure	28	5	13	174	221	99
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	36	6	17	193	251	104
	+ Subsidies	212	131	177	120	640	42
	+ Fees and payments	0	0	0	0	1	0
	- Revenues	15	4	8	24	52	93
	= Expenditure 2	232	132	186	289	839	52
2000	Investments	15	1	3	19	39	16
	+ In-house current expenditure	37	17	13	165	231	141
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	52	18	16	184	270	158
	+ Subsidies	251	149	180	145	724	544
	+ Fees and payments	8	2	0	0	10	7
	- Revenues	24	12	10	29	75	137
	= Expenditure 2	287	157	185	301	929	572
2001	Investments	14	2	3	18	36	17
	+ In-house current expenditure	33	18	17	157	224	147
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	46	20	19	175	260	163
	+ Subsidies	241	168	66	154	628	464
	+ Fees and payments	8	2	0	0	10	8
	- Revenues	25	13	10	27	75	127
	= Expenditure 2	270	177	75	302	823	509
BUSINESS SECTOR (c, d)							
1997	Investments	131	61	122	126	441	12
	-of which End-of-pipe investments	105	51	75	101	332	11
	+ In-house current expenditure	173	289	147	156	765	12
	- Receipts from by-products	5	6	12	5	28	0
	= Expenditure 1	299	344	258	277	1 178	24
	- Subsidies	2	2	0	1	5	0
	+ Fees and payments	62	39	2	25	128	0
	= Expenditure 2	360	381	260	301	1 302	24
1998	Investments	78	22	144	74	318	9
	-of which End-of-pipe investments	46	14	100	48	208	8
	+ In-house current expenditure	175	283	148	163	770	15
	- Receipts from by-products	6	6	13	6	30	0
	= Expenditure 1	247	299	280	231	1 058	24
	- Subsidies	2	0	0	0	3	0
	+ Fees and payments	64	38	3	26	130	0
	= Expenditure 2	310	336	283	257	1 186	25
							.../...

		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other (a,b)	Total	
1999	Investments	80	16	71	86	252	4
	-of which End-of-pipe investments	61	13	41	40	155	3
	+ In-house current expenditure	177	289	150	151	767	10
	- Receipts from by-products	6	6	13	5	29	0
	= Expenditure 1	251	299	208	231	990	13
	- Subsidies	1	0	0	0	2	0
	+ Fees and payments	68	40	2	18	128	0
	= Expenditure 2	318	338	211	250	1 116	14
2000	Investments	49	18	53	41	161	26
	-of which End-of-pipe investments	41	9	38	28	116	2
	+ In-house current expenditure	177	289	150	167	783	9
	- Receipts from by-products	5	6	12	6	29	0
	= Expenditure 1	221	301	191	202	914	34
	- Subsidies	1	0	0	0	1	0
	+ Fees and payments	67	39	2	21	130	0
	= Expenditure 2	287	339	193	223	1 043	35
2001	Investments	66	19	71	74	229	3
	-of which End-of-pipe investments	50	15	41	34	141	2
	+ In-house current expenditure	94	158	79	84	415	5
	- Receipts from by-products	3	3	6	3	14	..
	= Expenditure 1	157	174	145	155	630	8
	- Subsidies	2	0	0	0	2	..
	+ Fees and payments	23	14	1	7	44	0
	= Expenditure 2	178	187	145	161	672	..
Mining and quarrying (c)							
2000	Investments	2	1	2	4	9	1
	-of which End-of-pipe investments	2	1	2	3	7	1
	+ In-house current expenditure	11	8	4	13	36	1
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1	13	9	6	17	45	2
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	0	0	0	0	1	0
	= Expenditure 2	..	..	..	..	..	..
Manufacturing (c)							
2000	Investments	46	16	46	36	143	24
	-of which End-of-pipe investments	38	7	32	25	102	1
	+ In-house current expenditure	164	248	124	153	689	8
	- Receipts from by-products	5	6	12	6	29	0
	= Expenditure 1	204	258	157	184	803	32
	- Subsidies	1	0	0	0	1	0
	+ Fees and payments	66	39	2	21	127	0
	= Expenditure 2	269	296	159	204	929	32
Electricity, gas and water supply (c)							
2000	Investments	1	1	6	0	8	1
	-of which End-of-pipe investments	1	1	5	0	7	1
	+ In-house current expenditure	2	32	22	1	58	0
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	3	33	28	2	66	1
	- Subsidies	0	0	0	0	0	0
	+ Fees and payments	1	0	0	0	2	0
	= Expenditure 2	4	34	28	2	67	1
HOUSEHOLDS							
1995	Expenditure 1	18	71	201	106	396	..
	- Subsidies	0	..	7	1	8	..
	+ Fees and payments	594	435	..	..	1 029	..
	= Expenditure 2	612	505	194	105	1 417	..
2001	Expenditure 1	26	76	289	36	427	..
	- Subsidies	0	0	5	1	7	26
	+ Fees and payments	522	213	..	..	735	..
	= Expenditure 2	548	289	284	35	1 155	..

.../...

		Pollution Abatement and Control (PAC)				Biodiversity & landscape	
		Wastewater	Waste	Soil and groundwater	Other		Total
<u>SPECIALISED PRODUCERS OF EP SERVICES</u>							
<u>Public specialised producers</u>							
2001	Investments	646	319	..	..	965	..
	+ In-house current expenditure	668	524	..	..	1 191	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	1 314	842	..	..	2 156	..
	- Subsidies	160	137	..	..	297	..
	+ Fees and payments	264	262	..	..	525	..
	- Revenues	1 929	971	..	..	2 900	..
	= Expenditure 2	- 512	- 4	..	..	- 516	..
<u>Private specialised producers</u>							
2001	Investments	77	157	58	57	349	..
	+ In-house current expenditure	301	922	175	776	2 173	..
	- Receipts from by-products	29	44	..	..	73	..
	= Expenditure 1	349	1 035	233	833	2 450	..
	- Subsidies	78	31	50	602	760	..
	+ Fees and payments	45	71	..	..	116	..
	- Revenues	485	684	..	..	1 169	..
	= Expenditure 2	- 169	390	183	231	636	..

Notes:

- (a) For the public sector the category other includes soil & groundwater, noise, research & development, radiation and general administration.
- (b) For the business sector the category other includes noise, research & development and radiation. Soil & groundwater is excluded (included in biodiversity and landscape).
- (c) For the business sector soil & groundwater is included in biodiversity and landscape.
- (d) Total business sector data include only ISIC/NACE C, D and E (10-41).

Source: OECD.

BELGIUM

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the National Statistics Institute²⁴
- ◆ are published annually for the public sector, the business sector, households, and specialised producers (private and public)
- ◆ were published for the first time for the reference year 1996
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The data are mainly produced for responding to international reporting requirements. They are also used for regional environmental reports and research.

► DATA SOURCES AND TYPES OF EXPENDITURE

Public sector: Public expenditure data are based on National Accounts (public accounts), and budget appropriations or outlays.

Business sector: The data source for the business sector is National Statistics Institute, environmental statistics division (based on the structural business survey).

There is a risk of double counting when adding the expenditures for business and public sector, since the specific transfers between the sectors are not identified.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA.

► ECONOMIC SECTORS

Public sector expenditure consists of the expenditure by regional administrations, the federal administration and the local administrative levels (municipalities and provinces).

Business sector used to include all ISIC/NACE groups except agriculture, ISIC/NACE 37, ISIC/NACE 90 and financial services. However, in 2002, the business sector cover only ISIC/NACE 15-41.

Data on specialised producers of EP services are available from 1996. However, since there is a lot of double counting, they are not added up with the totals for the public and business sector when calculating national totals (see summary table 1 and 2a).

24. Vandille, G. (2005): "Environmental Protection Expenditure Accounts for Belgium: 1997-2002". Report for Eurostat, Federal Planning Bureau, Brussels, 154 pp. MIRA-T (2005): "Milieu & economie: milieu-uitgaven en vergoening van het belastingstelsel nader bekeken". Flemish Environmental Thematic Report, 227-244 pp. KESTEMONT, B. (2004): "Environmental expenditures by the Belgian industry in 2002. Imputation techniques and results". Statistics Belgium Working Paper n 9, Direction générale Statistique et information économique, Brussels, 77 pp, http://statbel.fgov.be/studies/home_fr.asp#2

Belgium

Million Euro at 2000 prices

		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other (a)	Total	
PUBLIC SECTOR							
1996	Investments	332	20	0	10	362	11
+	In-house current expenditure	80	443	8	146	677	82
-	Receipts from by-products	0	0	0	0	0	0
=	Expenditure 1	412	463	8	155	1 039	93
+	Subsidies	- 400	- 57	0	- 47	- 504	0
+	Fees and payments	4	26	0	15	45	6
-	Revenues	6	399	0	6	410	3
=	Expenditure 2	10	33	8	117	169	96
1997	Investments	403	- 36	1	18	386	19
+	In-house current expenditure	55	437	12	153	658	99
-	Receipts from by-products	0	0	0	0	0	0
=	Expenditure 1	459	401	13	171	1 044	118
+	Subsidies	- 391	- 56	0	- 46	- 493	0
+	Fees and payments	3	25	0	15	44	7
-	Revenues	6	391	0	6	403	3
=	Expenditure 2	65	- 21	13	135	191	122
2002	Investments	302	108	0	51	461	56
+	In-house current expenditure	106	499	9	171	784	66
-	Receipts from by-products	0	0	0	0	0	0
=	Expenditure 1	408	607	9	222	1 245	122
+	Subsidies	- 247	56	- 28	17	- 202	4
+	Fees and payments	5	28	1	18	51	9
-	Revenues	8	403	0	6	418	2
=	Expenditure 2	158	287	- 19	250	677	133
2003	Investments	265	107	0	51	423	56
+	In-house current expenditure	111	497	8	168	784	65
-	Receipts from by-products	0	0	0	0	0	0
=	Expenditure 1	376	604	8	219	1 207	120
+	Subsidies	- 240	55	- 22	18	- 189	4
+	Fees and payments	6	28	1	17	52	9
-	Revenues	8	408	0	6	423	2
=	Expenditure 2	134	278	- 13	248	646	131
BUSINESS SECTOR (b)							
1996	Investments	119	53	147	11	330	..
	- of which End-of-pipe investments	59	31	60	6	156	..
+	In-house current expenditure	162	150	85	153	550	0
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	281	204	232	164	881	..
-	Subsidies	- 4	- 40	0	- 10	- 54	0
+	Fees and payments	73	259	2	62	397	0
=	Expenditure 2	358	503	235	237	1 332	0
1997	Investments	157	40	149	15	360	..
	- of which End-of-pipe investments	54	21	71	9	155	..
+	In-house current expenditure	161	149	85	152	546	0
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	318	189	233	167	907	..
-	Subsidies	- 4	- 39	0	- 10	- 52	0
+	Fees and payments	73	257	2	62	394	0
=	Expenditure 2	394	485	236	238	1 353	0
2002	Investments	41	28	49	75	193	..
	- of which End-of-pipe investments	22	8	25	26	81	0
+	Total current expenditure (c)	401	464	189	241	1 295	0
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (d)	442	492	238	316	1 488	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	..	..	..	..	..	..
=	Expenditure 2	..	..	..	..	..	..

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (a)		
HOUSEHOLDS							
1996	Expenditure 1	0	0	0	0	0	0
	- Subsidies	- 390	- 1	- 43	14	- 420	1
	+ Fees and payments	34	591	0	32	658	3
	= Expenditure 2	423	593	43	19	1 078	2
1997	Expenditure 1	0	0	0	0	0	0
	- Subsidies	- 381	- 1	- 42	13	- 411	1
	+ Fees and payments	33	581	0	32	646	3
	= Expenditure 2	414	582	42	18	1 057	2
2002	Expenditure 1	0	0	0	0	0	0
	- Subsidies	- 314	- 6	- 26	35	- 311	9
	+ Fees and payments	119	699	0	52	870	4
	= Expenditure 2	432	705	27	17	1 180	- 6
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES							
1996	Investments	110	108	..	..	219	..
	+ In-house current expenditure	141	709	..	0	851	..
	- Receipts from by-products	2	62	..	..	65	..
	= Expenditure 1	250	756	..	..	1 005	..
	- Subsidies	2	1	..	0	3	..
	+ Fees and payments	6	23	..	0	29	..
	- Revenues	106	873	..	..	980	..
	= Expenditure 2	147	- 96	..	..	51	..
1997	Investments	143	136	..	0	280	..
	+ In-house current expenditure	171	856	..	0	1 027	..
	- Receipts from by-products	131	78	..	0	209	..
	= Expenditure 1	183	915	..	0	1 098	..
	- Subsidies	2	1	..	0	3	..
	+ Fees and payments	7	28	..	0	34	..
	- Revenues	124	985	..	0	1 110	..
	= Expenditure 2	63	- 44	..	0	20	..
2002	Investments	144	62	..	0	206	..
	+ In-house current expenditure	455	1 288	..	0	1 744	..
	- Receipts from by-products	2	40	..	0	42	..
	= Expenditure 1	598	1 310	..	0	1 907	..
	- Subsidies	46	13	..	0	59	..
	+ Fees and payments	17	33	..	0	50	..
	- Revenues	397	1 490	..	..	1 887	..
	= Expenditure 2	172	- 161	..	..	11	..
2003	Investments	170	73	..	0	243	..
	+ In-house current expenditure	445	1 259	..	0	1 704	..
	- Receipts from by-products	0	0	..	0	0	..
	= Expenditure 1	615	1 332	..	0	1 947	..
	- Subsidies	43	13	..	0	56	..
	+ Fees and payments	16	32	..	0	48	..
	- Revenues	388	1 459	..	..	1 847	..
	= Expenditure 2	200	- 108	..	..	92	..
Public specialised producers of EP services							
2002	Investments	8	34	..	..	42	..
	+ Total current expenditure (c)	146	1 020	..	0	1 165	..
	- Receipts from by-products	0	12	..	..	12	..
	= Expenditure 1 (d)	154	1 041	..	..	1 195	..
	- Subsidies	6	- 4	..	..	1	..
	+ Fees and payments	0	0	..	0	0	..
	- Revenues	162	1 171	..	..	1 333	..
	= Expenditure 2	- 15	- 125	..	..	- 140	..

Notes:

(a) Other includes soil & groundwater, noise, radiation, research and general administration.

(b) Total business sector data include only all businesses except ISIC/NACE 01-05 for the years 1996 and 1997. Figures for 2002 cover only ISIC/NACE D and E (15-41).

(c) Total current expenditure includes both in-house current expenditure and fees/purchases.

(d) Includes total current expenditure, and is therefore not a pure Expenditure I, but rather shows total environmental expenditure or outlays.

Source: OECD.

CZECH REPUBLIC

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the Czech Statistical Office
- ◆ are published annually for the public sector, the business sector and specialised producers
- ◆ have been published regularly since the early 1990s.
- ◆ cover expenditure on PAC activities and, for some sectors, on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ cover mainly investment expenditure.

► DATA SOURCES AND TYPES OF EXPENDITURE

The data on environmental protection expenditure in the Czech Republic cover mainly investments. Environmental investments are defined as investments in buildings, equipment or any other measure aimed at environmental protection. The figures include integrated investments. Figures on current expenditure are not yet available, except for private specialised producers.

Data on environmental investments, for all sectors, are collected within the framework of general construction investment statistics and according to the national methodology by the Czech Statistical Office. Data on the public sector are collected through the annual statistical survey of government institutions. This puts certain limits on the scope of the economic variables covered (i.e. only investment expenditure). Data for private specialised producers are collected through an annual survey on environmental expenditure.

High levels of PAC investments are due to the mitigation of environmental damage from earlier periods as well as to the implementation, after 1990, of new stringent legislation concerning the environmental protection.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA, except general administration (for the public sector).

Since 1992 environmental investments have been broken down by environmental domain. Until 2001, the domain "other" covered air, biodiversity & landscape, and reduction of the impact of physical factors, and hence did not correspond to the CEPA categories. Since 2002, the domain "other" covers the categories air, noise, biodiversity & landscape, radiation research & development, and other, ensuring a full coverage of all CEPA domains. This means that the figures for total PAC expenditure and "other" are not entirely comparable over time.

► ECONOMIC SECTORS

Public sector data include all levels of government (general government and municipal authorities), plus some publicly owned companies (3).

Business sector data cover all industries.

Data on both public and private specialised producers of EP services are available from 1996. The sectors covered are ISIC/NACE 90 and 37. Public specialised producers include parts of the publicly owned companies, while others are included in public sector.

No surveys on household PAC expenditure have been carried out.

Czech Republic

Million Koruny (Koruna) at 2000 prices

		Pollution Abatement and Control (PAC)				Biodiversity & landscape	
		Wastewater	Waste	Air	Other (a)	Total	
PUBLIC SECTOR							
1993	Investments	4 357	881	2 369	20	7 628	25
1995	Investments	7 507	877	4 775	283	13 443	115
1997	Investments	7 007	1 225	4 548	237	13 017	745
1998	Investments	5 484	1 073	3 990	223	10 770	892
1999	Investments	5 566	689	4 107	287	10 649	677
2000	Investments	5 196	383	3 873	252	9 704	1 005
2001	Investments	6 680	410	3 531	243	10 864	967
2002	Investments	4 098	484	1 567	800	6 950	229
BUSINESS SECTOR							
1993	Investments	7 992	3 241	8 745	381	20 359	120
1995	Investments	5 148	2 548	17 317	919	25 933	347
1997	Investments	5 087	2 981	20 273	921	29 262	440
1998	Investments	3 134	1 831	17 056	672	22 694	306
1999	Investments	3 508	1 604	12 128	399	17 639	435
2000	Investments	3 363	1 489	4 528	350	9 730	527
2001	Investments	1 909	568	3 371	856	6 704	440
2002	Investments	2 980	386	2 595	1 190	7 151	237
Agriculture, hunting, forestry and fishing							
2002	Investments	23	10	12	23	69	0
Mining and quarrying							
2002	Investments	68	2	377	13	460	0
Manufacturing							
2002	Investments	569	125	1 094	316	2 103	1
Electricity, gas and water supply							
2002	Investments	1 842	208	998	299	3 346	30
Other business sector							
2002	Investments	478	41	115	539	1 173	205
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES (b)							
1997	Investments	455	1 098	..	67	1 621	..
	+ In-house current expenditure	..	..	..	..	9 783	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	11 403	..
	- Subsidies	..	..	..	..	60	..
	+ Fees and payments	..	..	..	..	5 221	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
1999	Investments	32	383	..	20	435	..
	+ In-house current expenditure	..	..	..	..	9 461	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	9 896	..
	- Subsidies	..	..	..	..	112	..
	+ Fees and payments	..	..	..	..	6 186	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2000	Investments	8	398	..	28	434	..
	+ In-house current expenditure	..	..	..	..	12 384	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	12 819	..
	- Subsidies	..	..	..	..	74	..
	+ Fees and payments	..	..	..	..	7 144	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (a)		
2001	Investments	65	459	..	31	555	..
	+ In-house current expenditure	..	..	..	..	10 248	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	10 804	..
	- Subsidies	..	..	..	..	73	..
	+ Fees and payments	..	..	..	..	7 925	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2002	Investments	12	376	..	83	471	..
	+ In-house current expenditure	..	..	..	..	11 562	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	12 032	..
	- Subsidies	..	..	..	..	95	..
	+ Fees and payments	..	..	..	..	7 774	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
Public specialised producers of EP services (b)							
1996	Investments	13	131	..	21	165	..
1998	Investments	8	77	..	25	109	..
1999	Investments	19	11	..	13	43	..
2000	Investments	8	24	..	12	44	..
2001	Investments	49	5	..	0	53	..
2002	Investments	0	21	..	53	74	..

Notes:

- (a) Covers the CEPA categories soil & groundwater, noise & vibration, radiation, research & development and other (according to CEPA definition).
(b) Data before 2002 only includes parts of the CEPA environmental domains, excluding Noise and vibration, Radiation, Research and development and Other.

Source: OECD.

DENMARK

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by Statistics Denmark
- ◆ are published annually for the public sector and for specialised producers
- ◆ have been published regularly since the reference year 1991
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The main users of the statistics are the Danish Ministry of Environment and the Danish Environmental Protection Agency.

► DATA SOURCES AND TYPES OF EXPENDITURE

Data on EP expenditure are collected by Statistics Denmark. All public sector data come from the Database for Integrated Public Accounts (DIOR), from where the aggregate figures for environmental protection are obtained.²⁵

The data on public and private specialised producers are collected through a special survey on income and expenditure for public non-integrated corporations of EP services.

► ENVIRONMENTAL DOMAINS

The expenditure data cover most domains according to the CEPA. For the public sector, all CEPA environmental domains are covered, while for specialised producers the domains "waste", "wastewater" and "other" are covered (ISIC/NACE 90.01-90.03).

► ECONOMIC SECTORS

Public sector data cover all public sector levels (central government, counties, municipalities and inter municipal corporations). Publicly owned enterprises whose accounting is part of the public budgets are also included.

Data on specialised producers of EP services are available from 1991. Data cover ISIC/NACE 90. Public specialised producers also include publicly owned enterprises whose accounting is done separately from the public budgets.

There are no data on business and household PAC expenditure at present.

25. *Etwil P. and Vesselbo E. (1993): Collection of data on expenditure on the environment by the General Government Sector, Danmarks Statistik, in Contributions of Member States and EFTA countries to the SERIEE system, Eurostat F3, Luxembourg, 1994.*

Denmark

Million Danish Kroner at 2000 prices

	Pollution Abatement and control (PAC)					Biodiversity & landscape
	Wastewater	Waste	Air	Other	Total	
PUBLIC SECTOR				(c)		
1991 Investments	2 411	388	105	303	3 207	290
+ Total current expenditure (a)	2 231	3 047	178	2 288	7 744	1 193
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	4 642	3 435	283	2 591	10 951	1 483
+ Subsidies	0	0	21	533	554	309
+ Fees and payments	..	..	..	..	..	..
- Revenues	4 887	3 330	1	295	8 513	100
= Expenditure 2	- 245	106	303	2 829	2 992	1 692
1995 Investments	1 754	193	948	392	3 286	523
+ Total current expenditure (a)	2 592	2 907	166	2 989	8 654	1 166
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	4 346	3 100	1 114	3 381	11 940	1 689
+ Subsidies	1	76	800	1 297	2 175	218
+ Fees and payments	..	..	..	..	..	..
- Revenues	4 125	3 115	1	338	7 580	122
= Expenditure 2	221	61	1 913	4 340	6 535	1 784
1997 Investments	1 780	211	811	452	3 255	455
+ Total current expenditure (a)	2 734	3 270	220	3 204	9 428	1 194
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	4 515	3 481	1 031	3 657	12 683	1 649
+ Subsidies	1	103	1 265	1 748	3 116	139
+ Fees and payments	..	..	..	..	..	..
- Revenues	4 155	3 291	5	333	7 783	101
= Expenditure 2	361	293	2 292	5 071	8 016	1 688
1999 Investments	1 955	179	890	405	3 429	541
+ Total current expenditure (a)	2 892	3 578	262	3 540	10 272	1 261
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	4 847	3 757	1 152	3 945	13 701	1 802
+ Subsidies	10	84	1 433	2 321	3 849	232
+ Fees and payments	..	..	..	..	..	..
- Revenues	4 485	3 726	3	405	8 619	101
= Expenditure 2	372	116	2 582	5 861	8 932	1 933
2001 Investments	2 024	214	671	396	3 306	613
+ Total current expenditure (a)	2 842	3 445	237	3 688	10 212	1 307
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	4 866	3 660	908	4 084	13 518	1 920
+ Subsidies	7	171	777	2 524	3 479	365
+ Fees and payments	..	..	..	..	..	..
- Revenues	4 610	3 460	13	403	8 487	94
= Expenditure 2	262	371	1 673	6 205	8 510	2 191
2003 Investments	2 482	326	326	369	3 504	403
+ Total current expenditure (a)	3 020	3 543	232	3 518	10 314	1 306
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	5 503	3 869	557	3 888	13 817	1 709
+ Subsidies	1	209	394	1 923	2 526	392
+ Fees and payments	..	..	..	..	..	..
- Revenues	5 456	3 783	22	359	9 620	106
= Expenditure 2	47	295	930	5 451	6 723	1 995
2004 Investments	2 431	32	137	385	2 985	444
+ Total current expenditure (a)	2 933	3 402	167	3 543	10 045	1 312
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	5 363	3 435	304	3 928	13 030	1 756
+ Subsidies	1	218	424	1 694	2 336	521
+ Fees and payments	..	..	..	..	..	..
- Revenues	5 629	3 843	15	361	9 591	116
= Expenditure 2	- 266	- 191	713	5 260	5 517	2 160

.../...

	Pollution Abatement and control (PAC)					Biodiversity & landscape	
	Wastewater	Waste	Air	Other	Total		
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES							
1991	Investments	2 512	838	..	..	3 350	..
	+ Total current expenditure (a)	2 570	5 338	..	..	7 908	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	5 082	6 176	..	..	11 258	..
	- Subsidies	11	106	..	..	117	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	5 140	6 624	..	..	11 763	..
	= Expenditure 2	- 68	- 554	..	..	- 622	..
1995	Investments	586	412	..	..	998	..
	+ Total current expenditure (a)	392	2 524	..	..	2 916	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	978	2 935	..	..	3 914	..
	- Subsidies	47	117	..	..	163	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	646	3 201	..	..	3 847	..
	= Expenditure 2	285	- 382	..	..	- 97	..
1999	Investments	282	859	..	..	1 141	..
	+ Total current expenditure (a)	698	4 011	..	..	4 709	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	980	4 870	..	..	5 850	..
	- Subsidies	7	96	..	..	103	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	944	5 139	..	..	6 084	..
	= Expenditure 2	28	- 365	..	..	- 337	..
2003	Investments	264	995	..	..	1 259	..
	+ Total current expenditure (a)	889	4 460	..	..	5 350	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	1 154	5 455	..	..	6 608	..
	- Subsidies	9	82	..	..	92	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	958	5 365	..	..	6 323	..
	= Expenditure 2	187	7	..	..	194	..
2004	Investments	279	1 051	..	..	1 330	..
	+ Total current expenditure (a)	925	4 641	..	..	5 567	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	1 205	5 692	..	..	6 897	..
	- Subsidies	10	85	..	..	94	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	1 001	5 610	..	..	6 611	..
	= Expenditure 2	194	- 3	..	..	191	..
Public specialised producers of EP services							
2004	Investments	214	1 038	..	..	1 252	..
	+ Total current expenditure (a)	408	2 760	..	..	3 168	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	622	3 798	..	..	4 420	..
	- Subsidies	4	73	..	..	76	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	362	3 411	..	..	3 773	..
	= Expenditure 2	256	315	..	..	571	..
Private specialised producers of EP services							
2004	Investments	66	13	..	..	78	..
	+ Total current expenditure (a)	517	1 881	..	..	2 399	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	583	1 894	..	..	2 477	..
	- Subsidies	6	12	..	..	18	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	639	2 199	..	..	2 838	..
	= Expenditure 2	- 62	- 317	..	..	- 380	..

Notes:

(a) Total current expenditure includes both in-house current expenditure and fees/purchases.

(b) Here, expenditure 1 refers to total PAC expenditure or outlays (including all current expenditure).

(c) Other includes soil & groundwater, noise & vibration, radiation, research & development, public administration and subsidies to other countries.

Source: OECD.

FINLAND

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by Statistics Finland²⁶
- ◆ are published annually for the public sector, the business sector and public specialised producers
- ◆ have been published regularly since 1992
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are compiled according to the abater principle since 2000.

► DATA SOURCES AND TYPES OF EXPENDITURE

The collection of PAC expenditure data for the business sector began in 1992 as a joint project between the Ministry of Environment and Statistics Finland. Statistics on the business sector are compiled on the basis of an annual survey. Since 2000, details on current expenditure are available, distinguishing between internal current expenditure and fees/purchases.

Data on the public sector are based on Statistics Finland's database on national accounts as well as on additional estimates. The statistics are compiled in accordance with the SERIEE framework.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA.

► ECONOMIC SECTORS

Public sector data cover the central and local government, as well as municipal business firms.

Business sector data refer to mining and quarrying, manufacturing, and electricity, gas and water supply (ISIC/NACE categories 10-41 excl.37).

The data on specialised producers cover only public sector authorities.

Data on other business sectors (e.g. agriculture, services), private specialised producers and households are not available.

26. The latest national publication containing environmental expenditures: Environment Statistics 2006, Statistics Finland. The website (in Finnish): <http://tilastokeskus.fi/til/tyymm/index.html>

Finland

Million Euro at 2000 prices

	Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape	
	Wastewater	Waste	Air	Other (c, d)			
PUBLIC SECTOR							
1994	Investments	108	17	34	29	188	16
	+ Total current expenditure (a)	156	74	31	149	410	15
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	264	91	64	178	598	31
	+ Subsidies	144	4	..	41	188	21
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	341	78	..	6	425	0
	= Expenditure 2	67	17	64	213	362	53
1997	Investments	78	15	42	34	169	17
	+ Total current expenditure (a)	99	62	24	196	380	16
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	177	77	65	230	549	33
	+ Subsidies	107	2	..	152	260	35
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	173	87	..	19	278	0
	= Expenditure 2	112	- 8	65	363	531	68
1998	Investments	65	13	22	39	138	14
	+ Total current expenditure (a)	97	65	28	197	387	16
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	161	78	50	236	525	30
	+ Subsidies	102	1	..	154	256	39
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	171	94	..	24	289	0
	= Expenditure 2	92	- 16	50	366	492	69
1999	Investments	57	11	..	12	80	12
	+ Total current expenditure (a)	94	66	..	230	390	17
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	151	77	..	242	470	29
	+ Subsidies	88	1	..	144	233	43
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	170	93	..	22	285	0
	= Expenditure 2	70	- 15	..	363	418	72
2000	Investments	74	17	..	13	104	13
	+ Total current expenditure (a)	90	70	..	215	375	17
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	164	87	..	228	479	30
	+ Subsidies	185	1	..	93	279	55
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	162	95	..	30	288	0
	= Expenditure 2	186	- 7	..	291	470	85
BUSINESS SECTOR (e)							
1992	Investments	118	15	245	2	379	..
	- of which End-of-pipe investments	84	11	163	1	259	..
	+ Total current expenditure (a)	132	64	47	12	255	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	250	79	292	13	634	..
	- Subsidies	..	4	3	4	11	..
	+ Fees and payments	..	..	..	..	..	..
	= Expenditure 2	250	75	289	10	623	..
1997	Investments	62	25	163	11	261	..
	-of which End-of-pipe investments	37	10	69	9	126	..
	+ Total current expenditure (a)	145	88	71	30	333	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	207	112	234	41	594	..

.../...

	Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
	Wastewater	Waste	Air	Other (c, d)		
1998 Investments	82	28	72	20	202	..
- of which End-of-pipe investments	36	26	45	17	123	..
+ Total current expenditure (a)	144	92	57	53	345	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	226	120	129	73	548	..
1999 Investments	72	17	44	15	148	..
- of which End-of-pipe investments	25	14	28	13	79	..
+ In-house current expenditure	97	35	66	16	213	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1	169	52	110	31	361	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	38	72	..	37	147	..
= Expenditure 2	..	..	..	..	..	..
2000 Investments	77	32	91	26	225	..
- of which End-of-pipe investments	50	18	41	23	133	0
+ In-house current expenditure	105	34	72	19	229	0
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1	181	66	163	44	454	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	41	75	..	40	156	..
= Expenditure 2	..	..	..	..	..	..
Mining and quarrying						
2000 Investments	1	0	1	1	4	..
- of which End-of-pipe investments	1	0	1	1	3	0
+ In-house current expenditure	3	0	1	1	5	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1	4	0	2	3	9	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	0	0	..	1	2	..
= Expenditure 2	..	..	..	..	..	..
Manufacturing						
2000 Investments	76	31	77	21	205	..
- of which End-of-pipe investments	49	18	38	19	124	0
+ In-house current expenditure	100	32	57	14	205	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1	176	64	134	35	410	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	39	73	..	28	139	..
= Expenditure 2	..	..	..	..	..	..
Electricity, gas and water supply						
2000 Investments	0	0	13	3	16	..
- of which End-of-pipe investments	0	0	2	3	5	0
+ In-house current expenditure	1	2	14	3	19	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1	1	2	27	6	36	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	1	2	..	11	15	..
= Expenditure 2	..	..	..	..	..	..
SPECIALISED PRODUCERS OF EP SERVICES						
Public specialised producers						
1996 Investments	41	0	..	..	41	..
+ Total current expenditure (a)	49	2	..	..	51	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	90	3	..	..	92	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	..	..	..	..	..	..
- Revenues	138	4	..	..	141	..
= Expenditure 2	- 48	- 1	..	..	- 49	..

.../...

	Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
	Wastewater	Waste	Air	Other (c, d)		
1997 Investments	66	2	..	..	68	..
+ Total current expenditure (a)	62	8	..	..	70	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	128	10	..	..	138	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	..	..	..	..	..	..
- Revenues	151	12	..	..	163	..
= Expenditure 2	- 23	- 3	..	..	- 26	..
1998 Investments	62	3	..	..	65	..
+ Total current expenditure (a)	64	8	..	..	72	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	126	11	..	..	137	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	..	..	..	..	..	..
- Revenues	148	14	..	..	162	..
= Expenditure 2	- 21	- 3	..	..	- 24	..
1999 Investments	62	3	..	..	64	..
+ Total current expenditure (a)	69	11	..	..	80	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	131	14	..	..	145	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	..	..	..	..	..	..
- Revenues	155	17	..	..	172	..
= Expenditure 2	- 24	- 4	..	..	- 27	..
2000 Investments	68	1	..	..	68	..
+ Total current expenditure (a)	79	10	..	..	90	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	147	11	..	..	158	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	..	..	..	..	..	..
- Revenues	155	19	..	..	173	..
= Expenditure 2	- 8	- 8	..	..	- 16	..

Notes:

(a) Total current expenditure includes both in-house current expenditure and fees/payments.

(b) Expenditure 1 includes total current expenditure and it therefore an expression of total outlays/expenditure for environmental protection expenditure.

(c) For the public sector the category other includes soil & groundwater, noise, radiation, general administration and research, and also air from 1999.

(d) For the business sector the category other includes soil & groundwater, noise, radiation, general administration, research and biodiversity & landscape.

(e) Total business sector data include only ISIC/NACE C, D and E (10-41).

Source: OECD.

FRANCE

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the Ministry of Ecology and Sustainable Development and the French Environment Institute²⁷
- ◆ are published annually for all sectors (public sector, business sector, specialised producers and households)
- ◆ have been published regularly since 1982
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The EPE accounts are published in a report and presented to the Commission on Environmental Accounts and Economics, chaired by the Minister of Environment. An estimation of environmental employment is based on the accounts. Data on PAC expenditure form an integral part of the regular analysis of economic aspects of the environment.

► DATA SOURCES AND TYPES OF EXPENDITURE

Public sector: Data on the public sector and on public specialised producers are based on state accounts and accounts for municipalities and other local authorities.

Business: Since 1992, the statistical offices of the Ministries of Industry and Agriculture have carried out annual surveys on industrial PAC expenditure.

Since 1994, the Institut Français de l'Environnement (IFEN) has been compiling environmental protection expenditure accounts (EPEA) according to the SERIEE methodology. The figures for the whole time series 1990-2004 have recently been revised to take into account the latest improvements in the French EPEAs.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA, except soil and groundwater. Biodiversity & landscape has only been covered since 1995, and radioactive waste since 1998; the totals are thus not entirely comparable before and after these years.

► ECONOMIC SECTORS

Public sector data cover general administration and other non-marked activities (like biodiversity and landscape, street cleaning and noise) within the Ministry of Ecology and Sustainable Development, national and sub-national entities under the Ministry's supervision, others ministries and municipalities.

Business sector data cover ISIC/NACE C (Mining and quarrying), D (Manufacturing) and E (Electricity, gas and water supply).

Specialised producers:

Public specialised producers include municipal waste and wastewater departments, which have a market activity. Data on private specialised producers of EP services are available from 1990. For confidentiality reasons, data on radioactive waste (radiation) are not broken down by private and public specialised producers, but are only shown for specialised producers overall.

Household data cover expenditure on both connected and adapted products (septic tanks, anti-pollution measures for motor vehicles, protection against noise, and expenditure for waste (waste bags)), waste and wastewater fees and subsidies on lead free petrol (until 2000 when it became a standard product).

27. Latest edition: Ministère de l'écologie et du développement durable – Institut français de l'environnement : L'économie de l'environnement en 2004 – Rapport à la Commission des comptes et de l'économie de l'environnement, Édition 2006, Lavoisier Tec&Doc, Paris.

France

Million Euro at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
PUBLIC SECTOR							
1990	Investments	0	65	2	337	404	..
	+ In-house current expenditure	0	1 109	6	872	1 986	..
	- Receipts from by-products	0	0	0	0	0	..
	= Expenditure 1	0	1 174	8	1 208	2 390	..
	+ Subsidies	996	28	229	0	1 253	..
	+ Fees and payments	0	0	0	0	0	..
	- Revenues	..	..	37	..	37	..
	= Expenditure 2	996	1 202	200	1 208	3 607	..
1995	Investments	0	74	5	496	575	110
	+ In-house current expenditure	0	1 173	11	1 213	2 397	137
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1	0	1 247	16	1 709	2 972	247
	+ Subsidies	1 316	128	250	0	1 693	- 14
	+ Fees and payments	0	0	0	0	0	0
	- Revenues	..	..	- 301	..	- 301	..
	= Expenditure 2	1 316	1 375	566	1 709	4 966	233
1998	Investments	0	73	15	494	582	112
	+ In-house current expenditure	0	1 229	23	1 284	2 536	208
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1	0	1 302	39	1 777	3 118	320
	+ Subsidies	1 360	294	238	7	1 900	- 28
	+ Fees and payments	0	0	0	9	9	0
	- Revenues	..	..	- 366	..	- 366	..
	= Expenditure 2	1 360	1 596	642	1 794	5 393	292
2001	Investments	0	81	10	684	776	122
	+ In-house current expenditure	0	1 290	31	1 452	2 773	271
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1	0	1 371	41	2 137	3 549	394
	+ Subsidies	1 502	304	30	19	1 855	4
	+ Fees and payments	0	0	0	9	9	0
	- Revenues	..	..	0	..	0	..
	= Expenditure 2	1 502	1 674	71	2 165	5 413	398
2002	Investments	0	75	10	645	730	104
	+ In-house current expenditure	0	1 313	35	1 515	2 863	294
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1	0	1 388	45	2 160	3 593	398
	+ Subsidies	1 479	288	28	28	1 823	10
	+ Fees and payments	0	0	0	7	7	0
	- Revenues	..	..	0	..	0	..
	= Expenditure 2	1 479	1 675	74	2 195	5 423	408
BUSINESS SECTOR (e)							
1990	Investments	388	117	357	219	1 081	..
	+ In-house current expenditure	698	492	612	345	2 148	..
	- Receipts from by-products	0	0	0	0	0	..
	= Expenditure 1	1 087	609	969	564	3 229	..
	- Subsidies	21	16	92	0	129	..
	+ Fees and payments	1 362	1 411	0	0	2 773	..
	= Expenditure 2	2 427	2 004	877	564	5 872	..
1995	Investments	389	111	258	220	979	236
	+ In-house current expenditure	739	572	535	332	2 178	24
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1	1 128	683	793	552	3 156	261
	- Subsidies	59	43	118	0	220	11
	+ Fees and payments	2 019	2 271	0	0	4 290	0
	= Expenditure 2	3 089	2 911	675	552	7 226	250

.../...

		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)	Total	
2000	Investments	347	111	319	241	1 018	314
+	In-house current expenditure	772	746	642	370	2 530	89
-	Receipts from by-products	0	0	0	0	0	0
=	Expenditure 1	1 119	857	961	611	3 548	403
-	Subsidies	68	48	45	0	161	57
+	Fees and payments	2 546	3 189	0	442	6 177	0
=	Expenditure 2	3 597	3 997	917	1 052	9 563	346
2001	Investments	419	122	352	275	1 169	340
+	In-house current expenditure	760	711	615	378	2 463	94
-	Receipts from by-products	0	0	0	0	0	0
=	Expenditure 1	1 180	833	967	653	3 632	433
-	Subsidies	86	44	30	0	159	48
+	Fees and payments	2 584	3 317	0	442	6 343	0
=	Expenditure 2	3 678	4 107	936	1 095	9 816	386
2002	Investments	394	127	309	260	1 090	370
+	In-house current expenditure	752	704	603	368	2 426	107
-	Receipts from by-products	0	0	0	0	0	0
=	Expenditure 1	1 146	831	912	628	3 517	477
-	Subsidies	84	38	28	0	150	55
+	Fees and payments	2 579	3 555	0	446	6 581	0
=	Expenditure 2	3 641	4 349	884	1 074	9 947	422
<u>Mining and quarrying</u>							
2000	End-of-pipe investments	5	4	4	0	14	..
2001	Investments	2	2	2	1	7	14
	- of which End-of-pipe investments	2	2	1	0	5	14
+	Total current expenditure (a)	9	1	2	0	12	4
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	11	3	4	1	19	17
2002	Investments	2	1	4	2	10	11
	- of which End-of-pipe investments	2	1	2	0	6	11
<u>Manufacturing</u>							
2000	End-of-pipe investments	197	75	188	15	475	..
2001	Investments	324	101	297	25	748	20
	- of which End-of-pipe investments	268	80	177	17	543	19
+	Total current expenditure (a)	463	291	168	6	929	26
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	788	392	466	31	1 677	46
2002	Investments	351	117	260	19	747	17
	- of which End-of-pipe investments	307	100	189	12	609	15
<u>Electricity, gas and water supply</u>							
2000	End-of-pipe investments	57	5	10	4	75	..
2001	Investments	68	11	31	2	113	198
	- of which End-of-pipe investments	66	10	9	2	86	196
+	Total current expenditure (a)	442	119	68	1	630	46
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	510	131	99	3	743	244
2002	Investments	29	3	32	3	66	148
	- of which End-of-pipe investments	29	3	11	3	45	148

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
HOUSEHOLDS							
2000	Expenditure 1	835	362	114	334	1 644	0
	- Subsidies	0	0	0	14	14	- 40
	+ Fees and payments	2 999	2 917	0	0	5 916	0
	= Expenditure 2	3 834	3 279	114	320	7 546	40
2001	Expenditure 1	826	369	120	336	1 651	0
	- Subsidies	0	0	0	19	19	- 43
	+ Fees and payments	3 012	3 075	0	0	6 087	0
	= Expenditure 2	3 839	3 444	120	317	7 720	43
2002	Expenditure 1	839	340	135	334	1 648	0
	- Subsidies	0	0	0	28	28	- 46
	+ Fees and payments	3 056	3 306	0	0	6 362	0
	= Expenditure 2	3 895	3 646	135	305	7 981	46
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES (d)							
2002	Investments	2 914	1 395	..	35	4 344	..
	+ In-house current expenditure	3 027	5 342	..	335	8 704	..
	- Receipts from by-products	0	285	..	0	285	..
	= Expenditure 1	5 940	6 452	..	370	12 763	..
	- Subsidies	1 395	250	..	..	1 645	..
	+ Fees and payments	0	0	..	0	0	..
	- Revenues	5 513	6 447	..	457	12 418	..
	= Expenditure 2	- 968	- 245	..	- 86	- 1 300	..
Public specialised producers of EP services							
2002	Investments	2 698	798	..	..	3 496	..
	+ In-house current expenditure	1 286	1 209	..	..	2 495	..
	- Receipts from by-products	0	285	..	..	285	..
	= Expenditure 1	3 984	1 722	..	..	5 706	..
	- Subsidies	1 395	233	..	..	1 628	..
	+ Fees and payments	0	0	..	..	0	..
	- Revenues	2 512	1 387	..	..	3 899	..
	= Expenditure 2	77	102	..	..	179	..
Private specialised producers of EP services							
2002	Investments	216	597	..	..	813	..
	+ In-house current expenditure	1 741	4 133	..	..	5 874	..
	- Receipts from by-products	0	0	..	..	0	..
	= Expenditure 1	1 957	4 730	..	..	6 687	..
	- Subsidies	0	17	..	..	17	..
	+ Fees and payments	0	0	..	..	0	..
	- Revenues	2 998	5 061	..	..	8 059	..
	= Expenditure 2	- 1 042	- 347	..	..	- 1 389	..

Notes:

- (a) Current expenditure includes both in-house current expenditure and fees/purchases.
 (b) Expenditure 1 includes all current expenditures, and is therefore an expression for the total outlays/expenditure to environmental protection.
 (c) Other includes noise, radiation (radioactive waste from 1998), research and development, and general administration.
 (d) For private and public specialised producers (total figures), the category other consists of radioactive waste.
 (e) Total business sector data include all ISIC/NACE groups except A and B (1-5).

Source: OECD.

GERMANY

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by Federal Statistical Office
- ◆ are published annually for the public sector, the business sector and public specialised producers
- ◆ have been published regularly since 1975
- ◆ cover most expenditure on PAC activities, but not on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The main national users of these statistics are politicians, research institutes, and the general public.

► DATA SOURCES AND TYPES OF EXPENDITURE

Annual business surveys evaluating PAC investment expenditure have been conducted since 1975 by the Federal Statistical Office. In 1996, the scope of the business surveys was expanded to cover current expenditure.

Data on current and investment expenditure by the public sector are derived from financial statistics.

Since 1994, estimates have been made for expenditure by public specialised producers of environmental protection services.²⁸ The estimates build on a survey that is designed for other purposes than the collection of EPE data.

By integrating the data from the different sources in environmental-economic accounting, the results follow the definitions and methodologies of the SEEA.²⁹

► ENVIRONMENTAL DOMAINS

German expenditure statistics cover only expenditure for direct pollution abatement and control (PAC). Expenditure for integrated technologies are not covered. The following domains according to the CEPA are covered: air, wastewater, waste and noise.

► ECONOMIC SECTORS

Public sector data cover the different levels of government (general government and municipal departments).

Business sector data cover mining and quarrying, manufacturing, and electricity, gas and water supply (ISIC/NACE C, D, E).

Public specialised producers of EP services:

Estimates of expenditure by specialised producers of environmental protection services are carried out for enterprises that are mainly in public ownership (more than 50% of joint stock). Specialised producers that are mainly in private ownership are not yet covered.

Data on expenditure by households are not available.

28. Statistisches Bundesamt (2001): *Umweltökonomische Gesamtrechnungen - Ausgaben und Anlagevermögen für Umweltschutz - 2001, Fachserie 19, Reihe 6, Metzler-Poeschel, Stuttgart.*

29. *Integrated Environmental and Economic Accounting 2003- Handbook on national accounting*, United Nations, European Commission, IMF, OECD, World Bank, 2003.

Germany

Million Euro at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
PUBLIC SECTOR							
1991	Investments	6 015	1 129	22	200	7 367	..
	+ Total current expenditure (a)	2 896	4 311	18	0	7 225	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	8 910	5 441	40	200	14 592	..
1997	Investments	3 634	428	20	169	4 251	..
	+ Total current expenditure (a)	2 731	4 800	20	..	7 552	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	6 365	5 228	40	169	11 803	..
1999	Investments	2 884	271	20	211	3 386	..
	+ Total current expenditure (a)	2 572	4 206	20	..	6 799	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	5 456	4 478	40	211	10 185	..
2001	Investments	2 284	210	20	120	2 634	..
	+ Total current expenditure (a)	2 521	3 826	20	..	6 366	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	4 805	4 036	40	120	9 001	..
2002	Investments	2 093	171	0	131	2 395	..
	+ Total current expenditure (a)	2 772	4 242	20	..	7 034	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	4 865	4 413	20	131	9 429	..
2003	Investments	2 010	162	0	152	2 324	..
	+ Total current expenditure (a)	2 852	4 010	19	..	6 881	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	4 861	4 172	19	152	9 205	..
BUSINESS SECTOR (e)							
1991	Investments	..	..	..	..	..	..
	End-of-pipe investments	835	478	1 797	117	3 227	..
	+ Total current expenditure (a)	2 215	1 164	2 587	78	6 044	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b, d)	3 049	1 643	4 384	195	9 271	..
1997	Investments	..	..	..	..	..	..
	End-of-pipe investments	627	259	826	100	1 812	..
	+ In-house current expenditure	2 128	1 399	2 544	91	6 162	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (d)	2 756	1 658	3 370	191	7 974	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	1 003	1 916	334	30	3 284	..
	= Expenditure 2	..	..	..	..	..	..
1999	Investments	..	..	..	..	..	..
	End-of-pipe investments	613	332	734	90	1 769	..
	+ In-house current expenditure	1 835	1 406	2 304	90	5 636	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (d)	2 448	1 738	3 038	180	7 405	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	1 027	1 955	299	30	3 312	..
	= Expenditure 2	..	..	..	..	..	..
2001	Investments	..	..	..	..	..	..
	End-of-pipe investments	521	210	751	100	1 583	..
	+ In-house current expenditure	1 875	1 362	2 329	109	5 675	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (d)	2 396	1 572	3 081	209	7 258	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	967	1 846	188	30	3 030	..
	= Expenditure 2	..	..	..	..	..	..

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
2002	Investments	..	..	..	..	..	..
	End-of-pipe investments	573	282	745	70	1 670	..
+	In-house current expenditure	1 867	1 235	2 207	107	5 415	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (d)	2 440	1 516	2 951	177	7 085	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	953	1 740	194	29	2 916	..
=	Expenditure 2	..	..	..	..	..	..
2003	Investments	..	..	..	..	..	..
	End-of-pipe investments	568	183	609	91	1 452	..
+	In-house current expenditure	2 096	1 135	2 269	115	5 615	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (d)	2 664	1 317	2 878	207	7 067	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	942	1 548	202	19	2 711	..
=	Expenditure 2	..	..	..	..	..	..
<u>Mining and quarrying</u>							
2003	Investments	..	..	..	..	..	..
	End-of-pipe investments	10	0	10	10	30	..
+	In-house current expenditure	19	29	29	0	77	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (d)	29	29	39	10	107	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	19	19	0	0	38	..
=	Expenditure 2	..	..	..	..	..	..
<u>Manufacturing</u>							
2003	Investments	..	..	..	..	..	..
	End-of-pipe investments	518	162	518	81	1 279	..
	In-house current expenditure	1 817	923	1 375	87	4 202	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (d)	2 335	1 085	1 893	168	5 481	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	923	1 529	202	19	2 673	..
=	Expenditure 2	..	..	..	..	..	..
<u>Electricity, gas and water supply</u>							
2003	Investments	..	..	..	..	..	..
	End-of-pipe investments	41	20	71	0	132	..
+	In-house current expenditure	250	183	856	29	1 317	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (d)	291	203	927	29	1 449	..
<u>PUBLIC SPECIALISED PRODUCERS OF EP SERVICES</u>							
1995	Investments	3 616	1 674	..	..	5 291	..
+	In-house current expenditure	2 463	4 875	..	..	7 339	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	6 080	6 550	..	..	12 629	..
1998	Investments	3 170	1 166	..	..	4 337	..
+	In-house current expenditure	4 280	6 466	..	..	10 746	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	7 451	7 632	..	..	15 083	..
2000	Investments	3 930	850	..	..	4 780	..
+	In-house current expenditure	4 610	6 690	..	..	11 300	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	8 540	7 540	..	..	16 080	..
2002	Investments	3 793	704	..	..	4 497	..
+	In-house current expenditure	4 997	7 427	..	..	12 424	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	8 790	8 132	..	..	16 922	..
2003	Investments	3 603	802	..	..	4 405	..
+	In-house current expenditure	5 230	7 423	..	..	12 653	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	8 834	8 224	..	..	17 058	..

Notes: see next page/voir page suivante.

Notes:

- (a) Total current expenditure includes both in-house current expenditure and fees/purchases.
- (b) Expenditure I includes all current expenditure, and is therefore an expression of total outlays/expenditure for environmental protection.
- (c) Other includes only noise.
- (d) Expenditure I includes only end-of-pipe investments (not investments in integrated technology), and is therefore underestimated.
- (e) Total business sector data include only ISIC/NACE C, D and E (10-41).

Source: OECD.

GREECE

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the National Statistical Service of Greece
- ◆ are published annually for the public sector, not regularly for industries
- ◆ was published for the first time for the reference year 1990
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► DATA SOURCES AND TYPES OF EXPENDITURE

The National Statistical Service of Greece has been carrying out specific surveys on environmental protection expenditure incurred by the Business sector and by the municipalities and regions. Data on expenditure by the Central State result from a survey among ministries about current expenditure and transfers, and the exploitation of the Program of Public Investments.

All studies have been carried out following the SERIEE definition of environmental protection expenditure.

► ENVIRONMENTAL DOMAINS

For the public sector, the expenditure data cover all domains according to the CEPA.

► ECONOMIC SECTORS

Public sector data cover expenditure by the central government, regions and municipalities.

Business sector data cover mining and quarrying, manufacturing industries and electricity, gas and water supply (ISIC/NACE C, D and E). Data for different sectors are collected for different years.

No surveys on households or specialised producers have been carried out.

Greece

Million Euros at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
PUBLIC SECTOR							
1991	Investments	79	103	14	91	286	215
	+ Total current expenditure (a)	12	313	..	83	408	112
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	90	415	14	174	694	327
	+ Subsidies	94	..	..	..	94	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	43	281	..	..	323	..
	= Expenditure 2	142	135	14	174	465	..
1995	Investments	66	63	5	1	135	70
	+ Total current expenditure (a)	12	301	..	60	372	107
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	78	365	5	61	508	178
	+ Subsidies	67	..	..	..	67	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	51	366	..	..	417	..
	= Expenditure 2	93	- 1	5	61	158	..
1996	Investments	46	71	24	5	147	84
	+ Total current expenditure (a)	13	355	..	59	428	123
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	59	427	24	64	574	207
	+ Subsidies	80	..	..	..	80	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	48	385	..	..	433	..
	= Expenditure 2	90	42	24	64	220	..
1997	Investments	73	61	1	6	141	63
	+ Total current expenditure (a)	11	349	..	55	415	120
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	84	410	1	61	556	184
	+ Subsidies	75	..	..	..	75	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	52	444	..	..	496	..
	= Expenditure 2	107	- 34	1	61	135	..
1998	Investments	97	65	1	4	167	61
	+ Total current expenditure (a)	13	346	..	53	412	120
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	110	411	1	57	579	181
	+ Subsidies	96	..	..	..	96	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	54	448	..	..	502	..
	= Expenditure 2	152	- 38	1	57	173	..
1999	Investments	100	63	1	3	167	31
	+ Total current expenditure (a)	13	358	..	52	423	124
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	113	421	1	55	590	155
	+ Subsidies	96	..	..	..	96	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	57	480	..	..	538	..
	= Expenditure 2	152	- 60	1	55	148	..

.../...

	Pollution Abatement and Control (PAC)					Biodiversity & landscape	
	Wastewater	Waste	Air	Other (c)	Total		
BUSINESS SECTOR							
<u>Mining and quarrying</u>							
1995	Investments	0	0	2	2	3	..
	- of which End-of-pipe investments	0	0	2	2	3	..
+	In-house current expenditure	0	0	1	1	2	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	0	0	3	3	6	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	0	0	0	0	1	..
=	Expenditure 2	..	..	..	..	..	..
2002	Investments	..	..	..	..	..	..
	End-of-pipe investments	0	0	1	2	3	..
+	Total current expenditure (a)	0	0	9	2	11	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	..	..	..	..	..	..
2003	Investments	..	..	..	..	..	..
	End-of-pipe investments	0	0	1	0	1	..
+	Total current expenditure (a)	0	0	0	0	1	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	..	..	..	..	..	..
<u>Manufacturing</u>							
1996	Investments	18	3	17	2	41	..
	- of which End-of-pipe investments	15	3	16	2	36	..
+	Total current expenditure (a)	18	6	13	3	39	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	35	9	30	5	80	..
2002	Investments	..	..	..	..	..	..
	End-of-pipe investments	1	0	4	0	5	..
+	Total current expenditure (a)	1	1	2	1	5	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	..	..	..	..	..	..
2003	Investments	..	..	..	..	..	..
	End-of-pipe investments	3	1	7	2	13	..
+	Total current expenditure (a)	1	2	4	1	8	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	..	..	..	..	..	..
<u>Electricity, gas and water supply</u>							
1995	Investments	89	..	..	..	..	..
	- of which End-of-pipe investments	..	..	..	..	..	..
+	Total current expenditure (a)	..	..	..	..	..	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	..	..	..	..	..	..
-	Subsidies	67	..	..	..	..	..
+	Fees and payments	129	..	..	..	..	..
=	Expenditure 2	..	..	..	..	..	..
1999	Investments	138	..	..	..	..	..
	- of which End-of-pipe investments	..	..	..	..	..	..
+	Total current expenditure (a)	..	..	..	..	..	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	..	..	..	..	..	..
-	Subsidies	96	..	..	..	..	..
+	Fees and payments	152	..	..	..	..	..
=	Expenditure 2	..	..	..	..	..	..
2002	End-of-pipe investments	..	..	4	..	..	..
2003	End-of-pipe investments	..	..	41	..	..	..

Notes:

(a) Total current expenditure includes both in-house current expenditure and fees/purchases.

(b) Expenditure I include all current expenditure, and therefore represent total outlays/expenditure on environmental protection.

(c) Other includes soil & groundwater, noise, radiation, research and general administration.

Source: OECD.

HUNGARY

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the Hungarian Central Statistical Office
- ◆ are published annually for all sectors (public sector, business sector, specialised producers and households)
- ◆ were published for the first time for the reference year 1990
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ are partly compiled according to the abater/financing principle.

► DATA SOURCES AND TYPES OF EXPENDITURE

Public sector:

Data collection for the public sector is done through a separate survey on environmental protection expenditure, including also other information such as for example environmental employment and environmental management systems.

Business sector:

From 1990 to 1996 only data on end-of-pipe investments were collected. This was done through the annual investment survey, which included a section on environmental protection expenditure. Since 1999, a separate questionnaire has been used to collect these data, and the scope has been extended to include all investments and also current expenditure. The coverage has also increased gradually during these years, from companies with >50 employees in 1990-96 to >5 employees since 1999.

The environmental protection expenditure in households is estimated based on household statistics.

Specialised producers: Data are obtained through a separate survey on the environment industry. The survey collects data on environmental services as well as on environmental products and environmental protection related construction activities.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA. For the household sector only wastewater and water are considered relevant.

► ECONOMIC SECTORS

Since 2001, the data collection on environmental protection expenditure covers all sectors of the economy.

The public sector includes general government (administration) and municipal departments.

Since 2001, all sub-sectors of the business sector are covered. For 1999 and 2000, only figures for mining and quarrying, manufacturing and electricity, gas and water supply (ISIC/NACE C, D and E) were reported.

Specialised producers include private companies, publicly owned companies as well as relevant secondary production within NACE 41 (water supply). Data are however not broken down by public and private specialised producers respectively.

Hungary

Million Hungarian Forints at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (b,c)		
PUBLIC SECTOR							
1997	Investments	19 267	1 880	226	1 314	22 686	1 857
1998	Investments	50 892	3 953	1 588	3 073	59 507	508
2001	Investments	60 695	3 486	1 638	1 251	67 070	833
	+ In-house current expenditure	476	705	15	411	1 607	571
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	61 171	4 191	1 653	1 662	68 677	1 404
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	2 929	7 323	..	(a) 84	10 335	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2002	Investments	79 134	3 402	487	1 418	84 441	1 120
	+ In-house current expenditure	349	629	26	160	1 164	510
	- Receipts from by-products	..	15	..	..	15	..
	= Expenditure 1	79 482	4 016	513	1 579	85 590	1 629
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	1 905	8 210	..	(a) 141	10 257	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
BUSINESS SECTOR							
1991	End-of-pipe investments	8 698	2 127	6 058	8 275	25 157	201
1992	End-of-pipe investments	4 990	3 012	15 902	7 377	31 281	710
1993	End-of-pipe investments	4 272	4 950	3 363	4 248	16 832	554
1994	End-of-pipe investments	4 862	6 149	3 009	6 685	20 705	138
1995	End-of-pipe investments	4 284	7 989	1 915	3 718	17 905	357
1996	End-of-pipe investments	7 256	8 353	4 609	4 708	24 925	365
1997	Investments	6 833	8 619	4 353	5 941	25 746	201
	- of which End-of-pipe investments	3 222	7 760	2 709	3 480	17 172	201
1998	Investments	6 145	7 070	14 872	6 899	34 986	893
	- of which End-of-pipe investments	4 684	6 266	5 483	5 141	21 575	857
2001	Investments	7 251	5 778	27 326	14 456	54 811	500
	- of which End-of-pipe investments	6 596	4 313	5 551	10 569	27 029	258
	+ In-house current expenditure	6 697	5 371	3 566	5 684	21 318	408
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	13 948	11 149	30 892	20 140	76 129	908
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	16 028	20 310	..	(a) 3 336	39 674	..
	= Expenditure 2	..	..	..	..	..	..
2002	Investments	4 639	3 355	15 076	14 247	37 318	1 401
	- of which End-of-pipe investments	3 424	2 007	8 690	7 457	21 578	1 376
	+ In-house current expenditure	7 602	6 170	3 065	6 501	23 338	1 693
	- Receipts from by-products	..	817	..	..	817	..
	= Expenditure 1	12 241	8 708	18 141	20 749	59 839	3 094
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	17 449	22 307	..	(a) 2 916	42 672	..
	= Expenditure 2	..	..	..	..	..	..

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (b,c)		
Agriculture, hunting, forestry and fishing							
2002	Investments	101	350	161	528	1 140	39
	- of which End-of-pipe investments	71	336	118	493	1 017	39
+	In-house current expenditure	170	235	21	234	661	115
-	Receipts from by-products	..	51	..	..	51	..
=	Expenditure 1	271	534	182	763	1 750	154
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	287	1 320	..	90	1 697	..
=	Expenditure 2	..	..	..	..	..	..
Mining and quarrying							
2002	Investments	4	1	92	36	133	12
	- of which End-of-pipe investments	4	0	83	24	112	9
+	In-house current expenditure	3	30	47	18	97	8
-	Receipts from by-products	..	0	..	..	0	..
=	Expenditure 1	8	30	138	54	230	19
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	20	52	..	(a) 2	74	..
=	Expenditure 2	..	..	..	..	..	..
Manufacturing							
2002	Investments	3 315	1 792	5 972	8 550	19 628	57
	- of which End-of-pipe investments	2 739	1 252	2 827	3 233	10 051	44
+	In-house current expenditure	5 600	3 506	1 884	2 642	13 632	57
-	Receipts from by-products	..	685	..	..	685	..
=	Expenditure 1	8 915	4 613	7 857	11 192	32 576	114
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	10 887	14 033	..	(a) 2 322	27 243	..
=	Expenditure 2	..	..	..	..	..	..
Electricity, gas and water supply							
2002	Investments	180	790	5 502	1 137	7 609	13
	- of which End-of-pipe investments	99	37	3 497	920	4 552	4
+	In-house current expenditure	322	589	717	1 214	2 842	930
-	Receipts from by-products	..	5	..	..	5	..
=	Expenditure 1	503	1 375	6 219	2 350	10 447	944
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	661	408	..	(a) 234	1 303	..
=	Expenditure 2	..	..	..	..	..	..
Other business sector							
2002	Investments	1 038	423	3 350	3 997	8 807	1 280
	- of which End-of-pipe investments	511	383	2 164	2 787	5 846	1 280
+	In-house current expenditure	1 506	1 810	396	2 393	6 105	584
-	Receipts from by-products	..	77	..	..	77	..
=	Expenditure 1	2 544	2 156	3 746	6 390	14 836	1 864
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	5 594	6 494	..	268	12 355	..
=	Expenditure 2	..	..	..	..	..	..
HOUSEHOLDS							
2000	Expenditure 1	..	..	..	..	..	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	31 312	13 257	..	..	44 570	..
=	Expenditure 2	..	..	..	..	..	..
2001	Expenditure 1	..	..	..	..	..	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	32 429	12 510	..	..	44 939	..
=	Expenditure 2	..	..	..	..	..	..
2002	Expenditure 1	..	..	..	..	..	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	36 561	14 762	..	..	51 323	..
=	Expenditure 2	..	..	..	..	..	..

.../...

		Pollution Abatement and Control (PAC)				Biodiversity & landscape	
		Wastewater	Waste	Soil and groundwater	Other		Total
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES							
1997	Total current expenditure (d)	33 577	25 303	..	..	58 880	..
1998	Total current expenditure (d)	38 187	32 943	..	..	71 130	..
1999	Total current expenditure (d)	41 227	36 012	..	156	77 395	..
	- Revenues	42 348	42 063	..	..	84 411	..
2000	Total current expenditure (d)	45 860	39 749	..	392	86 001	..
	- Revenues	46 550	46 058	..	..	92 608	..
2001	Investments	3 423	4 339	343	8 627	16 731	..
	+ In-house current expenditure	29 095	31 413	642	969	62 119	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	32 517	35 752	985	9 596	78 850	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments (a)	1 250	2 577	..	557	4 385	..
	- Revenues	52 768	42 992	..	3 991	99 750	..
	= Expenditure 2	- 19 000	- 4 662	985	6 162	- 16 515	..
2002	Investments	3 236	3 159	222	748	7 365	..
	+ In-house current expenditure	36 223	29 773	1 017	3 029	70 043	..
	- Receipts from by-products	..	297	..	..	297	..
	= Expenditure 1	39 459	32 635	1 239	3 778	77 110	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments (a)	760	3 320	..	234	4 315	..
	- Revenues	57 933	51 171	..	3 481	112 586	..
	= Expenditure 2	- 17 714	- 15 216	1 239	531	- 31 160	..

Notes:

- (a) Other fees/payments cover all environmental domains other than waste and wastewater.
 (b) For the public sector and specialised producers, the category other includes soil & groundwater, noise, radiation, research and general administration.
 (c) For the business sector, other includes soil & groundwater, noise, radiation and research.
 (d) Total current expenditure includes both in-house current expenditure and fees/payments.

Source: OECD.

ICELAND

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are compiled and provided by the Statistics Iceland
- ◆ are compiled annually for the public sector
- ◆ have been compiled and provided regularly since 1990
- ◆ cover expenditure on both PAC activities and other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The statistics on environmental protection expenditure are not published domestically.

► DATA SOURCES AND TYPES OF EXPENDITURE

Data on statistics on environmental protection expenditure are based on annually published National and Local Government Accounts.

► ENVIRONMENTAL DOMAINS

The expenditure data covers the following domains according to the CEPA: wastewater, waste and biodiversity and landscape.

► ECONOMIC SECTORS

Public sector data cover both the central government and municipalities.

No data are collected for the business sector. It is estimated that expenditures by the business sector are relatively low compared to other OECD countries.

Iceland

Million Iceland Krona at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other		
PUBLIC SECTOR							
1990	Investments	285	4	..	..	289	..
	+ Total current expenditure (a)	43	1 115	..	..	1 159	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	328	1 119	..	..	1 447	..
	+ Subsidies	..	397	..	..	397	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
1995	Investments	294	4	..	..	298	..
	+ Total current expenditure (a)	75	1 582	..	..	1 657	26
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	369	1 587	..	..	1 956	..
	+ Subsidies	..	454	..	..	454	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
1997	Investments	346	2	..	..	348	..
	+ Total current expenditure (a)	101	1 670	..	..	1 772	33
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	448	1 672	..	..	2 120	..
	+ Subsidies	..	461	..	..	461	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
1999	Investments	586	3	..	..	588	..
	+ Total current expenditure (a)	104	1 716	..	..	1 820	34
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	690	1 719	..	..	2 409	..
	+ Subsidies	..	479	..	..	479	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2001	Investments	520	3	..	..	523	..
	+ Total current expenditure (a)	97	1 745	..	..	1 842	23
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	617	1 748	..	..	2 365	..
	+ Subsidies	..	521	..	..	521	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2002	Investments	416	3	..	..	419	..
	+ Total current expenditure (a)	105	1 536	..	..	1 641	22
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	521	1 539	..	..	2 060	..
	+ Subsidies	..	550	..	..	550	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2003	Investments	394	5	..	..	400	..
	+ Total current expenditure (a)	99	1 585	..	..	1 684	21
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	494	1 590	..	..	2 084	..
	+ Subsidies	..	584	..	..	584	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..

.../...

		Pollution Abatement and Control (PAC)				Biodiversity & landscape
		Wastewater	Waste	Air	Other		Total
HOUSEHOLDS						
1997	Expenditure 1	..	..	..	..	..
	- Subsidies	..	..	..	..	..
	+ Fees and payments	..	223	..	..	223
	= Expenditure 2	..	..	..	..	..
2000	Expenditure 1	..	..	..	..	..
	- Subsidies	..	..	..	..	..
	+ Fees and payments	..	281	..	..	281
	= Expenditure 2	..	..	..	..	..
2002	Expenditure 1	..	..	..	..	..
	- Subsidies	..	..	..	..	..
	+ Fees and payments	..	290	..	..	290
	= Expenditure 2	..	..	..	..	..

Notes:

(a) Total current expenditure includes both in-house current expenditure and fees/payments.

(b) Expenditure 1 includes all current expenditure, and is therefore an expression of total outlays/expenditure for environmental protection.

Source: OECD.

IRELAND

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ were compiled once for the public and business sectors for the reference year 1998
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► DATA SOURCES AND TYPES OF EXPENDITURE

Only data for 1998 are available. The data were collected as part of the National Accounts compilation, from the Department of Environment and other administrative sources.

► ENVIRONMENTAL DOMAINS

The expenditure data cover the CEPA domains: wastewater, waste, air and other.

► ECONOMIC SECTORS

Business sector data cover manufacturing and electricity, gas and water supply (ISIC/NACE D and E).

		<i>Million Euro at 2000 prices</i>					
		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other	Total	
<u>PUBLIC SECTOR</u>							
1998	Investments	156	..	..	8	164	1
+	Total current expenditure (a)	65	142	..	81	288	9
-	Receipts from by-products	11	68	..	4	82	..
=	Expenditure 1 (b)	210	74	..	86	370	10
+	Subsidies	..	..	..	215	..	..
+	Fees and payments	..	..	..	..	..	..
-	Revenues	..	0	..	3	..	..
=	Expenditure 2	..	..	..	..	..	..
<u>BUSINESS SECTOR (c)</u>							
1998	Investments	43	6	29	44	121	0
+	Total current expenditure (a)	13	11	13	30	67	0
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	56	18	41	74	189	0
<u>Manufacturing</u>							
1998	Investments	42	5	25	37	109	..
+	Total current expenditure (a)	13	10	12	28	63	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	56	15	36	65	172	..
<u>Electricity, gas and water supply</u>							
1998	Investments	0	2	4	7	13	0
+	Total current expenditure (a)	0	1	1	2	4	0
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	0	3	5	9	17	0

Notes:

(a) Total current expenditure includes both in-house current expenditure and fees/payments.

(b) Expenditure I includes all current expenditure, and is therefore an expression of total outlays/expenditure for environmental protection.

(c) Total business sector data include only ISIC/NACE D and E (15-41).

Source: OECD.

ITALY

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the Italian National Statistical Institute (ISTAT)
- ◆ are published annually for the public sector and less regularly for the business sector, households and specialised producers
- ◆ have been published regularly since 1989
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The main user of EPE data is the Ministry of the environment and territory (MoE). The MoE publishes and analyses EPE data in its Report on the State of the Environment that is periodically produced and communicated to the Parliament.³⁰

Similarly, a number of regional administrations – i.e. top level Local Government with competence on NUTS II territorial units (called 'Regions') – have over the last years started to produce and communicate to the Regional Council their own Report on the State of the Environment, including data on regional EPE.³¹

The most recent experience stems from a joint initiative by ISTAT (National Accounts Directorate) and the Ministry of economic development (Department of Development Policies). The purpose of the project is to identify ways in which environmental accounting can improve the design, monitoring and evaluation of development policies and to highlight the value-added of this type of data, in comparison to other sources of information on the environment. A methodological paper has already been produced,³² as well as some regional environmental accounting figures, including data on EPE.³³

► DATA SOURCES AND TYPES OF EXPENDITURE

The first estimates of public environmental expenditure were based on a study carried out by the Research Institute for Economic Planning (ISPE), which was initiated by the MoE. These estimates were presented in the 1989 Report on the State of the Environment. ISPE and the Italian Treasury proceeded to update those estimates for a number of years up to 1994. These updates were published in the later editions of the same report.

In the early 1990s, ISTAT launched a series of projects aiming at implementing the Environmental Protection Expenditure Accounts (EPEA) of the SERIEE system. After processing the ISPE data, a first set of figures on General Government EPE were produced for the years 1990-1992. These data were not consistent with the SERIEE definition of EPE, and neither with the CEPA. Therefore, ISTAT started to develop EPE statistics ex novo through a number of projects focusing on the collection of basic data for EPEA purposes.

The first set of figures for the public sector covered ministries' EPE for the years 1995-1996.³⁴ The figures were produced by means of a detailed budget analysis technique set up by ISTAT specifically for that purpose. This methodology is now being applied on a regular basis for Central Government (Ministries) and a number of regional administrations. A time series of Central Government's EPE, broken down by CEPA, is available for the years 1995-2004.³⁵

A further source of data on General Government's EPE stems from the implementation of the European System of National and Regional Accounts (ESA 1995 - EC Regulation n. 2223/96) and particularly from the requirement for States to supply data on General Government environmental protection expenditure by function (COFOG).

30. For the latest version see: *Ministry of the environment and territory (2006): Relazione sullo stato dell'ambiente 2005 [Report on the state of the environment 2005]*, 23 marzo 2006, Roma, http://www2.minambiente.it/sito/pubblicazioni/rsa_2005/rsa_2005.asp. See in particular "Allegato 2".

31. See e.g. *Regione Lazio (2005): Rapporto sullo Stato dell'Ambiente del Lazio 2004 [Report on the state of the environment of Lazio 2004]*, Roma: <http://www.arpalazio.it/pubblicazioni/pubblicazioni.php>. See in particular § 16.2.

32. *Ministry of economic development & Istat (2005): Development policies and the environment: using environmental accounts for better decision making*, http://www.dps.tesoro.it/documentazione/uval/materiali_uval/MUVAL5_eng.pdf

26. ISTAT (2006): *Contabilità ambientale e sviluppo [Environmental accounting for development policies]*, <http://www.istat.it/ambiente/contesto/ambientale/index.html>. See in particular "Aggregati EPEA di spesa pubblica per la protezione dell'ambiente Regione Lazio, anni 1995-2001" [Environmental protection expenditure of Region Lazio – years 1995-2001].

34. These figures were presented in the *Report on the State of the Environment 2001: Ministero dell'ambiente (2001), Istituto Poligrafico e Zecca dello Stato*.

35. ISTAT (2006): *La spesa per la protezione dell'ambiente delle Amministrazioni dello Stato. Anni 2001-2004 [Central Government expenditure for environmental protection – Years 2001-2004]*, Istat, *Statistiche in breve*, 19 aprile 2006, and ISTAT (2005): *La spesa per la protezione dell'ambiente delle Amministrazioni dello Stato. Anni 1995-2002*, Istat, *Statistiche in breve*, 17 maggio 2005. Both available at: <http://www.istat.it/conti/ambientali/>

The classification includes one item specifically related to environmental protection: 05 Environmental Protection, which cover all CEPA activities.

A first time series on EPE carried out by General Government as a whole, based on ESA1995 data by COFOG, was published in 2003.³⁶ This time series is now being updated regularly.³⁷

ISTAT's current work aims at making consistent with each other the time series produced for ESA 1995 and EPEA purposes, in order to build a unique data base, exhaustive and detailed enough for both accounting systems. First results are expected in 2007.

Business sector: The first collection of data coherent with the EPEA framework was conducted by ISTAT through the long-form phase of the Intermediate 1998 Census of Industry and Services.³⁸ The long-form survey was partly census and partly sample. The survey collected data on end-of-pipe investments and current expenditure by detail.

Since 2001, the questions on business environmental expenditure have been enclosed in some already existing ISTAT questionnaires.³⁹ The scope of the questions has been enlarged to include investments in integrated technologies. On the other hand it has been reduced by taking away details on subsidies and fees/purchases.

A complete and consistent picture of the EPE carried out by the all sectors (i.e. General Government, Enterprises, and Households) can at present be given only for the wastewater and the waste domains. A first compilation has been done for the reference year 1997,⁴⁰ and a first time series for the years 1997-2005 is currently being produced in consistence with the national accounts.

► ENVIRONMENTAL DOMAINS

Since 1995, the expenditure data covers all domains according to the CEPA.

The household sector and specialised producers cover only the wastewater and waste domains.

► ECONOMIC SECTORS

Public sector: Figures for total expenditure cover the general government as a whole. Figures by environmental domain are only available for the central government.

Business sector: since 2001, data cover all industries except ISIC/NACE 1-5 (A/B) and 90. For earlier years, the coverage was slightly narrower.

Specialised producers: data include municipal departments, publicly owned companies and private companies belonging to NACE/SIC 90. The data are broken down by private and public specialised producers. Figures are published only for the reference year 1997.

36. ISTAT (2003): *Environment Statistics. 2002*, http://www.istat.it/dati/catalogo/20031029_01/.

37. ISTAT (2004): *Spesa delle Amministrazioni pubbliche per funzione. Serie SEC95 - anni 1990-2002 [General Government expenditure by function. ESA95 series - Years 1990-2002]*, *Statistiche in breve*, 12 febbraio 2004, <http://samoa.istat.it/Economia/Conti-nazi/Storico/index.htm>;
 ISTAT (2005): *Spesa delle Amministrazioni pubbliche per funzione. Serie SEC95 - anni 2001-2004*, *Statistiche in breve*, 19 dicembre 2005, <http://www.istat.it/conti/nazionali/>, and ISTAT (2005): *Environment Statistics. 2004*, http://www.istat.it/dati/catalogo/20051114_00/.

38. *The Intermediate Census was based on two surveys: the first phase, the short form, aimed at supplementing, correcting and verifying data of the Statistical Register of Active Undertakings (ASIA), constructed from the information available in the principal administrative registers; the second phase, the long form, aimed at inquiring into certain structural aspects of the business activity.*

39. *The questionnaires of Business Accounts Survey (SCI), addressed to undertakings with >=100 employees, and "Rilevazione sulle piccole e medie imprese e sull'esercizio di arti e professioni" (PMI), addressed to undertakings with <100 employees.*

40. ISTAT (2003): *Prima applicazione del conto EPEA per l'Italia. Conto satellite delle spese per la protezione dell'ambiente per i settori della gestione delle acque reflue e della gestione dei rifiuti [The first Italian EPEA for waste and wastewater management]*, Roma, <http://www.istat.it/conti/ambientali/>

Italy

Million Euro at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
PUBLIC SECTOR							
1995	Investments	..	..	..	..	1 317	..
	+ Total current expenditure (a)	..	..	..	..	5 971	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	..	..	..	7 288	..
	+ Subsidies	..	..	..	..	306	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
1997	Investments	..	..	..	..	1 468	..
	+ Total current expenditure (a)	..	..	..	..	6 358	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	..	..	..	7 825	..
	+ Subsidies	..	..	..	..	413	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
1998	Investments	..	..	..	..	1 559	..
	+ Total current expenditure (a)	..	..	..	..	6 745	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	..	..	..	8 304	..
	+ Subsidies	..	..	..	..	433	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
1999	Investments	..	..	..	..	1 547	..
	+ Total current expenditure (a)	..	..	..	..	7 045	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	..	..	..	8 592	..
	+ Subsidies	..	..	..	..	485	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2000	Investments	..	..	..	..	1 476	..
	+ Total current expenditure (a)	..	..	..	..	7 578	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	..	..	..	9 054	..
	+ Subsidies	..	..	..	..	410	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2001	Investments	..	..	..	..	1 777	..
	+ Total current expenditure (a)	..	..	..	..	7 794	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	..	..	..	9 571	..
	+ Subsidies	..	..	..	..	429	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2002	Investments	..	..	..	..	1 707	..
	+ Total current expenditure (a)	..	..	..	..	7 757	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	..	..	..	9 465	..
	+ Subsidies	..	..	..	..	465	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..

.../...

BUSINESS SECTOR (f)	Pollution Abatement and Control (PAC)					Biodiversity & landscape
	Wastewater	Waste	Air	Other (c)	Total	
1997 (d) Investments	..	..	..	..	..	..
- of which End-of-pipe investments	192	67	503	115	878	12
+ In-house current expenditure	213	133	46	41	396	8
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (e)	406	200	548	156	1 311	20
- Subsidies	0	15	..	..	..	..
+ Fees and payments	790	4 674	30	31	5 525	24
= Expenditure 2 (e)	1 196	4 859	578	187	6 835	44
2001 Investments	798	768	1 330	1 194	4 090	..
- of which End-of-pipe investments	772	734	1 227	439	3 171	..
+ Total current expenditure (a)	376	905	262	1 081	2 624	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	1 174	1 673	1 592	2 275	6 714	..
Mining and quarrying						
2001 Investments	17	4	16	98	134	..
- of which End-of-pipe investments	17	4	16	97	133	..
+ Total current expenditure (a)	43	28	18	77	167	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	60	32	34	175	301	..
Manufacturing						
2001 Investments	440	656	235	830	2 160	..
- of which End-of-pipe investments	420	650	200	98	1 369	..
+ Total current expenditure (a)	228	535	96	216	1 076	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	668	1 191	331	1 047	3 237	..
Electricity, gas and water supply						
2001 Investments	336	51	945	99	1 431	..
- of which End-of-pipe investments	330	26	913	81	1 350	..
+ Total current expenditure (a)	73	111	106	339	628	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	409	162	1 051	438	2 059	..
Other business sector						
2001 Investments	5	58	134	167	365	..
- of which End-of-pipe investments	5	54	98	162	319	..
+ Total current expenditure (a)	32	230	42	449	753	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	37	288	176	616	1 117	..

SPECIALISED PRODUCERS OF EP SERVICES	Pollution Abatement and Control (PAC)					Biodiversity & landscape
	Wastewater	Waste	Soil and groundwater	Other	Total	
Public specialised producers						
1997 Investments	101	94	..	..	195	..
+ In-house current expenditure	1 044	2 137	..	..	3 181	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1	1 146	2 230	..	..	3 376	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	30	1 206	..	..	1 236	..
- Revenues	636	3 580	..	..	4 216	..
= Expenditure 2	..	..	..	..	..	..
Private specialised producers						
1997 Investments	446	3 076	..	..	3 522	..
+ In-house current expenditure	601	4 143	..	..	4 743	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1	1 047	7 218	..	..	8 265	..
- Subsidies	..	..	..	..	..	..
+ Fees and payments	0	0	..	..	0	..
- Revenues	746	5 141	..	..	5 887	..
= Expenditure 2	..	..	..	..	..	..

Notes: see next page/voir page suivante.

Notes

- (a) Total current expenditure includes both in-house current expenditure and fees/payments.
 - (b) Expenditure 1 includes all current expenditure, and is therefore an expression of total outlays/expenditure for environmental protection.
 - (c) For the business sector in 2001, the category "other" includes soil & groundwater, noise, biodiversity & landscape, radiation, research and general administration.
 - (d) Business data from 1997 cover only companies with ≥ 20 employees.
 - (e) Expenditure 1 and 2 only include the end-of-pipe part of investments. Integrated investments are not available for this year.
 - (f) Total business sector figures include all ISIC/NACE groups except A and B (1-5).
- Source: OECD.

LUXEMBOURG

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ were compiled once for the public sector, for the reference year 1997
- ◆ were compiled by the Ministry of Environment⁴¹
- ◆ covered expenditure on PAC activities and on other EP activities
- ◆ followed the CEPA standard definitions of environmental domains
- ◆ were compiled according to the abater/financing principle.

► DATA SOURCES AND TYPES OF EXPENDITURE

The data sources used to compile these figures were the State and municipal accounts. For the time being, there are no plans to produce regular environmental protection expenditure statistics.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA.

► ECONOMIC SECTORS

The 1997 figures cover only public sector expenditure. Public sector includes central (state) government and municipalities. The figures are consolidated (net of transfers between different levels of government).

		<i>Million Euro at 2000 prices</i>					
		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other (a)	Total	
<u>PUBLIC SECTOR</u>							
1997	Investments	26	11	0	1	38	2
	+ In-house current expenditure	18	29	0	13	60	1
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	44	41	0	14	98	3
	+ Subsidies	0	0	0	4	5	6
	+ Fees and payments	5	5	0	1	12	1
	- Revenues	13	39	..	..	52	..
	= Expenditure 2	36	7	0	19	63	10

Note:

(a) The category other includes soil & groundwater, noise, radiation, research and general administration.

Source: OECD.

41. Ministère de l'Environnement (2000), *La dépense de protection de l'environnement au Grand-Duché de Luxembourg. Document de travail No 1*, Ministère de l'Environnement, Novembre 2000.

NETHERLANDS

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the Netherlands Central Bureau of Statistics (NCBS)
- ◆ are published annually for all sectors (public sector, business sector, households and private specialised producers)
- ◆ have been published regularly since 1979
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are compiled according to the abater/financing principle for most series.

► DATA SOURCES AND TYPES OF EXPENDITURE

Public sector: Data are mainly compiled through analysis of annual accounts and digital background information on the accounts.

Business sector:

NCBS has been conducting surveys on environmental expenditure for a number of years. In 1979, a special survey was conducted to provide a basis for the annual investment surveys, and has been carried out since then. Estimation methods are used to update survey results for current PAC expenditure. These data are published along with other environmental statistics (NCBS, 1996⁴²).

Specialised producers:

ISIC/NACE 90 is part of the system of production statistics. Data are collected through the surveys of these statistics. Public and private producers can be identified through a specific attribute (sector code) in the business register.

Financial flows:

A major concern of the Netherlands' statistical approach towards PAC expenditure is to trace financial flows associated with the expenditures on environmental protection. The amount of transfers, subsidies, and payments in exchange for environmental services is evaluated. Therefore, expenditure data are available according to both the abater and the financing principle for most time series.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA.

Household expenditure data cover the households' environmental expenditure on traffic, environmental contributions for metal and electro products, and contributions to nature conservation organisations (landscape) .

► ECONOMIC SECTORS

Public sector data cover the general government at all levels (state, provinces, water boards and municipalities).

Business sector data include ISIC/NACE A (1-2), C, D and E (10-41), and 60-62.

Data on private specialised producers of EP services are available from 1997.

42. Netherlands Central Bureau of Statistics (1996): *Environmental Statistics of the Netherlands, 1996*, Voorburg/Heerlen.

Netherlands

Million Euros at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
PUBLIC SECTOR							
1991	Investments	389	278	1	1	668	..
	+ Total current expenditure (a)	797	1 017	57	886	2 757	..
	- Receipts from by-products	12	59	0	2	74	..
	= Expenditure 1 (b)	1 174	1 235	58	885	3 351	..
	+ Subsidies	19	6	43	43	112	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	1 105	926	1	577	2 608	..
	= Expenditure 2	89	315	101	351	855	..
1995	Investments	634	140	1	17	791	68
	+ Total current expenditure (a)	1 019	1 322	48	1 312	3 701	376
	- Receipts from by-products	23	50	0	3	76	31
	= Expenditure 1 (b)	1 629	1 412	49	1 327	4 416	412
	+ Subsidies	31	30	60	52	172	49
	+ Fees and payments	0	0	0	0	0	0
	- Revenues	1 414	1 345	1	103	2 863	0
	= Expenditure 2	246	96	108	1 275	1 725	461
1998	Investments	749	90	0	6	845	..
	+ Total current expenditure (a)	1 038	764	26	1 548	3 376	..
	- Receipts from by-products	28	44	0	0	73	..
	= Expenditure 1 (b)	1 759	810	26	1 554	4 149	..
	+ Subsidies	0	0	0	0	0	..
	+ Fees and payments	0	0	0	0	0	..
	- Revenues	0	0	0	0	0	..
	= Expenditure 2	1 759	810	26	1 554	4 149	..
1999	Investments	822	73	0	5	900	..
	+ In-house current expenditure	923	697	244	1 662	3 527	..
	- Receipts from by-products	- 37	- 51	0	- 10	- 97	..
	= Expenditure 1	1 782	821	245	1 677	4 524	..
	+ Subsidies	8	6	57	75	147	..
	+ Fees and payments	214	886	0	0	1 100	..
	- Revenues	1 579	1 422	0	27	3 028	..
	= Expenditure 2	425	292	302	1 725	2 744	..
2001	Investments	845	95	0	4	943	..
	+ In-house current expenditure	974	710	204	1 795	3 683	..
	- Receipts from by-products	- 55	- 59	0	- 2	- 115	..
	= Expenditure 1	1 874	864	204	1 800	4 741	..
	+ Subsidies	5	6	222	174	407	..
	+ Fees and payments	205	1 114	0	1	1 320	..
	- Revenues	1 600	1 458	0	82	3 140	..
	= Expenditure 2	484	524	426	1 893	3 328	..
2003	Investments	910	138	0	3	1 051	4
	+ In-house current expenditure	920	654	392	1 674	3 640	61
	- Receipts from by-products	50	53	..	3	107	0
	= Expenditure 1	1 780	739	392	1 674	4 584	66
	+ Subsidies	2	3	94	96	195	174
	+ Fees and payments	213	1 107	0	2	1 322	0
	- Revenues	2 249	1 434	0	56	3 738	52
	= Expenditure 2	- 254	416	486	1 716	2 363	188

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
BUSINESS SECTOR (d)							
1990	Investments	371	86	429	220	1 106	..
	+ Total current expenditure (a)	210	210	326	324	1 070	..
	- Receipts from by-products	0	0	0	0	0	..
	= Expenditure 1 (b)	581	297	754	544	2 176	..
1995	Investments	152	37	280	258	726	87
	- of which End-of-pipe investments	119	15	124	176	435	64
	+ Total current expenditure (a)	255	52	286	424	1 018	39
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1 (b)	407	89	566	682	1 744	126
	- Subsidies	0	0	0	0	0	0
	+ Fees and payments	0	0	0	0	0	0
	= Expenditure 2	407	89	566	682	1 744	126
1998	Investments	84	55	393	245	777	..
	+ Total current expenditure (a)	327	57	400	366	1 151	..
	- Receipts from by-products	0	0	0	0	0	..
	= Expenditure 1 (b)	412	112	793	611	1 927	..
	- Subsidies	0	0	0	0	0	..
	+ Fees and payments	0	0	0	0	0	..
	= Expenditure 2	412	112	793	611	1 927	..
1999	Investments	131	66	365	183	745	..
	+ In-house current expenditure	217	57	371	568	1 214	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	348	123	736	751	1 959	..
	- Subsidies	8	6	57	75	147	..
	+ Fees and payments	506	1 212	0	21	1 739	..
	= Expenditure 2	846	1 329	679	698	3 551	..
2001	Investments	92	26	467	187	771	..
	+ In-house current expenditure	198	64	530	618	1 410	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	290	90	996	805	2 182	..
	- Subsidies	5	6	222	174	407	..
	+ Fees and payments	505	1 149	0	60	1 714	..
	= Expenditure 2	790	1 233	774	691	3 488	..
2003	Investments	64	20	402	117	603	1
	+ In-house current expenditure	199	93	528	658	1 478	32
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1	263	113	930	775	2 080	33
	- Subsidies	2	3	94	95	194	174
	+ Fees and payments	601	1 365	0	55	2 021	0
	= Expenditure 2	862	1 475	836	734	3 908	- 142
Mining and quarrying							
2003	Investments	2	0	27	3	32	0
	+ In-house current expenditure	8	2	9	25	45	2
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1	10	2	37	28	77	2
	- Subsidies	0	0	8	0	8	..
	+ Fees and payments	1	22	0	3	25	0
	= Expenditure 2	11	24	29	31	95	..
Manufacturing							
2003	Investments	49	19	117	32	218	1
	+ In-house current expenditure	147	39	263	196	645	10
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1	196	58	380	228	863	11
	- Subsidies	1	2	13	2	18	..
	+ Fees and payments	139	284	0	2	425	5
	= Expenditure 2	334	340	367	229	1 270	..
Electricity, gas and water supply							
2003	Investments	4	0	11	2	18	0
	+ In-house current expenditure	9	1	58	9	77	6
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1	14	1	69	12	95	6
	- Subsidies	0	0	17	0	17	..
	+ Fees and payments	5	23	0	0	28	9
	= Expenditure 2	19	24	52	12	106	..

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
HOUSEHOLDS							
1999	Expenditure 1	7	19	235	13	274	0
	- Subsidies	0	0	0	0	0	0
	+ Fees and payments	1 143	1 029	0	0	2 172	67
	= Expenditure 2	1 150	1 048	235	13	2 446	67
2001	Expenditure 1	10	20	203	3	235	0
	- Subsidies	0	0	0	0	0	0
	+ Fees and payments	1 169	1 051	0	0	2 220	56
	= Expenditure 2	1 178	1 071	203	3	2 455	56
2003	Expenditure 1	22	25	225	0	272	107
	- Subsidies	0	0	0	0	0	0
	+ Fees and payments	1 781	1 091	0	0	2 872	0
	= Expenditure 2	1 803	1 116	225	0	3 144	107
SPECIALISED PRODUCERS OF EP SERVICES							
Private specialised producers							
1997	Investments	12	1 129	..	12	1 153	..
	+ In-house current expenditure	53	1 090	..	111	1 250	..
	- Receipts from by-products	5	219	..	10	233	..
	= Expenditure 1	59	1 997	..	113	2 169	..
	- Subsidies	0	2	..	0	3	..
	+ Fees and payments	11	736	..	137	884	..
	- Revenues	72	2 186	..	253	2 511	..
	= Expenditure 2	- 2	545	..	- 3	540	..
1998	Investments	9	279	..	18	306	..
	+ In-house current expenditure	55	1 246	..	124	1 415	..
	- Receipts from by-products	5	241	..	9	254	..
	= Expenditure 1	59	1 275	..	133	1 466	..
	- Subsidies	0	3	..	1	4	..
	+ Fees and payments	10	881	..	147	1 038	..
	- Revenues	73	2 446	..	274	2 793	..
	= Expenditure 2	- 4	- 293	..	5	- 292	..
2000	Investments	17	328	..	10	356	..
	+ In-house current expenditure	166	1 483	..	142	1 792	..
	- Receipts from by-products	44	283	..	20	348	..
	= Expenditure 1	139	1 529	..	132	1 800	..
	- Subsidies	0	1	..	0	1	..
	+ Fees and payments	36	1 078	..	106	1 220	..
	- Revenues	179	2 910	..	245	3 334	..
	= Expenditure 2	- 4	- 304	..	- 6	- 315	..
2001	Investments	16	272	..	18	306	..
	+ In-house current expenditure	162	1 576	..	143	1 881	..
	- Receipts from by-products	50	294	..	8	351	..
	= Expenditure 1	128	1 554	..	153	1 836	..
	- Subsidies	0	3	..	1	4	..
	+ Fees and payments	51	1 209	..	103	1 363	..
	- Revenues	187	3 087	..	259	3 533	..
	= Expenditure 2	- 7	- 326	..	- 5	- 338	..
2003	Investments	0	0	..	343	343	..
	+ In-house current expenditure	181	1 483	..	0	1 664	..
	- Receipts from by-products	7	29	..	..	36	..
	= Expenditure 1	174	1 454	..	343	1 970	..
	- Subsidies	0	0	..	0	0	..
	+ Fees and payments	0	56	..	0	56	..
	- Revenues	364	2 251	..	2	2 617	..
	= Expenditure 2	- 191	- 742	..	341	- 591	..

Notes:

- (a) Total current expenditure include both in-house current expenditure and fees and payments.
(b) Expenditure 1 includes total current expenditure, and is therefore an expression of total outlays/expenditure on environmental protection.
(c) Other includes soil & groundwater, noise, radiation, research and development and general administration.
(d) Total business sector data include only ISIC/NACE groups A, C, D, E and 60-62.

Source: OECD.

NORWAY

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are compiled by Statistics Norway (SN)⁴³
- ◆ are published annually for the local government and business sectors
- ◆ have been published regularly since 1990
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are compiled according to the abater/financing principle: fully for the public sector, partly for other sectors.

► MAIN USES AND AUDIENCES

The main use of public expenditure data on waste and wastewater has primarily been to follow up on regulations on the pricing of public waste and wastewater services. In the early 1990s, the municipal wastewater data have also been used to evaluate and set the levels of subsidies given to municipalities to upgrade wastewater treatment plants.

Important users are: public authorities, such as the Norwegian Pollution Control Authority (SFT), the Ministry of the Environment and Regional Environmental Authorities, municipalities, non-governmental organisations, the media and research institutions, professional and industrial bodies, and private users.

► DATA SOURCES AND TYPES OF EXPENDITURE

Public sector data are, since 2001, compiled by the Division for Environmental Statistics at SN from the annual accounts of the municipalities and counties. A budget analysis is carried out to compile statistics on EPE by the central government. Currently, only certain municipal figures are published as official statistics in Norway.

Earlier data on public sector expenditure were based on local level surveys, including publicly owned companies, and cannot be compared to recent data. This change in the data source introduced a break in the time series concerning the abater expenditure.

For the business sector, data on end-of-pipe investments have been collected since 2000 in a separate survey. From 2002, the number of variables was expanded to also cover investments in integrated technologies and current expenditure.

For specialised producers, turnover statistics (from the structural statistics) are used. For public specialised producers, data on financial transfers from the municipal accounts are used.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA, except noise for the public sector and radiation for the business sector.

► ECONOMIC SECTORS

Public sector data cover all level of government – municipal, county and central government. The data are consolidated to account for transfers between different levels of public sector. Data prior to 2001 do not cover expenditure by the central government, but include expenditure by publicly owned companies.

Business sector data cover the manufacturing industry (ISIC/NACE D 15-36) and parts of mining and quarrying (ISIC/NACE C 10 and 12/14). Statistics on ISIC/NACE 11 – Extraction of crude petroleum and natural gas, which is assumed to account for the largest share of EPE in ISIC/NACE C, have not yet been calculated.

A few variables for public specialised producers and households are also available. These data are deducted for the transfer information available in the municipal accounts.

Specialised producers include ISIC/NACE 90 (90.01, 90.02 and 90.03).

43. Statistics Norway's websites for PAC (in English):
Municipal wastewater: http://www.ssb.no/english/subjects/01/04/20/avlok_en/
Industry: http://www.ssb.no/english/subjects/01/06/20/miljokostind_en/

Norway

Million Norwegian Kroner at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c,d,e)		
PUBLIC SECTOR							
1991	Investments	1 257	..	..	..	..	..
	+ Total current expenditure (a)	2 238	..	..	..	..	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	3 495	..	..	..	..	..
1994	Investments	1 648	432	..	..	..	..
	+ Total current expenditure (a)	2 000	2 150	..	..	..	..
	- Receipts from by-products	..	81	..	..	..	..
	= Expenditure 1 (b)	3 648	2 500	..	..	..	..
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	3 150	1 945	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2001	Investments	1 674	105	10	- 184	1 605	184
	+ In-house current expenditure	1 630	781	140	2 092	4 643	475
	- Receipts from by-products	153	196	0	32	382	13
	= Expenditure 1	3 150	690	150	1 876	5 866	646
	+ Subsidies	- 20	265	104	1 276	1 624	159
	+ Fees and payments	603	1 723	0	29	2 355	19
	- Revenues	4 007	2 679	1	470	7 157	41
	= Expenditure 2	- 273	- 1	253	2 711	2 689	783
2002	Investments	1 744	175	10	31	1 960	169
	+ In-house current expenditure	1 686	708	180	2 120	4 694	480
	- Receipts from by-products	169	232	0	24	425	9
	= Expenditure 1	3 261	651	189	2 127	6 228	641
	+ Subsidies	- 22	591	103	1 353	2 025	172
	+ Fees and payments	634	1 819	0	35	2 488	15
	- Revenues	4 071	2 702	0	530	7 303	42
	= Expenditure 2	- 197	359	292	2 985	3 439	785
BUSINESS SECTOR							
Mining and quarrying (f)							
2000	End-of-pipe investments	0	0	11	1	11	..
2001	End-of-pipe investments	1	0	1	3	6	0
2002	Investments	4	2	3	2	12	1
	- of which End-of-pipe investments	4	2	3	1	11	1
	+ In-house current expenditure	13	0	0	2	15	0
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	17	3	3	4	27	1
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	13	18	50	3	85	0
	= Expenditure 2	..	..	..	..	..	..
Manufacturing							
2000	End-of-pipe investments	114	85	251	309	759	..
2001	End-of-pipe investments	146	57	287	63	552	5
2002	Investments	137	110	257	321	825	3
	-of which End-of-pipe investments	102	100	183	15	401	3
	+ In-house current expenditure	107	77	83	36	303	2
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	243	187	340	357	1 127	5
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	360	354	133	49	896	13
	= Expenditure 2	..	..	..	..	..	..

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c,d,e)		
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES							
2002	Revenues	641	6 323	..	251	7 215	..
Public specialised producers of EP services							
2001	Revenues	478	1 151	..	..	1 629	..
2002	Revenues	496	1 206	..	..	1 703	..

Notes:

- (a) Total current expenditure includes both in-house current expenditure and fees and purchases.
- (b) Expenditure 1 includes total current expenditure and is therefore an expression of the total outlays/expenditure for environmental protection.
- (c) For the public sector the category other includes soil & groundwater, radiation, research & development and general administration.
- (d) For the business sectors the category other includes soil & groundwater, noise, research & development and general administration. For 2000 biodiversity and landscape is included in the category other.
- (e) For the specialised producers other include NACE 90.03 (sanitation and cleaning streets etc.).
- (f) The figures for the mining and quarrying industry do not include NACE 11.

Source: OECD.

POLAND

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the Central Statistical Office (CSO)⁴⁴
- ◆ are published annually for all sectors (public sector, business sector, specialised producers and households)
- ◆ have been published regularly since the 1970s (only investments in earliest years)
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The EPE data are published in several publications by the CSO (see the References at the end of this document). The main national users are the parliament, governmental institutions (government, ministries, etc.), scientific institutes and other organisations, universities, environmental organisations, and individual users.

► DATA SOURCES AND TYPES OF EXPENDITURE

Since the 1970s, data on investment expenditure have been collected through comprehensive annual statistical surveys, by the CSO and the regional services of the statistical office. These surveys cover investments in the public as well as the business sector. Data on current expenditure by the public sector are collected every three years through sample surveys.

From 1996 onwards, the data collection methodology has changed. New data are thus not comparable with those for years prior to 1996. In 1998, the coverage of expenditure variables was broadened. In 2002 it was broadened again, and now enables the calculation of both Expenditure 1 and 2.

Surveys on current expenditure by the business sector are conducted separately by the Foundation of Environmental and Resources Economists in Białystok under the supervision of the Ministry of the Environment.⁴⁵ Since 2000, new sample surveys have been carried out: for the Agriculture, Forestry and Fishery sectors in 2000; for the Mining & quarrying and Electricity, gas and water supply sectors in 2001; for the Manufacturing sector in 2002; and for the "Other" sectors in 2003. In 2005, the sample survey was conducted for all industry sectors (ISIC/NACE C, D and E) according to the amended Regulation No 58/97 on SBS of the European Commission, and for specialised producers (NACE 37, 90 and secondary production in 40 and 41).

► ENVIRONMENTAL DOMAINS

Since 1995, the expenditure data cover all domains according to the CEPA.

► ECONOMIC SECTORS

Public sector data cover ministries, regional and local authorities (municipal departments) and publicly owned companies.

Business sector data cover the whole business sector. Data on different ISIC/NACE groups are collected in different years, and estimations are made for the whole of the business sector.

Data on households' expenditure are available from 1999.

Data on specialised producers include publicly owned companies, private companies and some secondary production.

44. www.stat.gov.pl.

45. A pilot sample survey in 1997/98 and a sample survey in 1999.

Poland

Million New Polish Zlotys at 2000 prices

		Pollution Abatement and Control (PAC)				Biodiversity & landscape	
		Wastewater	Waste	Air	Other	Total	
PUBLIC SECTOR (d)							(c)
1990	Investments	..	..	..	..	735	0
1995	Investments	1 226	193	156	4	1 579	3
1998	Investments	2 746	258	266	40	3 309	9
	+ Total current expenditure (a)	616	237	547	916	2 315	294
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	3 362	495	812	956	5 625	303
2000	Investments	2 553	251	211	61	3 076	3
	+ Total current expenditure (a)	605	233	538	902	2 278	290
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	3 159	484	749	963	5 354	293
2001	Investments	2 410	143	327	45	2 925	6
	+ Total current expenditure (a)	611	235	543	910	2 298	292
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	3 020	378	870	955	5 223	298
2002	Investments	2 166	107	142	61	2 475	3
	+ In-house current expenditure	220	147	9	196	572	69
	- Receipts from by-products	4	1	0	0	5	0
	= Expenditure 1	2 382	253	150	257	3 042	72
	+ Subsidies	0	- 5	1	- 34	- 38	22
	+ Fees and payments	125	96	12	80	314	77
	- Revenues	68	49	2	43	161	0
	= Expenditure 2	2 440	295	162	260	3 157	172
2003	Investments	2 297	113	124	62	2 596	3
	+ In-house current expenditure	160	148	9	195	512	69
	- Receipts from by-products	3	1	0	0	4	0
	= Expenditure 1	2 453	260	133	257	3 103	72
	+ Subsidies	- 3	- 5	1	- 34	- 41	22
	+ Fees and payments	91	96	12	80	279	77
	- Revenues	50	49	2	43	144	0
	= Expenditure 2	2 492	302	144	260	3 198	171
2004	Investments	2 282	176	116	115	2 689	9
	+ In-house current expenditure	160	148	9	196	514	69
	- Receipts from by-products	3	1	0	0	4	0
	= Expenditure 1	2 440	323	124	311	3 198	78
	+ Subsidies	- 2	- 5	1	- 34	- 41	22
	+ Fees and payments	91	97	12	80	281	77
	- Revenues	50	49	2	43	144	0
	= Expenditure 2	2 479	366	136	314	3 294	178
BUSINESS SECTOR (d) (e)							
1996	Investments	516	229	4 618	46	5 408	0
	- of which end-of-pipe investments	498	229	2 461	6	3 195	..
	+ Total current expenditure (a)	830	1 795	2 338	371	5 334	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	1 346	2 024	6 956	417	10 743	..
	- Subsidies	- 769	- 790	- 1 122	- 949	- 3 631	..
	+ Fees and payments	..	..	..	..	..	..
	= Expenditure 2	2 115	2 814	8 078	1 366	14 373	..
1999	Investments	1 154	377	4 037	95	5 663	1
	- of which end-of-pipe investments	867	332	2 545	51	3 795	1
	+ Total current expenditure (a)	869	1 109	2 505	313	4 796	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	2 024	1 485	6 542	408	10 459	..
	- Subsidies	- 735	- 214	- 736	- 929	- 2 614	..
	+ Fees and payments	..	..	..	..	..	..
	= Expenditure 2	2 759	1 699	7 278	1 337	13 073	..

.../...

	Pollution Abatement and Control (PAC)					Biodiversity & landscape
	Wastewater	Waste	Air	Other	Total	
2001 Investments	751	168	1 802	265	2 986	0
- of which end-of-pipe investments	678	159	965	91	1 893	0
+ Total current expenditure (a)	859	1 031	2 853	307	5 050	..
- Receipts from by-products	..	..	..	..	..	..
= Expenditure 1 (b)	1 610	1 199	4 654	572	8 036	..
- Subsidies	- 672	- 152	- 637	- 942	- 2 404	..
+ Fees and payments	..	..	..	..	..	..
= Expenditure 2	2 282	1 352	5 291	1 515	10 440	..
2002 Investments	539	282	1 320	102	2 242	1
- of which end-of-pipe investments	485	269	599	37	1 391	1
+ In-house current expenditure	1 713	1 124	734	255	3 826	147
- Receipts from by-products	366	155	478	0	1 000	0
= Expenditure 1	1 886	1 250	1 575	356	5 068	148
- Subsidies	51	97	- 347	- 311	- 509	69
+ Fees and payments	1 857	990	495	188	3 530	138
= Expenditure 2	3 691	2 144	2 417	855	9 107	217
2003 Investments	486	322	1 330	125	2 263	0
- of which end-of-pipe investments	465	308	410	41	1 223	0
+ In-house current expenditure	1 601	1 430	769	220	4 019	270
- Receipts from by-products	368	141	476	0	985	0
= Expenditure 1	1 719	1 610	1 623	344	5 297	271
- Subsidies	62	110	- 339	- 308	- 476	77
+ Fees and payments	1 727	1 312	517	197	3 752	239
= Expenditure 2	3 385	2 812	2 479	849	9 525	432
2004 Investments	618	351	981	235	2 184	0
- of which end-of-pipe investments	579	294	446	50	1 369	0
+ In-house current expenditure	1 150	1 657	865	234	3 906	255
- Receipts from by-products	208	906	178	1	1 292	0
= Expenditure 1	1 560	1 102	1 669	468	4 798	255
- Subsidies	- 127	92	- 532	- 441	- 1 008	78
+ Fees and payments	1 687	1 739	235	143	3 803	234
= Expenditure 2	3 374	2 749	2 435	1 052	9 609	411
Agriculture, hunting, forestry and fishing						
2004 Investments	0	..	..	..	0	..
- of which end-of-pipe investments	0	..	..	..	0	..
+ In-house current expenditure	5	1	2	9	16	123
- Receipts from by-products	0	0	0	0	0	0
= Expenditure 1	5	..	..	..	16	..
- Subsidies	- 1	- 1	- 7	- 6	- 14	8
+ Fees and payments	10	5	1	8	24	101
= Expenditure 2	15	5	8	15	54	93
Mining and quarrying						
2004 Investments	33	22	17	4	75	..
- of which end-of-pipe investments	32	11	17	1	61	..
+ In-house current expenditure	117	110	204	71	502	15
- Receipts from by-products	59	733	54	0	845	0
= Expenditure 1	91	- 601	167	75	- 267	..
- Subsidies	- 70	- 7	- 14	- 409	- 500	- 1
+ Fees and payments	96	181	4	34	314	8
= Expenditure 2	257	- 413	185	517	546	10
Manufacturing						
2004 Investments	119	154	293	75	642	..
- of which end-of-pipe investments	97	108	206	25	436	..
+ In-house current expenditure	615	536	385	98	1 634	8
- Receipts from by-products	139	160	108	1	407	0
= Expenditure 1	595	531	570	173	1 869	..
- Subsidies	- 60	- 49	- 177	- 37	- 323	- 2
+ Fees and payments	662	497	61	59	1 280	13
= Expenditure 2	1 317	1 077	808	270	3 472	15

.../...

		Pollution Abatement and Control (PAC)					Biodiversity
		Wastewater	Waste	Air	Other	Total	& landscape
Electricity, gas and water supply							
2004	Investments	438	137	590	79	1 244	0
	- of which end-of-pipe investments	427	137	211	9	784	0
	+ In-house current expenditure	79	112	244	22	457	2
	- Receipts from by-products	10	13	16	0	39	0
	= Expenditure 1	508	236	817	101	1 663	2
	- Subsidies	- 3	- 10	- 289	- 1	- 303	0
	+ Fees and payments	42	127	70	23	263	6
	= Expenditure 2	553	373	1 177	125	2 228	9
Other business sector							
2004	Investments	27	38	82	76	223	0
	- of which end-of-pipe investments	22	38	14	14	87	0
	+ In-house current expenditure	334	897	30	34	1 295	107
	- Receipts from by-products	0	0	0	0	0	0
	= Expenditure 1	361	935	112	110	1 518	107
	- Subsidies	7	158	- 45	12	132	73
	+ Fees and payments	877	929	99	19	1 923	105
	= Expenditure 2	1 231	1 706	255	117	3 309	139
HOUSEHOLDS (f)							
1999	Expenditure 1	441	9	8 458	994	9 902	1 783
	- Subsidies	0	0	0	0	0	0
	+ Fees and payments	2 411	1 188	0	0	3 598	0
	= Expenditure 2	2 852	1 197	8 458	994	13 500	1 783
2002	Expenditure 1	471	289	7 517	512	8 789	903
	- Subsidies	0	0	0	0	0	0
	+ Fees and payments	3 097	1 336	0	0	4 433	0
	= Expenditure 2	3 568	1 626	7 517	512	13 222	903
2004	Expenditure 1	489	300	7 813	531	9 133	939
	- Subsidies	0	0	0	0	0	0
	+ Fees and payments	3 217	1 388	0	0	4 604	0
	= Expenditure 2	3 705	1 688	7 813	531	13 737	939

		Pollution Abatement and Control (PAC)					Biodiversity
		Wastewater	Waste	Soil and groundwater	Other	Total	& landscape
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES (g)							
2000	Investments	94	59	1	11	165	..
2001	Investments	81	94	3	7	185	..
2002	Investments	92	142	1	5	241	..
	+ In-house current expenditure	1 427	879	10	203	2 519	..
	- Receipts from by-products	49	15	0	10	74	..
	= Expenditure 1	1 470	1 007	11	198	2 685	..
	- Subsidies	- 126	- 79	4	0	- 202	..
	+ Fees and payments	195	247	3	3	449	..
	- Revenues	2 092	1 457	0	39	3 587	..
	= Expenditure 2	- 301	- 124	11	162	- 251	..
2004	Investments	77	119	1	3	199	..
	+ In-house current expenditure	2 459	2 325	8	262	5 054	..
	- Receipts from by-products	58	362	0	14	433	..
	= Expenditure 1	2 478	2 082	9	251	4 820	..
	- Subsidies	- 75	- 91	- 2	- 24	- 192	..
	+ Fees and payments	297	331	1	19	649	..
	- Revenues	3 327	2 842	0	16	6 186	..
	= Expenditure 2	- 477	- 338	12	278	- 526	..
Public specialised producers of EP services							
2004	Investments	71	84	1	3	158	..
	+ In-house current expenditure	2 017	905	7	178	3 107	..
	- Receipts from by-products	42	193	0	8	244	..
	= Expenditure 1	2 045	796	8	173	3 021	..
	- Subsidies	- 60	- 53	- 1	- 15	- 129	..
	+ Fees and payments	244	204	1	11	459	..
	- Revenues	2 679	1 197	0	11	3 887	..
	= Expenditure 2	- 330	- 145	9	196	- 278	..

.../...

	Pollution Abatement and Control (PAC)					Biodiversity & landscape
	Wastewater	Waste	Soil and groundwater	Other	Total	
Private specialised producers of EP services						
2004 Investments	7	35	0	0	42	..
+ In-house current expenditure	441	1 420	1	83	1 946	..
- Receipts from by-products	15	169	0	5	190	..
= Expenditure 1	432	1 286	1	78	1 799	..
- Subsidies	- 16	- 38	- 1	- 9	- 64	..
+ Fees and payments	53	127	0	9	189	..
- Revenues	648	1 645	0	6	2 299	..
= Expenditure 2	- 147	- 193	2	90	- 248	..

Notes:

- (a) Total current expenditure includes both in-house current expenditure and fees and payments.
- (b) Expenditure 1 includes total current expenditure, and is therefore an expression for total environmental outlays/expenditure.
- (c) Other includes soil & groundwater, noise, radiation, research, general administration, education, training.
- (d) Until 2001: specialised producers are included.
- (e) Until 2001 fees for raw water intake are included in soil & groundwater/other.
- (f) From 1999-2001 the category other include expenditure for protection against radiation.
- (g) For the specialised producers "other" includes air and biodiversity & landscape in addition to soil & groundwater, noise, radiation, research, general administration, education, training.

Source: OECD.

PORTUGAL

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the National Statistical Office (INE)
- ◆ are published annually for the public and the business sectors
- ◆ have been published regularly since 1988
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The main national users of the EPE statistics are the Macroeconomics Department of the National Statistical Office (INE), the Ministry of Environment, industry associations, municipalities, researchers and students.

► DATA SOURCES AND TYPES OF EXPENDITURE

The methodology applied follows the environmental accounting system of the European Commission (SERIEE). Detailed results covering the entire field of environmental protection and a methodological discussion are presented in Ribeiro (1992).⁴⁶

For the main economic sectors, the statistics allow for distinction between the abater and financing principles, i.e. fees and subsidies for PAC purposes are identified.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA.

► ECONOMIC SECTORS

Public sector data cover expenditure at the central government level (from 1990 onward), at the departmental level and at the municipality level. Since 1998, the enterprises belonging to municipalities are excluded from the public sector data, hence there is a break in the time series.

Business sector data cover mining and quarrying, manufacturing and electricity, gas and water supply (ISIC/NACE C, D and E).

Data on specialised producers of EP services are only available for the years 1996-1998.

46. Ribeiro, *Methodological problems inherent in setting up an economic database on the environment, Portugal 1992*.

Portugal

Million Euro at 2000 prices

	Pollution Abatement and Control (PAC)					Biodiversity & landscape	
	Wastewater	Waste	Air	Other	Total PAC		
PUBLIC SECTOR							
1996 (a)	Investments	239	43	17	11	310	22
	+ In-house current expenditure	98	205	1	51	355	72
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	337	248	18	61	665	94
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	119	32	..	0	151	1
	= Expenditure 2	..	..	..	..	..	..
1998	Investments	181	41	13	10	244	27
	+ In-house current expenditure	54	158	0	54	266	65
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	235	198	13	63	510	92
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues (b)	56	29	..	0	85	0
	= Expenditure 2	..	..	..	..	..	..
2000	Investments	193	63	2	6	264	27
	+ In-house current expenditure	65	183	1	54	302	67
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	258	246	3	60	567	94
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	0	23	..	..	23	..
	- Revenues (b)	79	53	..	0	133	0
	= Expenditure 2	..	..	..	..	..	..
2002	Investments	168	52	1	12	232	25
	+ In-house current expenditure	59	209	0	60	329	65
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	227	261	1	73	561	90
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	0	46	..	..	46	..
	- Revenues (b)	64	55	..	0	119	0
	= Expenditure 2	..	..	..	..	..	..
2003	Investments	155	37	1	14	207	20
	+ In-house current expenditure	62	209	0	37	309	68
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	217	246	2	51	516	88
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	3	48	..	..	51	..
	- Revenues (b)	73	73	..	..	146	0
	= Expenditure 2	..	..	..	..	..	..
2004	Investments	130	32	0	17	179	25
	+ In-house current expenditure	64	205	1	36	306	77
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	194	237	1	53	484	102
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	4	46	..	..	50	..
	- Revenues (b)	74	92	..	0	166	1
	= Expenditure 2	..	..	..	..	..	..

.../...

		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other	Total PAC	
BUSINESS SECTOR (c)							
1994	Investments	30	14	72	8	124	..
	- of which end-of-pipe investments	21	11	59	6	97	..
	+ In-house current expenditure	11	10	5	2	28	..
	- Receipts from by-products	1	20	4	0	26	..
	= Expenditure 1	41	3	73	10	127	..
1998	Investments	71	19	71	20	182	..
	- of which end-of-pipe investments	43	16	33	7	99	..
	+ In-house current expenditure	22	9	23	5	59	..
	- Receipts from by-products	..	49	..	..	49	..
	= Expenditure 1	93	- 20	94	25	192	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	8	27	3	4	43	..
	= Expenditure 2	..	..	..	..	..	..
2000	Investments	65	23	130	25	243	1
	- of which end-of-pipe investments	47	16	71	16	150	1
	+ In-house current expenditure	31	60	18	14	123	3
	- Receipts from by-products	..	49	..	..	49	..
	= Expenditure 1	96	35	148	38	317	4
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	17	41	7	7	72	2
	= Expenditure 2	..	..	..	..	..	..
2003	Investments	33	7	110	31	181	..
	- of which end-of-pipe investments	16	4	36	27	83	..
	+ In-house current expenditure	15	19	19	8	61	..
	- Receipts from by-products	..	66	..	..	66	..
	= Expenditure 1	48	- 40	129	39	176	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	25	54	10	11	99	..
	= Expenditure 2	..	..	..	..	..	..
2004	Investments	32	11	152	15	211	28
	- of which end-of-pipe investments	29	9	79	13	130	28
	+ In-house current expenditure	21	17	18	7	62	1
	- Receipts from by-products	..	62	..	..	62	..
	= Expenditure 1	53	- 34	170	22	211	29
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	25	55	7	6	93	3
	= Expenditure 2	..	..	..	..	..	..
Mining and quarrying							
2004	Investments	1	1	1	0	3	0
	- of which end-of-pipe investments	0	1	1	0	2	0
	+ In-house current expenditure	1	1	0	0	2	0
	- Receipts from by-products	..	0	..	..	0	..
	= Expenditure 1	2	1	1	1	5	0
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	0	0	0	0	1	0
	= Expenditure 2	..	..	..	..	..	..
Manufacturing							
2004	Investments	30	8	149	13	200	17
	- of which end-of-pipe investments	28	5	76	11	120	17
	+ In-house current expenditure	19	15	17	5	57	1
	- Receipts from by-products	..	56	..	..	56	..
	= Expenditure 1	49	- 34	166	19	200	18
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	24	52	6	4	86	2
	= Expenditure 2	..	..	..	..	..	..
							.../...

		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other	Total PAC	
Electricity, gas and water supply							
2004	Investments	1	2	2	2	8	11
	- of which end-of-pipe investments	1	3	1	1	7	10
+	In-house current expenditure	1	1	1	1	3	0
-	Receipts from by-products	..	5	..	..	5	..
=	Expenditure 1	2	-2	3	3	6	11
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	1	3	1	2	6	1
=	Expenditure 2	..	..	..	..	..	..
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES							
1998	Investments	28	..	..	0	..	..
+	In-house current expenditure	39	..	..	1	..	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	67	..	..	2	..	..
-	Subsidies	4	..	..	1	..	..
+	Fees and payments	0	..	..	0	..	..
-	Revenues	42	..	..	1	..	..
=	Expenditure 2	21	..	..	0	..	..

Notes:

- (a) Data includes public specialised producers.
 (b) Revenues cover only municipal departments.
 (c) Total business sector data include only ISIC/NACE C, D and E (10-41).

Source: OECD.

SLOVAK REPUBLIK

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published annually for all sectors (public sector, business sector and specialised producers)
- ◆ have been published regularly since 1990
- ◆ cover expenditure on PAC activities, but not on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA.

► ECONOMIC SECTORS

Business sector data cover the whole business sector.

Data on public and on private specialised producers of EP services are available from 1998.

Slovak Republik

Million Slovak Koruna at 2000 prices

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
PUBLIC SECTOR							
1994	Investments	2 482	736	1 379	..	4 596	..
	+ Total current expenditure (a)	878	261	487	..	1 626	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	3 360	996	1 867	..	6 222	..
	+ Subsidies	598	175	327	48	1 153	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	288	80	419	281	1 115	..
	= Expenditure 2	3 670	1 091	1 774	- 233	6 302	..
1995	Investments	2 703	184	1 006	..	3 893	..
	+ In-house current expenditure	..	..	..	..	..	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	..	..
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	292	210	549	..	1 051	..
	= Expenditure 2	..	..	..	..	..	..
1999	Investments	..	..	..	..	2 340	..
	+ In-house current expenditure	..	..	..	..	2 420	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	4 760	..
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	1 710	..
	- Revenues	..	..	..	..	20	..
	= Expenditure 2	..	..	..	..	..	..
2002	Investments	572	121	366	239	1 298	30
	+ In-house current expenditure	171	75	1	64	312	89
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	743	197	367	303	1 610	119
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	57	49	4	2	112	67
	- Revenues	8	10	0	0	18	1
	= Expenditure 2	..	..	..	..	..	..
2003	Investments	422	60	423	89	994	12
	+ In-house current expenditure	37	148	1	7	193	18
	- Receipts from by-products	0	0	0	0	1	0
	= Expenditure 1	459	207	424	96	1 186	30
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	6	25	1	12	44	8
	- Revenues	15	73	0	0	88	0
	= Expenditure 2	..	..	..	..	..	..
BUSINESS SECTOR							
1998	Investments	..	..	..	..	17 965	..
	+ In-house current expenditure	..	..	..	..	4 153	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	22 118	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	3 863	..
	= Expenditure 2	..	..	..	..	..	..
2002	Investments	816	203	1 370	2 354	4 742	58
	+ In-house current expenditure	1 280	646	2 274	949	5 149	72
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	2 096	849	3 644	3 302	9 891	131
	- Subsidies	41	3	2	609	654	4
	+ Fees and payments	423	895	1 365	1 713	4 395	15
	= Expenditure 2	2 478	1 741	5 007	4 406	13 632	141

.../...

		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)	Total	
2003	Investments	480	162	1 191	1 322	3 155	39
	- of which End-of-pipe investments	242	64	907	664	1 876	37
	+ In-house current expenditure	915	1 539	1 775	347	4 577	99
	- Receipts from by-products	30	534	9	151	724	4
	= Expenditure 1	1 366	1 167	2 957	1 517	7 007	135
	- Subsidies	35	12	28	418	494	0
	+ Fees and payments	441	1 220	1 006	1 818	4 485	21
	= Expenditure 2	1 771	2 375	3 935	2 917	10 998	156
<u>Agriculture, hunting, forestry and fishing</u>							
2003	Investments	2	7	1	19	29	15
	- of which End-of-pipe investments	1	4	1	11	17	14
	+ In-house current expenditure	28	40	31	26	126	18
	- Receipts from by-products	0	5	0	1	6	0
	= Expenditure 1	31	41	32	45	149	33
	- Subsidies	0	3	0	6	9	0
	+ Fees and payments	2	110	48	10	169	5
	= Expenditure 2	33	148	80	48	309	38
<u>Mining and quarrying</u>							
2003	Investments	0	0	1	0	1	0
	- of which End-of-pipe investments	0	0	0	0	0	0
	+ In-house current expenditure	13	4	1	1	18	0
	- Receipts from by-products	0	3	0	1	4	0
	= Expenditure 1	13	0	2	0	15	0
	- Subsidies	0	0	0	0	0	0
	+ Fees and payments	1	3	5	11	20	7
	= Expenditure 2	14	4	7	11	36	7
<u>Manufacturing</u>							
2003	Investments	219	139	945	503	1 806	22
	- of which End-of-pipe investments	185	53	819	456	1 513	21
	+ In-house current expenditure	496	382	203	166	1 247	81
	- Receipts from by-products	29	348	9	150	536	3
	= Expenditure 1	685	173	1 139	520	2 516	100
	- Subsidies	0	9	5	0	14	0
	+ Fees and payments	301	558	354	193	1 406	7
	= Expenditure 2	986	722	1 488	713	3 909	106
<u>Electricity, gas and water supply</u>							
2003	Investments	217	6	61	699	983	2
	- of which End-of-pipe investments	55	5	53	147	260	2
	+ In-house current expenditure	370	1 066	1 475	138	3 050	0
	- Receipts from by-products	1	16	0	0	17	0
	= Expenditure 1	586	1 056	1 536	838	4 016	2
	- Subsidies	34	0	0	377	411	0
	+ Fees and payments	96	98	589	1 578	2 361	2
	= Expenditure 2	648	1 154	2 125	2 039	5 967	4
<u>Other business sector</u>							
2003	Investments	43	10	183	100	336	0
	- of which End-of-pipe investments	1	2	34	50	86	0
	+ In-house current expenditure	8	47	64	15	135	0
	- Receipts from by-products	0	161	0	0	161	0
	= Expenditure 1	51	- 103	247	115	310	0
	- Subsidies	1	0	23	36	60	0
	+ Fees and payments	41	450	10	26	528	1
	= Expenditure 2	91	347	234	106	778	1

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES							
1998	Investments	..	..	..	..	42	..
	+ In-house current expenditure	..	..	..	..	108	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	150	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	77	..
	- Revenues	..	..	..	..	152	..
	= Expenditure 2	..	..	..	..	..	..
2001	Investments	..	..	..	..	194	..
	+ In-house current expenditure	..	..	..	..	40	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	234	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	52	..
	- Revenues	..	..	..	..	210	..
	= Expenditure 2	..	..	..	..	..	..
2002	Investments	2	31	..	1	34	..
	+ In-house current expenditure	85	52	..	1	137	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	87	83	..	1	171	..
	- Subsidies	0	11	..	0	11	..
	+ Fees and payments	5	79	..	0	84	..
	- Revenues	92	206	..	0	299	..
	= Expenditure 2	0	- 56	..	1	- 55	..
2003	Investments	3	33	..	1	38	..
	+ In-house current expenditure	88	109	..	1	198	..
	- Receipts from by-products	0	7	..	0	7	..
	= Expenditure 1	91	136	..	2	229	..
	- Subsidies	0	9	..	0	9	..
	+ Fees and payments	1	45	..	1	47	..
	- Revenues	74	242	..	1	317	..
	= Expenditure 2	18	- 70	..	2	- 50	..
Public specialised producers of EP services							
2003	Investments	0	4	..	0	4	..
	+ In-house current expenditure	0	18	..	0	19	..
	- Receipts from by-products	0	0	..	0	1	..
	= Expenditure 1	0	22	..	0	23	..
	- Subsidies	0	3	..	0	3	..
	+ Fees and payments	0	1	..	1	3	..
	- Revenues	0	35	..	0	35	..
	= Expenditure 2	0	- 14	..	1	- 13	..
Private specialised producers of EP services							
2003	Investments	3	29	..	1	34	..
	+ In-house current expenditure	87	91	..	1	179	..
	- Receipts from by-products	0	6	..	0	6	..
	= Expenditure 1	91	114	..	2	207	..
	- Subsidies	0	6	..	0	6	..
	+ Fees and payments	0	44	..	0	44	..
	- Revenues	74	208	..	1	282	..
	= Expenditure 2	17	- 56	..	1	- 38	..

Notes:

- (a) Total current expenditure includes both in-house current expenditure and fees/purchases.
 (b) Expenditure 1 here is an expression of total environmental outlays/expenditure for EP activities.
 (c) Other includes soil and groundwater, noise, radiation, research and development and general administration.

Source: OECD.

SPAIN

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the Ministry of the Environment⁴⁷
- ◆ are published annually for the public sector and the business sector
- ◆ have been published regularly since 1987
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► DATA SOURCES AND TYPES OF EXPENDITURE

Public sector data on environmental protection expenditure have been collected since 1987.

The data collection follows closely the SERIEE-framework developed by Eurostat; hence data are generally consistent with the definitions used in the OECD/Eurostat questionnaire.

Business sector data have first been compiled for 1993 in a study "Asistencia Técnica para la realización de una Encuesta sobre el Gasto en Medio Ambiente efectuado por las Empresas Industriales en 1993", carried out for the Ministry of the Environment. The study however covered only a small fraction of the business sector and related figures are not presented here.

More recent surveys have been carried out for enterprises within ISIC/NACE C, D and E only, excluding ISIC/NACE 37 and 41.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA.

► ECONOMIC SECTORS

Public sector data include some expenditure by public specialised producers of EP services.

Business sector data cover mining and quarrying (C), manufacturing (D excl 37) and energy supply (40).

Some economic data (mainly investments) are collected for specialised producers since 1996. Included are producers of environmental protection services (ISIC/NACE 90) within municipal departments, publicly owned companies, and private companies. Producers of water supply services whose main activity is within ISIC/NACE 41 are also included, hence the figures are overestimated compared to the OECD/Eurostat questionnaire definitions.

47. *Ministerio de Medio Ambiente (1998): Gasto público en medio ambiente 1995, análisis comparativo 1987 - 1995, Madrid.*

Ministerio de Medio Ambiente): Gasto público en medio ambiente 1996, Madrid.

Ministerio de Medio Ambiente: Encuesta, estudio y resultados del gasto de las administraciones publicas en la proteccion del medio ambiente y en el uso y gestion de los recursos naturales en los años 1997, 1998 y 1999.

Spain

Million Euro at 2000 prices

		Pollution Abatement and Control (PAC)				Biodiversity & landscape	
		Wastewater	Waste	Air	Other (c)	Total	
PUBLIC SECTOR							
1994	Investments	573	173	14	174	934	480
	+ Total current expenditure (a)	293	1 038	12	699	2 042	375
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	866	1 211	26	873	2 976	856
	+ Subsidies	187	386	3	251	828	217
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
1995	Investments	581	153	10	211	954	740
	+ Total current expenditure (a)	264	956	13	775	2 009	467
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	845	1 109	23	986	2 963	1 207
	+ Subsidies	173	389	10	404	976	279
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
1997	Investments	1 000	380	8	361	1 750	402
	+ Total current expenditure (a)	286	882	14	365	1 547	237
	- Receipts from by-products	32	19	0	1	52	3
	= Expenditure 1 (b)	1 254	1 243	22	724	3 244	636
	+ Subsidies	68	241	2	- 9	303	37
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	251	376	0	61	688	8
	= Expenditure 2	1 071	1 109	24	654	2 859	665
1998	Investments	1 090	387	7	371	1 855	508
	+ Total current expenditure (a)	330	890	16	411	1 647	244
	- Receipts from by-products	30	26	0	6	63	0
	= Expenditure 1 (b)	1 390	1 250	23	776	3 439	752
	+ Subsidies	128	251	3	163	544	35
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	262	426	1	60	749	6
	= Expenditure 2	1 256	1 075	25	879	3 234	781
1999	Investments	1 184	408	9	426	2 026	588
	+ Total current expenditure (a)	336	901	20	405	1 662	231
	- Receipts from by-products	49	29	..	3	81	1
	= Expenditure 1 (b)	1 471	1 279	29	828	3 607	818
	+ Subsidies	80	328	4	199	611	39
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	256	424	2	60	742	5
	= Expenditure 2	1 295	1 183	31	967	3 476	852

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other (c)		
BUSINESS SECTOR (d)							
1998	Investments	142	78	290	85	594	7
	-of which end-of-pipe investments	123	43	106	24	296	7
2001	Investments	137	116	231	182	665	22
	-of which end-of-pipe investments	105	87	152	41	385	22
2003	Investments	161	105	218	194	679	31
	-of which end-of-pipe investments	123	58	120	43	343	31
2004	Investments	155	111	271	208	745	35
	-of which end-of-pipe investments	117	54	135	41	347	35
	+ Total current expenditure (a)	261	592	175	50	1 079	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	416	703	446	258	1 824	..
Mining and quarrying							
2004	Investments	6	6	4	4	21	16
	-of which end-of-pipe investments	1	4	3	1	9	16
	+ Total current expenditure (a)	7	5	3	3	26	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	13	11	8	7	48	..
Manufacturing							
2004	Investments	147	103	251	159	660	7
	-of which end-of-pipe investments	114	49	124	39	325	7
	+ Total current expenditure (a)	251	571	144	44	1 010	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	398	674	395	203	1 670	..
Electricity, gas and water supply							
2004	Investments	1	2	16	44	64	11
	-of which end-of-pipe investments	1	1	9	1	12	11
	+ Total current expenditure (a)	4	16	27	4	51	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	5	18	43	48	115	..
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES (e)							
1996	Investments	187	..	..	..	187	..
1997	Investments	228	..	..	..	228	..
1998	Investments	355	184	..	..	539	..
1999	Investments	342	177	..	..	520	..
	+ Total current expenditure (a)	..	2 791	..	..	..	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	..	2 968	..	..	..	..

Notes:

- (a) Total current expenditure includes both in-house current expenditure and fees/purchases.
(b) Expenditure 1 here is an expression of total environmental outlays/expenditure for EP activities.
(c) Other includes soil & groundwater, noise, radiation, research and development and general administration.
(d) Total business sector data include only ISIC/NACE C, D and parts of E (10-40).
(e) Data for wastewater cover both water and wastewater.

Source: OECD.

SWEDEN

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by Statistics Sweden
- ◆ are published annually for the business sector
- ◆ have been published regularly since 1999
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The main uses of the data are to evaluate the costs of complying with environmental regulations and to improve the design and implementation of environmental regulations in Sweden and within the EU.

The main users of the EPE data are the Swedish Ministry of sustainable development, companies and trade organisations, and research scientists, as well as Eurostat and the OECD.

► DATA SOURCES AND TYPES OF EXPENDITURE

The main source for annual data on PAC expenditure by the public sector is the central government budget (identified by COFOG/function). Data on expenditure by municipalities were compiled only for 1991 through a survey carried out by Statistics Sweden that helped to complete the picture. 1991 current expenditure data concerning the central government, included both total current expenditure, investments and some transfers (subsidies/grants both to the business sector and to the rest of the world).

Business sector: Data on environmental protection (EP) expenditure in industry have been collected since 1981 through surveys conducted on an ad hoc basis. Since 1999, the surveys are conducted and published on an annual basis⁴⁸. However, due to changes in the definition and scope of "environmental protection expenditure" data collected since 1999 cannot be compared to data from earlier surveys. Recent data are in line with SERIEE definitions and with the OECD/Eurostat questionnaire, whereas older data are incomplete and seen as rough estimates (Björzell, 1993⁴⁹). Since 2001, data collection is mandatory according to Swedish law (law on official statistics) and to the European Union regulation on structural business statistics.

The business surveys on EP expenditure cover both investment (end-of-pipe and integrated investments) and current expenditure (internal current expenditure and payments for bought services and fees). For the year 2000, only data on investments were collected.

Data on expenditure by specialised producers were compiled for the years 1996-98 from enterprise statistics for ISIC/NACE 90.

► ENVIRONMENTAL DOMAINS

The expenditure data now cover all domains according to the CEPA.

For the public sector, there is a break in the time series between 1991 and other years. 1991 data on expenditure by local governments covered only the treatment and collection of wastewater and solid waste, as well as air and noise. Central government data for 1991 encompassed in principle all environmental media, but details by domain were not available. Expenditure by the central government is thus reported as a whole under the domain "Other" for this year.

► ECONOMIC SECTORS

Public sector data cover for the year 1991 expenditure by the central government as well as municipal waste and waste water departments operating within ISIC/NACE 90. For later years, the data cover only expenditure by the general government, i.e. administration of non-market activities provided free of charge or with fees covering only a small part of the total costs. Hence, data for 1991 cannot be compared to data for other years.

48. *Environmental protection expenditure in industry 2001*, Statistics Sweden, 2002
For further details see Statistics Sweden's website at www.scb.se.

49. Björzell M. (1993): *Environmental Expenditures in the Swedish Manufacturing Industries, An Inventory of Problems*, Statistics Sweden, in *Contributions of Member States and EFTA countries to the SERIEE system*, Eurostat F3, Luxembourg, 1994.

Business sector data cover enterprises with 20 employees or more within ISIC/NACE 10-41, i.e. mining and quarrying (ISIC/NACE 10-14), manufacturing (ISIC/NACE 15-36), and electricity, gas and water supply (ISIC/NACE 40-41). The sample is around 1000 enterprises.

Data on specialised producers of EP services cover private and public enterprises operating within ISIC/NACE 90 regardless of their size. Data were collected for the years 1997-99 only. Municipal departments operating in the waste and the wastewater fields were not covered. A breakdown into public and private specialised producers is not available.

Data on EP expenditure by households are not available.

Sweden

Million Swedish Krona at 2000 prices

	Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape	
	Wastewater	Waste	Air	Other (g)			
PUBLIC SECTOR (a)							
1991 (b)	Investments	2 564	427	..	..	2 992	..
	+ Total current expenditure (c)	3 937	4 533	..	3 912	12 382	..
	- Receipts from by-products	..	458	..	..	458	..
	= Expenditure 1 (d)	6 502	4 503	..	3 912	14 916	..
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	5 982	4 151	..	..	10 132	..
	= Expenditure 2	..	..	..	..	..	..
1995	Investments	..	..	..	..	308	..
	+ Total current expenditure (c)	..	..	..	..	3 354	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (d)	..	..	..	..	3 662	..
2000	Investments	..	..	..	..	749	..
	+ Total current expenditure (c)	..	..	..	..	4 296	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (d)	..	..	..	..	5 045	..
	+ Subsidies	..	..	..	..	795	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2001 (e)	Investments	..	400	..	11	411	389
	+ Total current expenditure (c)	6	3 206	..	1 311	4 522	157
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (d)	6	3 605	..	1 322	4 933	547
	+ Subsidies	..	851	..	636	1 488	21
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
2002	Investments	..	..	..	..	733	..
	+ Total current expenditure (c)	..	..	..	..	5 080	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (d)	..	..	..	..	5 813	..
	+ Subsidies	..	..	..	..	1 630	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	..	..	..	..	..	..
	= Expenditure 2	..	..	..	..	..	..
BUSINESS SECTOR (f)							
1999	Investments	814	265	1 522	330	2 931	..
	- of which End-of-pipe investments	..	..	..	250	1 402	..
	+ In-house current expenditure	..	..	..	..	2 587	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	5 518	..
2001	Investments	1 062	394	1 761	261	3 477	..
	- of which End-of-pipe investments	..	..	..	..	1 713	..
	+ In-house current expenditure	..	..	..	..	3 028	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	6 506	..
2002	Investments	1 253	295	1 496	306	3 351	..
	- of which End-of-pipe investments	..	..	..	..	1 754	..
	+ In-house current expenditure	..	..	..	..	3 064	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	2 620	1 909	2 121	1 855	6 414	..

.../...

		Pollution Abatement and Control (PAC)				Biodiversity & landscape	
		Wastewater	Waste	Air	Other (g)	Total	
2003	Investments	1 231	610	1 975	331	4 147	..
	- of which End-of-pipe investments	..	..	..	..	1 761	..
	+ Total current expenditure (c)	1 136	1 756	555	1 378	4 825	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (d)	2 367	2 365	2 530	1 710	8 972	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	2 133	..
	= Expenditure 2	..	..	..	..	..	..
Mining and quarrying							
2003	Investments	21	42	164	20	248	..
	- of which End-of-pipe investments	..	..	..	..	205	..
	+ In-house current expenditure	..	..	..	..	56	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	42	57	187	45	303	..
Manufacturing							
2003	Investments	962	502	844	195	2 503	..
	- of which End-of-pipe investments	..	..	..	..	1 772	..
	+ In-house current expenditure	..	..	..	..	2 153	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	1 956	1 923	1 289	1 287	4 656	..
Electricity, gas and water supply							
2003	Investments	248	65	967	116	1 396	..
	- of which End-of-pipe investments	..	..	..	..	342	..
	+ In-house current expenditure	..	..	..	..	331	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	368	385	1 054	378	1 727	..
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES							
1997	Investments	327	1 010	..	..	1 337	..
	+ Total current expenditure (c)	505	5 167	..	..	5 672	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (d)	832	6 177	..	..	7 008	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	750	5 984	..	..	6 734	..
	= Expenditure 2	..	..	..	..	..	..
1998	Investments	116	883	..	..	1 000	..
	+ Total current expenditure (c)	525	5 934	..	..	6 459	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (d)	641	6 817	..	..	7 459	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	735	6 932	..	..	7 667	..
	= Expenditure 2	..	..	..	..	..	..
1999	Investments	268	996	..	..	1 264	..
	+ Total current expenditure (c)	417	6 287	..	..	6 704	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (d)	685	7 283	..	..	7 968	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	586	7 413	..	..	7 999	..
	= Expenditure 2	..	..	..	..	..	..

Notes:

- (a) Municipalities are included only in 1991 data. Since 1992, data include only general government.
- (b) Data include public specialised producers. The category other includes expenditure for all environmental domains by the central government, and includes both current expenditure, investments and subsidies. Data by domain mainly refer to expenditure at local level.
- (c) Total current expenditure includes both in-house current expenditure and fees/purchases.
- (d) Expenditure 1 here is an expression of total environmental outlays/expenditure for EP activities.
- (e) Expenditure for air is included in "Other."
- (f) Total business sector data include only ISIC/NACE C, D and E (10-41).
- (g) The category other includes soil & groundwater, noise, radiation, research and development, general administration and, biodiversity and landscape (except for 2001 when biodiversity and landscape is recorded separately for the public sector).

Source: OECD.

SWITZERLAND

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the Federal Statistical Office of Switzerland
- ◆ are published annually for the public sector, have been published once for the business sector
- ◆ have been published regularly since 1992
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► DATA SOURCES AND TYPES OF EXPENDITURE

The first pilot survey on PAC expenditure was done in 1994. The pilot survey was based on the OECD PAC expenditure concepts and is therefore also compatible with the Eurostat SERIEE system. The pilot study (Bundesamt für Statistik, 1996)⁵⁰ contains data on public sector PAC expenditure for 1992 and business sector expenditure for 1993.

From 1996 on, administrative data have been used to estimate the public sector PAC/EP expenditure. For the public sector, receipts from by-products are negligible and have not been estimated separately.

► ENVIRONMENTAL DOMAINS

The expenditure data cover most domains according to the CEPA. For the business sector all domains are covered. For the public sector all domains except soil & groundwater are covered since 1996.

► ECONOMIC SECTORS

Public sector data cover all levels of administration, i.e. the federal government, the cantons, and the municipalities. Also included are public enterprises (public specialised producers) with the exception of household waste incineration installations.

Business sector data cover all ISIC/NACE groups except agriculture (A) and fishing (B).

50. Bundesamt für Statistik (1996): *Umweltausgaben und -investitionen in der Schweiz 1992/1993, Ergebnisse einer Pilotstudie 2 Raum, Landschaft und Umwelt*, Bern.

Switzerland

Million Swiss Francs at 2000 prices

		Pollution Abatement and Control (PAC)				Biodiversity & landscape	
		Wastewater	Waste	Air	Other (c)	Total	
PUBLIC SECTOR (d)							
1990	Investments	797	94	..	13	905	27
	+ Total current expenditure (a)	712	646	..	170	1 528	38
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	1 510	740	..	183	2 433	65
1992	Investments	561	468	15	63	1 106	..
	+ Total current expenditure (a)	897	1 001	66	438	2 402	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	1 457	1 469	82	501	3 508	..
	+ Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	887	669	11	15	1 581	..
	= Expenditure 2	..	..	..	..	..	..
1995	Investments	976	223	..	37	1 236	42
	+ Total current expenditure (a)	788	869	..	194	1 851	146
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	1 764	1 092	..	231	3 087	188
1999	Investments	1 048	139	..	64	1 251	55
	+ Total current expenditure (a)	843	907	..	214	1 965	233
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	1 891	1 046	..	278	3 216	287
2000	Investments	928	119	..	64	1 111	60
	+ Total current expenditure (a)	856	953	..	235	2 043	243
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	1 785	1 071	..	298	3 154	303
2001	Investments	868	123	..	50	1 042	55
	+ Total current expenditure (a)	890	941	..	241	2 071	269
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	1 758	1 064	..	291	3 113	324
2002	Investments	842	127	..	45	1 015	63
	+ Total current expenditure (a)	900	936	..	238	2 074	277
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	1 742	1 064	..	283	3 089	340
2003	Expenditure 1 (b)	1 734	1 053	..	306	3 094	339
BUSINESS SECTOR (e)							
1993	Investments	217	198	514	193	1 121	..
	+ Total current expenditure (a)	215	270	102	291	877	..
	- Receipts from by-products	0	36	1	4	41	..
	= Expenditure 1 (b)	431	431	615	479	1 957	..
2003	Investments	..	..	..	..	821	..
	- of which End-of-pipe investments	..	..	..	..	366	..
	+ In-house current expenditure	..	..	..	..	699	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1	..	..	..	..	1 520	..
	- Subsidies	..	..	..	..	..	..
	+ Fees and payments	..	..	..	..	930	..
	= Expenditure 2	701	967	459	290	2 416	..

Notes:

(a) Total current expenditure includes both in-house current expenditure and fees/purchases.

(b) Expenditure 1 here is an expression of total environmental outlays/expenditure for EP activities.

(c) For the public sector the category other include: air, noise, radiation, research and general administration. For the business sector, the category include: soil & groundwater, noise, radiation, research, general administration and biodiversity & landscape.

(d) Data include public specialised producers.

(e) Total business sector data include all ISIC/NACE groups except A and B (1-5).

Source: OECD.

TURKEY

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the Turkish Statistical Institute (TURKSTAT)
- ◆ are published annually for public sector
- ◆ have been published regularly for governmental organisations since 1997 and for municipalities since 2003
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater principle.

► MAIN USES AND AUDIENCES

The main users of the statistics are State Planning Organisation, Ministry of Environment and Forestry, municipalities and other decision makers.

► DATA SOURCES AND TYPES OF EXPENDITURE

Data on current expenditure and investment expenditure (also end-of-pipe technologies) have been collected from governmental organisations, municipalities, manufacturing industry establishments, thermal power plants and organised industrial zones by TURKSTAT via annual surveys.

There have been large changes in methodology lately. Only data for the years since 2002 are therefore shown in the tables below.

► ENVIRONMENTAL DOMAINS

The expenditure data cover in principle all domains according to the CEPA. However, some domains are missing for some years.

► ECONOMIC SECTORS

Public sector data for the years 1997 and 1998 include public specialised producers of EP services.

Business sector data cover the manufacturing industry and the electricity, gas and water sectors.

Data on expenditure by public specialised producers are recorded separately since 2003. They cover separately identified departments of large municipalities and infrastructure unions of municipalities.

Turkey

Billions of Turkish Liras at 2000 prices

		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other	Total	
PUBLIC SECTOR (c)							
2002	Investments	70 171	46	51	13 486	83 755	159
	+ Total current expenditure (a)	190	211	71	70 651	71 123	259
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	70 361	258	122	84 137	154 877	419
2003	Investments	167 325	20 733	0	32 100	220 158	113
	+ Total current expenditure (a)	12 956	281 994	1	87 217	382 168	278
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	180 281	302 727	1	119 318	602 327	391
2004	Investments	136 047	46 160	0	44 791	226 999	132
	+ Total current expenditure (a)	12 862	344 851	14	103 311	461 039	402
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	148 909	391 011	14	148 102	688 037	534
BUSINESS SECTOR							
Electricity, gas and water supply							
2002	Investments	221	3 445	82 015	173	85 854	58
	-of which end-of-pipe investments	111	3 445	82 015	..	85 572	..
2003	Investments	9	2 535	5 562	..	8 107	61
	-of which end-of-pipe investments	9	2 535	5 562	..	8 107	..
2004	Investments	..	3 003	2 116	..	5 118	3
	-of which end-of-pipe investments	..	3 003	2 116	..	5 118	..
SPECIALISED PRODUCERS OF EP SERVICES							
Public specialised producers of EP services							
2003	Investments	51 133	..	..	199 368	250 501	..
	+ Total current expenditure (a)	14 028	..	..	250 244	264 272	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	65 161	..	..	449 612	514 773	..
2004	Investments	86 281	..	..	192 577	278 858	..
	+ Total current expenditure (a)	18 809	..	..	277 294	296 103	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1(b)	105 091	..	..	469 871	574 962	..

Notes:

- (a) Total current expenditure includes both in-house current expenditure and fees/purchases.
 (b) Expenditure 1 here is an expression of total environmental outlays/expenditure for EP activities.
 (c) From 2003, public sector includes municipalities in addition to government organisations.

Source: OECD.

UNITED KINGDOM

► GENERAL OVERVIEW

Statistics on environmental protection expenditure:

- ◆ are published by the Department for Environment, Food and Rural Affairs (DEFRA) and by the Office for National Statistics (ONS)
- ◆ are published annually for both the public and the business sectors
- ◆ have been published regularly since 1990
- ◆ cover expenditure on PAC activities and on other EP activities
- ◆ follow the CEPA standard definitions of environmental domains
- ◆ are partly compiled according to the abater/financing principle.

► MAIN USES AND AUDIENCES

The main uses of EPE data are: to provide benchmarks to enable individual companies to compare their expenditure with others in their industry; to help identify UK's supply capability for environmental equipment and the basis for improving industry support programmes to this growing industry; and to enable DEFRA to provide these estimates to the European Commission as required under the EU Structural Business Statistics Regulation 58/97.

► DATA SOURCES AND TYPES OF EXPENDITURE

The EPE statistics for the business sector are based on an annual survey⁵¹ which is being carried out by URS Corporation Ltd on behalf of the DEFRA.

The EPE statistics for the public sector are provided by the ONS and published as part of their environmental accounts.

The 1990 estimates were based on a study conducted by ECOTEC and commissioned by the Department of the Environment (HMSO, 1993)⁵² using published information and market research. The 1990 estimates should be regarded as indicating broad orders of magnitude only.

The 1994 estimates are derived from a survey (HMSO, 1996)⁵³, also conducted by ECOTEC, of the mining, manufacturing, energy supply and water industries. These estimates are considered to be the most reliable of all the estimates for these industries. The results for 1994 are not comparable with business sector spending for earlier years because they do not cover all industries and because they are based on a new survey rather than more limited published information and market research.

► ENVIRONMENTAL DOMAINS

The expenditure data cover all domains according to the CEPA.

► ECONOMIC SECTORS

Public sector data include expenditure by public specialised producers of EP services.

Business sector data cover mining and quarrying, manufacturing and energy, gas and water supply.

51. One can find information about the UK Environmental Protection Expenditure by Industry survey on : <http://www.defra.gov.uk/environment/statistics/envsurvey/index.htm>

52. HMSO (1993): *A Review of UK Environmental Expenditure, A Final Report to the Department of the Environment by Ecotec Research and Consulting Ltd, London.*

53. HMSO (1996): *Environmental Protection Expenditure by Industry, A survey of environmental protection expenditure by extraction, manufacturing, energy and water supply industries in the UK, Department of the Environment.*

United Kingdom

Million Pounds Sterling at 2000 prices

		Pollution Abatement and Control (PAC)					Biodiversity & landscape
		Wastewater	Waste	Air	Other	Total	
PUBLIC SECTOR					(c)		
1990	Investments	110	..	0	135	245	..
	+ Total current expenditure (a)	397	..	654	114	1 165	..
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	507	1 620	654	249	3 150	..
1997	Investments	6	80	8	130	223	27
	+ Total current expenditure (a)	206	2 911	86	442	3 645	380
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	211	2 991	94	572	3 868	407
	+ Subsidies	44	1	217	328	591	75
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	102	389	17	76	584	27
	= Expenditure 2	154	2 603	294	824	3 874	455
2000	Investments	7	53	8	110	178	27
	+ Total current expenditure (a)	176	3 252	95	441	3 963	450
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	183	3 304	103	551	4 141	476
	+ Subsidies	33	2	206	381	621	77
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	84	483	33	74	675	30
	= Expenditure 2	131	2 823	276	857	4 087	523
2001	Investments	6	49	9	110	174	30
	+ Total current expenditure (a)	148	3 012	90	452	3 702	377
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	154	3 061	99	562	3 876	407
	+ Subsidies	158	9	244	441	853	171
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	77	464	31	72	645	30
	= Expenditure 2	236	2 605	312	931	4 084	549
2002	Investments	26	214	39	479	758	131
	+ Total current expenditure (a)	175	2 508	104	419	3 206	418
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	201	2 723	143	898	3 964	549
	+ Subsidies	72	2	139	79	292	23
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	1	6	0	1	8	0
	= Expenditure 2	272	2 718	282	976	4 249	572
2003	Investments	25	210	38	470	743	128
	+ Total current expenditure (a)	187	2 597	111	439	3 333	444
	- Receipts from by-products	..	..	..	..	..	..
	= Expenditure 1 (b)	212	2 807	149	908	4 076	572
	+ Subsidies	57	1	30	23	111	14
	+ Fees and payments	..	..	..	..	..	..
	- Revenues	2	10	1	2	14	1
	= Expenditure 2	268	2 798	178	930	4 172	586

.../...

		Pollution Abatement and Control (PAC)				Biodiversity & landscape	
		Wastewater	Waste	Air	Other		Total
BUSINESS SECTOR (d)							
1990	Investments	321	..	578	..	..	..
	-of which end-of-pipe investments	..	..	..	..	..	..
+	Total current expenditure (a)	389	..	671	..	..	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1 (b)	792	1 746	1 396	357	4 291	..
1994	Investments	359	159	633	147	1 297	..
	-of which end-of-pipe investments	329	119	456	94	998	..
+	Total current expenditure (a)	790	430	92	10	1 322	..
-	Receipts from by-products	..	102	..	..	102	..
=	Expenditure 1 (b)	1 149	487	725	157	2 517	..
1997	Investments	281	145	610	143	1 180	..
	-of which end-of-pipe investments	..	..	..	..	840	..
	In-house current expenditure	..	..	..	..	1 662	..
-	Receipts from by-products	..	..	..	..	129	..
=	Expenditure 1	..	..	..	..	2 714	..
-	Subsidies	..	..	..	..	3	..
+	Fees and payments	..	..	..	..	1 655	..
=	Expenditure 2	..	..	..	..	4 365	..
1999	Investments	262	105	681	235	1 283	26
	-of which end-of-pipe investments	139	55	361	126	681	14
+	In-house current expenditure	306	309	391	270	1 276	..
-	Receipts from by-products	..	..	..	..	213	..
=	Expenditure 1	..	..	..	..	2 451	54
-	Subsidies	..	..	..	..	17	..
+	Fees and payments	..	..	..	..	1 402	..
=	Expenditure 2	..	..	..	..	3 731	..
2000	Investments	212	187	657	274	1 330	92
	-of which end-of-pipe investments	154	104	258	71	587	40
+	In-house current expenditure	295	311	350	170	1 126	..
-	Receipts from by-products	..	..	..	..	207	..
=	Expenditure 1	..	..	..	..	2 249	116
-	Subsidies	..	..	..	..	3	..
+	Fees and payments	529	664	24	436	1 653	1
=	Expenditure 2	..	..	..	..	3 899	..
2001	Investments	192	247	353	321	1 113	15
	-of which end-of-pipe investments	110	160	189	23	482	6
+	In-house current expenditure	289	313	399	175	1 177	19
-	Receipts from by-products	..	..	..	..	274	..
=	Expenditure 1	..	..	..	..	2 016	33
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	554	638	5	226	1 422	..
=	Expenditure 2	..	..	..	..	..	..
2002	Investments	105	84	187	89	464	29
	-of which end-of-pipe investments	77	62	107	14	260	13
+	In-house current expenditure	202	273	199	147	822	19
-	Receipts from by-products	..	..	..	..	232	..
=	Expenditure 1	..	..	..	..	1 054	48
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	407	510	5	157	1 079	0
=	Expenditure 2	..	..	..	..	..	..
2003	Investments	137	53	207	81	477	36
	-of which end-of-pipe investments	108	32	159	34	333	10
+	In-house current expenditure	309	451	216	262	1 238	19
-	Receipts from by-products	..	..	..	..	168	..
=	Expenditure 1	..	..	..	..	1 538	55
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	398	739	2	193	1 332	8
=	Expenditure 2	..	..	..	..	..	..

.../...

		Pollution Abatement and Control (PAC)				Total	Biodiversity & landscape
		Wastewater	Waste	Air	Other		
Mining and quarrying							
2003	Investments	1	1	6	16	23	0
	-of which end-of-pipe investments	1	0	2	15	19	0
+	In-house current expenditure	8	4	11	86	110	1
-	Receipts from by-products	..	..	..	..	2	..
=	Expenditure 1	..	..	..	..	131	1
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	6	24	0	9	38	0
=	Expenditure 2	..	..	..	..	..	..
Manufacturing							
2002	Investments	100	54	119	48	320	9
	-of which end-of-pipe investments	73	32	78	11	194	9
+	In-house current expenditure	188	175	136	117	617	10
-	Receipts from by-products	..	..	..	..	207	..
=	Expenditure 1	..	..	..	..	730	19
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	388	449	5	68	910	0
=	Expenditure 2	..	..	..	..	..	..
Electricity, gas and water supply							
2003	Investments	0	8	33	7	49	12
	-of which end-of-pipe investments	0	8	32	0	40	2
+	In-house current expenditure	4	159	29	4	196	2
-	Receipts from by-products	..	..	..	..	0	..
=	Expenditure 1	4	167	62	11	244	15
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	0	106	11	50	167	7
=	Expenditure 2	..	..	..	..	..	..
HOUSEHOLDS							
1990	Expenditure 1	..	511	41	387	939	..
1995	Expenditure 1	..	..	..	..	..	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	2 460	..	..	..	..	..
=	Expenditure 2	..	..	..	..	..	..
2001	Expenditure 1	..	..	..	..	..	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	2 562	..	..	..	..	..
=	Expenditure 2	..	..	..	..	..	..
PRIVATE & PUBLIC SPECIALISED PRODUCERS OF EP SERVICES							
1998	Investments	..	..	..	..	..	..
+	Total current expenditure	..	..	..	..	7 590	..
-	Receipts from by-products	..	..	..	..	..	..
=	Expenditure 1	..	..	..	..	..	..
-	Subsidies	..	..	..	..	..	..
+	Fees and payments	..	..	..	..	..	..
-	Revenues	..	..	..	..	7 533	..
=	Expenditure 2	..	..	..	..	..	..

Notes:

- (a) Total current expenditure includes both in-house current expenditure and fees/purchases.
(b) Expenditure 1 here is an expression of total environmental outlays/expenditure for EP activities.
(c) Other includes soil & groundwater, noise, radiation, research & development and general administration.
(d) Total business sector data include only ISIC/NACE C, D and E (10-41).

Source: OECD.

ANNEX

ANNEX TABLE 1. GROSS DOMESTIC PRODUCT.....	140
ANNEX TABLE 2. GROSS FIXED CAPITAL FORMATION.....	141
ANNEX TABLE 3. POPULATION	142
ANNEX TABLE 4. INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION OF ALL ECONOMIC ACTIVITIES – THIRD REVISION (ISIC REV. 3).....	143
ANNEX TABLE 5. LIST OF ABBREVIATIONS AND ACRONYMS	144

Annex table 1. Gross Domestic Product

in Million National Currencies

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
CAN	679,921	685,367	700,480	727,184	770,873	810,426	836,864	882,733	914,973	982,441	1,076,577	1,108,200	1,157,968	1,218,772	1,293,289
MEX	738,743	948,801	1,125,014	1,255,938	1,423,116	1,840,420	2,529,273	3,179,120	3,848,218	4,600,488	5,497,736	5,811,776	6,267,474	6,894,993	7,634,926
USA	5,803,075	5,995,925	6,337,750	6,657,400	7,072,225	7,397,650	7,816,825	8,304,325	8,746,975	9,268,425	9,816,975	10,127,950	10,486,975	11,004,050	11,734,950
JPN ^a	440,125	468,234	480,492	484,234	490,005	496,941	510,002	521,170	514,882	507,496	511,760	506,165	498,208	498,148	505,253
KOR ^a	186,691	226,008	257,525	290,676	340,208	398,838	448,596	491,135	484,103	529,500	578,665	622,123	684,263	724,675	778,445
AUS	393,993	400,352	414,880	435,759	459,890	484,883	515,767	543,483	574,571	602,820	648,631	689,959	736,777	785,343	838,482
NZL	73,514	72,475	74,129	79,902	85,715	91,202	96,712	100,035	101,363	106,606	113,343	121,913	127,982	134,801	146,237
AUT	136,237	146,539	155,165	160,616	168,648	175,670	181,539	185,436	192,309	200,148	210,224	215,907	220,899	226,076	235,053
BEL	163,397	171,110	179,324	185,198	195,292	202,269	206,241	217,248	225,433	235,883	247,646	254,182	261,133	269,634	283,079
CZE	665,016	800,504	894,869	1,083,540	1,256,123	1,466,681	1,660,649	1,785,131	1,962,483	2,041,353	2,150,058	2,315,255	2,414,669	2,550,754	2,751,075
DNK	825,311	857,651	887,868	900,152	965,719	1,009,757	1,060,887	1,116,323	1,155,407	1,207,749	1,278,955	1,325,512	1,350,788	1,390,537	1,446,472
FIN	87,864	84,166	82,196	83,112	88,015	95,379	98,519	107,114	116,341	120,043	130,152	135,517	140,251	143,436	149,504
FRA	1,010,055	1,050,627	1,085,417	1,101,379	1,142,280	1,182,963	1,212,219	1,250,762	1,306,278	1,354,261	1,421,655	1,475,790	1,528,261	1,559,747	1,624,125
DEU	1,384,311	1,506,140	1,610,950	1,651,650	1,733,850	1,800,800	1,834,020	1,873,500	1,926,580	1,972,730	2,028,970	2,076,000	2,110,150	2,130,680	2,168,130
GRC	39,111	48,302	55,839	62,873	71,302	79,927	87,851	97,235	105,773	112,686	121,701	131,318	141,669	153,471	165,280
HUN	2,282,430	2,521,756	2,970,274	3,581,549	4,405,758	5,614,042	6,893,935	8,540,669	10,087,434	11,393,500	13,172,293	14,849,809	16,740,420	18,568,273	20,216,250
ISL	361,396	391,060	390,722	402,712	427,827	440,523	472,727	510,383	567,342	608,448	660,975	740,636	766,239	797,487	858,920
IRL	36,358	37,727	40,085	43,294	46,562	52,597	57,972	67,058	77,562	89,408	102,981	115,386	127,917	134,717	146,216
ITA	682,089	744,009	783,257	806,864	854,166	923,571	982,259	1,026,300	1,072,537	1,107,412	1,167,383	1,218,347	1,260,613	1,302,175	1,349,370
LUX	9,180	10,155	10,725	11,843	12,731	13,215	13,928	15,491	17,007	18,739	21,279	22,020	22,805	23,956	25,664
NLD	243,561	256,547	266,472	273,242	287,517	302,233	315,059	333,725	354,194	374,070	402,291	429,345	445,160	454,276	466,310
NOR	726,799	769,782	790,300	830,416	873,410	937,444	1,026,925	1,111,349	1,132,134	1,233,040	1,469,075	1,526,232	1,519,132	1,561,914	1,685,552
POL	59,930	86,517	122,952	166,632	240,779	329,567	414,425	504,133	589,361	652,517	723,886	760,595	781,112	814,922	883,656
PRT	50,817	58,386	65,778	69,187	74,938	80,827	86,230	93,014	100,963	108,030	115,548	122,550	128,458	130,511	135,035
SVK	292,800	336,690	349,920	411,366	495,649	576,502	638,449	712,679	781,437	844,108	934,079	1,009,839	1,098,658	1,201,196	1,325,486
ESP	312,421	342,597	368,987	381,746	406,011	437,788	464,252	494,141	527,974	565,418	610,544	653,927	698,589	744,754	798,672
SWE	1,421,418	1,532,495	1,529,379	1,544,040	1,645,790	1,770,248	1,815,144	1,888,231	1,971,871	2,076,525	2,194,967	2,269,149	2,352,938	2,438,447	2,542,850
CHE	327,356	343,170	350,761	358,206	367,627	372,190	373,896	380,393	390,035	397,671	415,356	422,390	430,900	433,227	444,251
TUR	393	630	1,093	1,982	3,868	7,762	14,772	28,836	52,225	77,415	124,583	178,412	277,574	359,763	430,511
GBR	557,300	586,000	610,562	641,691	680,441	718,383	762,610	810,138	858,616	903,167	950,561	994,309	1,044,145	1,101,144	1,160,339

Notes:

a) Numbers are shown in billions of the national currency.

Source: OECD, 2006

Annex table 2. Gross Fixed Capital Formation

	<i>in Million National Currencies</i>														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
CAN	144,855	134,410	131,231	131,074	144,955	142,997	149,938	174,841	181,836	194,469	206,272	217,618	227,445	237,376	257,056
MEX	132,143	177,019	220,471	232,992	274,566	296,053	450,032	6109,493	804,002	973,800	1,174,300	1,161,952	1,205,941	1,304,885	1,540,995
USA	1,062,171	1,023,597	1,071,528	1,151,599	1,254,600	1,345,551	1,454,353	1,569,894	1,700,701	1,845,574	1,983,500	1,970,026	1,915,480	2,025,466	2,263,622
JPN ^a	142,239	149,057	146,782	142,008	138,675	138,096	145,021	146,235	138,422	133,694	134,850	130,422	120,577	119,400	120,313
KOR ^a	69,234	87,890	95,001	105,623	123,898	148,819	168,156	174,960	146,914	157,407	179,908	183,793	199,047	216,807	229,690
AUS	95,223	86,554	88,073	93,543	105,548	109,344	114,157	123,317	135,401	144,246	148,550	151,309	175,858	192,244	206,044
NZL	14,770	12,121	12,426	14,451	17,002	19,355	20,870	20,809	19,657	20,900	22,972	23,731	26,552	28,862	33,293
AUT	30,698	34,028	35,441	36,278	38,369	39,066	40,193	41,387	42,857	44,488	47,525	47,402	46,241	48,311	51,362
BEL	36,611	35,903	37,051	37,128	38,018	40,290	40,778	44,425	46,613	49,543	52,347	53,005	50,940	51,078	52,792
CZE	165,923	190,192	246,378	303,369	355,909	463,486	520,994	534,373	554,648	550,598	594,912	638,623	643,312	677,950	747,068
DNK	165,954	165,591	160,995	155,736	168,361	189,296	198,401	220,514	240,310	240,936	258,084	268,410	272,799	274,369	287,543
FIN	25,308	20,647	16,437	13,815	13,902	16,097	17,110	19,972	22,387	23,440	25,724	27,759	26,672	26,371	27,611
FRA	228,023	230,979	227,266	213,085	217,773	222,369	224,190	224,484	240,660	259,899	287,249	297,218	296,407	299,696	316,974
DEU	325,292	359,300	386,639	379,350	400,420	403,760	399,610	402,212	410,971	423,051	439,348	421,340	393,031	381,108	374,750
GRC	9,035	10,895	11,890	12,736	13,292	14,867	17,104	19,248	22,348	25,529	28,716	31,285	33,779	39,299	42,166
HUN	..	555,428	621,068	711,612	933,062	1,125,398	1,475,537	1,898,921	2,384,615	2,724,530	3,099,131	3,492,991	3,916,888	4,141,288	4,551,808
ISL	72,280	79,210	72,552	67,731	70,206	71,138	92,352	103,667	139,220	135,333	157,917	165,563	135,475	160,678	188,741
IRL	6,777	6,438	6,729	6,682	7,671	9,222	11,186	13,947	17,468	21,737	25,320	26,992	28,918	31,720	36,432
ITA	146,331	156,656	160,126	148,573	153,748	169,674	180,187	187,381	197,928	210,280	231,386	240,484	249,507	249,580	260,247
LUX	2,154	2,566	2,295	2,811	2,852	2,851	2,976	3,448	3,849	4,458	4,434	5,015	4,998	4,738	4,959
NLD	54,685	56,127	57,611	56,595	58,285	61,347	66,381	71,680	76,230	84,186	88,955	92,873	92,572	91,636	95,415
NOR	156,211	152,207	151,086	164,125	174,378	186,547	208,603	245,694	284,905	271,827	272,767	278,936	274,680	270,995	303,917
POL	11,761	15,775	19,296	24,749	40,386	57,404	80,390	110,853	139,205	156,691	170,430	157,210	148,338	149,962	160,835
PRT	13,328	14,564	15,600	15,385	16,681	18,457	20,123	23,771	27,125	29,462	32,420	33,258	32,167	29,491	30,508
SVK	86,910	90,340	109,300	123,374	131,819	144,248	205,845	243,540	281,775	249,792	242,276	291,027	303,482	308,403	327,226
ESP	80,785	86,059	85,326	81,153	85,699	96,252	100,389	108,080	120,719	136,335	154,340	165,382	175,752	190,437	211,809
SWE	328,868	319,808	279,600	241,846	255,000	282,855	293,467	296,632	324,498	358,325	389,011	395,616	392,069	384,567	405,377
CHE	94,994	94,174	86,928	83,079	86,654	86,695	82,816	82,312	87,066	88,660	94,740	93,658	92,732	90,795	93,558
TUR	90	150	258	526	952	1,850	3,706	7,618	12,839	16,931	27,848	32,409	46,043	55,618	76,722
GBR	114,300	105,179	100,583	101,027	108,314	117,448	126,291	133,776	150,539	154,647	161,211	165,504	171,695	179,534	195,865

Notes:

a) Numbers are shown in billions of the national currency.

Source: OECD, 2006.

Annex table 3. Population

	<i>in thousands of inhabitants</i>														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
CAN	27,698	28,031	28,367	28,682	28,999	29,302	29,611	29,907	30,157	30,404	30,689	31,021	31,373	31,660	31,946
MEX	81,250	83,265	84,902	86,613	88,402	91,234	92,788	94,305	95,786	97,199	98,658	100,051	101,398	102,708	104,000
USA	249,973	252,665	255,410	258,119	260,637	263,082	265,502	268,048	270,509	272,945	275,372	285,329	288,173	291,028	293,907
JPN	123,480	123,960	124,430	124,830	125,180	125,570	125,859	126,157	126,472	126,667	126,926	127,291	127,435	127,619	127,687
KOR	42,869	43,296	43,748	44,195	44,642	45,093	45,525	45,954	46,287	46,617	47,008	47,354	47,615	47,849	48,082
AUS	17,065	17,284	17,495	17,667	17,855	18,072	18,311	18,518	18,711	18,926	19,153	19,413	19,641	19,873	20,111
NZL	3,363	3,495	3,532	3,572	3,620	3,673	3,732	3,781	3,815	3,835	3,858	3,881	3,939	4,009	4,061
AUT	7,718	7,823	7,884	7,993	8,031	8,047	8,059	8,072	8,078	8,092	8,110	8,132	8,084	8,118	8,175
BEL	9,967	10,004	10,045	10,084	10,116	10,137	10,157	10,181	10,203	10,226	10,251	10,287	10,333	10,376	10,399
CZE	10,362	10,309	10,318	10,331	10,336	10,331	10,316	10,304	10,294	10,283	10,272	10,224	10,201	10,202	10,211
DNK	5,141	5,154	5,171	5,189	5,206	5,233	5,263	5,285	5,304	5,322	5,340	5,359	5,374	5,387	5,401
FIN	4,986	5,014	5,042	5,066	5,088	5,108	5,125	5,140	5,153	5,165	5,176	5,188	5,201	5,213	5,228
FRA	56,709	56,976	57,240	57,467	57,659	57,844	58,026	58,207	58,398	58,647	58,970	59,322	59,678	60,028	60,309
DEU	79,364	79,984	80,594	81,179	81,422	81,661	81,896	82,052	82,029	82,087	82,188	82,340	82,482	82,520	82,501
GRC	10,089	10,256	10,370	10,466	10,553	10,634	10,709	10,777	10,835	10,883	10,917	10,950	10,988	11,024	11,060
HUN	10,374	10,373	10,369	10,358	10,343	10,329	10,311	10,290	10,267	10,238	10,211	10,188	10,159	10,130	10,107
ISL	255	258	261	264	266	267	269	271	274	277	281	285	288	289	293
IRL	3,503	3,524	3,549	3,563	3,583	3,601	3,626	3,664	3,703	3,742	3,790	3,847	3,917	3,979	4,044
ITA	56,719	56,751	56,859	57,049	57,204	57,301	57,397	57,512	57,588	57,646	57,762	57,894	57,994	58,095	58,193
LUX	384	390	395	401	407	413	416	421	427	433	436	442	446	450	452
NLD	14,951	15,070	15,184	15,290	15,383	15,459	15,531	15,611	15,707	15,812	15,926	16,046	16,149	16,224	16,275
NOR	4,241	4,262	4,287	4,312	4,337	4,359	4,381	4,405	4,431	4,462	4,491	4,514	4,538	4,564	4,592
POL	38,119	38,245	38,365	38,459	38,544	38,588	38,618	38,650	38,666	38,654	38,256	38,251	38,232	38,195	38,180
PRT	9,873	9,860	9,833	9,840	9,840	9,847	9,866	9,878	10,129	10,171	10,229	10,305	10,380	10,449	10,509
SVK	5,298	5,283	5,307	5,325	5,347	5,364	5,374	5,383	5,391	5,395	5,401	5,379	5,379	5,379	5,382
ESP	38,851	38,940	39,069	39,190	39,296	39,388	39,479	39,583	39,722	39,927	40,264	40,721	41,314	42,005	42,692
SWE	8,559	8,617	8,668	8,719	8,781	8,827	8,841	8,846	8,851	8,858	8,872	8,896	8,925	8,958	8,994
CHE	6,712	6,800	6,875	6,938	6,994	7,041	7,072	7,089	7,110	7,144	7,184	7,227	7,285	7,339	7,391
TUR	56,154	57,262	58,374	59,491	60,612	61,737	62,873	64,015	65,157	66,293	67,420	68,529	69,626	70,712	71,789
GBR	57,237	57,439	57,585	57,714	57,862	58,025	58,164	58,314	58,475	58,684	58,886	59,113	59,322	59,554	59,778

Source: OECD, 2006

Annex table 4.
International Standard Industrial Classification of All Economic Activities – Third Revision (ISIC Rev. 3)

- A** - Agriculture, hunting and forestry
01 - Agriculture, hunting and related service activities
02 - Forestry, logging and related service activities
- B** - Fishing
05 - Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing
- C** - Mining and quarrying
10 - Mining of coal and lignite; extraction of peat
11 - Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction excluding surveying
12 - Mining of uranium and thorium ores
13 - Mining of metal ores
14 - Other mining and quarrying
- D** - Manufacturing
15 - Manufacture of food products and beverages
16 - Manufacture of tobacco products
17 - Manufacture of textiles
18 - Manufacture of wearing apparel; dressing and dyeing of fur
19 - Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
20 - Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
21 - Manufacture of paper and paper products
22 - Publishing, printing and reproduction of recorded media
23 - Manufacture of coke, refined petroleum products and nuclear fuel
24 - Manufacture of chemicals and chemical products
25 - Manufacture of rubber and plastics products
26 - Manufacture of other non-metallic mineral products
27 - Manufacture of basic metals
28 - Manufacture of fabricated metal products, except machinery and equipment
29 - Manufacture of machinery and equipment n.e.c.
30 - Manufacture of office, accounting and computing machinery
31 - Manufacture of electrical machinery and apparatus n.e.c.
32 - Manufacture of radio, television and communication equipment and apparatus
33 - Manufacture of medical, precision and optical instruments, watches and clocks
34 - Manufacture of motor vehicles, trailers and semi-trailers
35 - Manufacture of other transport equipment
36 - Manufacture of furniture; manufacturing n.e.c.
37 - Recycling
- E** - Electricity, gas and water supply
40 - Electricity, gas, steam and hot water supply
41 - Collection, purification and distribution of water
- F** - Construction
45 - Construction
- G** - Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
50 - Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel
51 - Wholesale trade and commission trade, except of motor vehicles and motorcycles
52 - Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods
- H** - Hotels and restaurants
55 - Hotels and restaurants
- I** - Transport, storage and communications
60 - Land transport; transport via pipelines
61 - Water transport
62 - Air transport
63 - Supporting and auxiliary transport activities; activities of travel agencies
64 - Post and telecommunications
- J** - Financial intermediation
65 - Financial intermediation, except insurance and pension funding
66 - Insurance and pension funding, except compulsory social security
67 - Activities auxiliary to financial intermediation
K - Real estate, renting and business activities
70 - Real estate activities
71 - Renting of machinery and equipment without operator and of personal and household goods
72 - Computer and related activities
73 - Research and development
74 - Other business activities
- L** - Public administration and defence; compulsory social security
75 - Public administration and defence; compulsory social security
- M** - Education
80 - Education
- N** - Health and social work
85 - Health and social work
- O** - Other community, social and personal service activities
90 - Sewage and refuse disposal, sanitation and similar activities
91 - Activities of membership organizations n.e.c.
92 - Recreational, cultural and sporting activities
93 - Other service activities
- P** - Private households with employed persons
95 - Private households with employed persons
- Q** - Extra-territorial organizations and bodies
99 - Extra-territorial organizations and bodies

Annex table 5. List of Abbreviations and Acronyms

CEPA	Single European Standard <u>C</u> lassification of <u>E</u> nvironmental <u>P</u> rotection <u>A</u> ctivities and expenditure (CEPA 2000)
COFOG	<u>C</u> lassification <u>o</u> f the <u>F</u> unctions of <u>G</u> overnment
EP	<u>E</u> nvironmental <u>P</u> rotection
EPE	<u>E</u> nvironmental <u>P</u> rotection <u>E</u> xpenditure
EPEA	<u>E</u> nvironmental <u>P</u> rotection <u>E</u> xpenditure <u>A</u> ccount
EPER	<u>E</u> nvironmental <u>P</u> rotection <u>E</u> xpenditure and <u>R</u> evenues
ESA 95	<u>E</u> uropean <u>S</u> ystem of <u>A</u> ccounts (1995)
GDP	<u>G</u> ross <u>D</u> omestic <u>P</u> roduct
GFCF	<u>G</u> ross <u>F</u> ixed <u>C</u> apital <u>F</u> ormation
ISIC	<u>I</u> nternational <u>S</u> tandard <u>I</u> ndustrial <u>C</u> lassification of all Economic Activities
NACE	<u>N</u> omenclature générale des <u>A</u> ctivités Economiques dans la <u>C</u> ommunauté <u>E</u> uropéenne (Classification of Economic Activities in the European Community)
NAICS	<u>N</u> orth <u>A</u> merican <u>I</u> ndustry <u>C</u> lassification <u>S</u> ystem
NPISH	<u>N</u> on- <u>P</u> rofit <u>I</u> nstitutions <u>S</u> ervicing <u>H</u> ouseholds
NUTS	<u>N</u> omenclature des <u>U</u> nités <u>T</u> erritoriales <u>S</u> tatistiques (Nomenclature of Territorial Units for Statistics of the European Commission)
PAC	<u>P</u> ollution <u>A</u> batement and <u>C</u> ontrol
SBS	<u>S</u> tructural <u>B</u> usiness <u>S</u> tatistics
SIC	<u>S</u> tandard <u>I</u> ndustrial <u>C</u> lassification
SERIEE	<u>S</u> ystème <u>E</u> uropéen pour le <u>R</u> assemblage des <u>I</u> nformations <u>E</u> conomiques sur l' <u>E</u> nvironnement (European System for the collection of Eco
SEEA	<u>S</u> ystem of integrated <u>E</u> nvironmental and <u>E</u> conomic <u>A</u> ccounting

REFERENCES

International references

Eurostat (2002), SERIEE, Environmental protection expenditure Accounts – Compilation guide, 2002 edition

Eurostat: CEPA 2000: <http://www.europa.eu.int/comm/eurostat/ramon>

Eurostat (1994), SERIEE, European System for the collection of economic information on the environment – 1994 Version.

OECD (2003), Pollution Control and Abatement Expenditure in OECD Countries, Environment Monograph ENV/EPOC/SE(2003)1, Paris: <http://www.oecd.org/dataoecd/41/57/4704311.pdf>

OECD (2001), Environmental performance reviews – Achievements in OECD countries

OECD, Country Environmental performance reviews – first cycle reviews

◆ Germany	English, French, German	1993	◆ Korea	English, French, Korean	1997
◆ Iceland	English, French	1993	◆ Finland	English, French	1997
◆ Norway	English, French	1993	◆ Belarus*	English, French, Russian	1997
◆ Portugal	English, French	1993	◆ Mexico	English, French, Spanish	1998
◆ Japan	English, French, Japanese	1994	◆ Australia	English, French	1998
◆ United Kingdom	English, French	1994	◆ Belgium	English, French	1998
◆ Italy	English, French, Italian	1994	◆ Switzerland	English, French, German	1998
◆ Netherlands	English, French	1995	◆ Denmark	English, French	1999
◆ Poland*	English, French, Russian, Polish	1995	◆ Czech Republic	English, French, Czech	1999
◆ Canada	English, French	1995	◆ Turkey	English, French, Turkish	1999
◆ Austria	English, French, German	1995	◆ Russia*	English, French, Russian	1999
◆ United States	English, French, Spanish	1996	◆ Greece	English, French, Greek	2000
◆ Bulgaria*	English, French, Russian, Bulgarian	1996	◆ Hungary	English, French, Hungarian	2000
◆ Sweden	English, French	1996	◆ Ireland	English, French	2000
◆ New Zealand	English, French	1996	◆ Luxembourg	English, French	2000
◆ France	English, French	1997	◆ Slovak Republic	English, French	2002
◆ Spain	English, French, Spanish	1997			

OECD, Country Environmental performance reviews – second cycle reviews

◆ Germany	English, French, German	2001	◆ Spain	English, French, Spanish	2004
◆ Iceland	English, French	2001	◆ Sweden	English, French	2004
◆ Norway	English, French	2001	◆ France	English, French	2005
◆ Portugal	English, French	2001	◆ Chile**	English, French, Spanish	2005
◆ Japan	English, French	2002	◆ Czech Republic	English, French, Czech	2005
◆ United Kingdom	English, French	2002	◆ United States	English, French	2006
◆ Italy	English, French, Italian	2002	◆ Korea	English, French	2006
◆ Netherlands	English, French	2003	◆ Belgium	English, French	2007 forthcoming
◆ Poland	English, French, Polish	2003	◆ China*	English, French, Chinese	2007 forthcoming
◆ Austria	English, French, German	2003	◆ Switzerland	English, French	2007 forthcoming
◆ Mexico	English, French, Spanish	2003	◆ New Zealand	English, French	2007 forthcoming
◆ Canada	English, French	2004	◆ Australia	English, French	2007 forthcoming

OECD (1996), Pollution Control and Abatement Expenditure in OECD Countries, Environment Monograph OECD/GD(96)50, Paris.

OECD/COWIconsult (1995), Case Study of Environmental Expenditure and Investment in Six Selected CEE Countries, Draft Final Report, June 1995, Lyngby, Denmark.

OECD (1993), Pollution Control and Abatement Expenditure in OECD Countries, Environment Monographs No. 75, Paris.

OECD (1990), Pollution Control and Abatement Expenditure in OECD Countries: A Statistical Compendium, Environment Monographs No. 38, Paris.

OECD/Eurostat Questionnaire on the State of the Environment – section "Environmental Protection Expenditure and Revenues."

United Nations, European Commission, International Monetary Fund, Organisation for Economic co-operation and Development, World Bank (2003), *Integrated Environmental and Economic Accounting - Handbook on national accounting*.

*. In co-operation with the UN-ECE. ** in co-operation with UN-ECLAC.

National references

Australia

Australian Bureau of Statistics (ABS), website: <http://www.abs.gov.au>

Australian Bureau of Statistics (2004), *Environment Expenditure, Local government, Australia, 2002-2003*. Australian Bureau of Statistics, Catalogue No. 4611.0.

Australian Bureau of Statistics (2002), *Environment Expenditure, Local government, Australia, 2000-2001*. Australian Bureau of Statistics, Catalogue No. 4611.0.

Australian Bureau of Statistics (2002), *Environment Protection, Mining and manufacturing industries, Australia, 2000-2001*. Australian Bureau of Statistics, Catalogue No. 4603.0.

Australian Bureau of Statistics (1999), *Environment Protection Expenditure, Australia, 1996-1997*. Australian Bureau of Statistics, Catalogue No. 4603.0.

Australian Bureau of Statistics (1999), *Environment Protection Expenditure, Australia, 1995-96 and 1996-97*, Australian Bureau of Statistics, Catalogue No. 4603.0.

Australian Bureau of Statistics (1994), *Cost of Environment Protection, Australia, Selected Industries 1990-91, A Research Project of the Australian Bureau of Statistics*, Catalogue No. 4603.0.

Austria

Statistik Austria, website: http://www.statistik.at/fachbereich_umwelt/txt.shtml

Österreichisches Statistisches Zentralamt (1999), *SERIEE tables for Austria – 1995 and 1996*. Document prepared for a Eurostat meeting.

Österreichisches Statistisches Zentralamt und Umweltbundesamt (1994), *Umwelt in Österreich, Daten und Trends*. Wien.

Bundeskammer der gewerblichen Wirtschaft (1992), *Aufwendungen der Industrie für den Umweltschutz*. Wien.

Belgium

Statistics Belgium, website: <http://statbel.fgov.be/>

Vandille, G. (2005), *Environmental Protection Expenditure Accounts for Belgium: 1997-2002*. Report for Eurostat, Federal Planning Bureau, Brussels, 154 pp.

Mira, T. (2005), *Milieu & economie: milieu-uitgaven en vergroening van het belastingstelsel nader bekeken*. Flemish Environmental Thematic Report, 227-244 pp.

Kestemont, B. (2004), *Environmental expenditures by the Belgian industry in 2002. Imputation techniques and results*. Statistics Belgium Working Paper no 9, Direction générale Statistique et information économique, Brussels, 77 pp. http://statbel.fgov.be/studies/home_fr.asp#2

Canada

Statistics Canada, website: <http://www.statcan.ca/english/Pgdb/>

CANSIM, Statistics Canada's socio economic database is available online at www.statcan.ca

Statistics Canada (2004), *Environmental Protection Expenditures in the Business Sector (2002)*. 16F0006XIE, Ottawa/ Statistique Canada (2004), *Dépenses de protection de l'environnement du secteur des entreprises (2002)*. 16F0006XIF, Ottawa.

Statistics Canada (2002), *Human Activity and the Environment*, Catalogue No. 16-201-XIE.

Statistics Canada (2001), *Econnections: Linking the Environment and the Economy, Indicators and Detailed Statistics (2000)*. Catalogue No 16-200-XKE, Ottawa. (Statistique Canada (2001), *Éconnexions: Pour lier l'environnement et l'économie, Indicateurs et statistiques détaillées (2000)*, 16-200-XKF, Ottawa).

Statistics Canada (several years: 1996, 1998, 2000, 2001), *Environmental Protection Expenditures in the Business Sector (1994, 1995, 1996 and 1997 (revised), 1998)*. Catalogue No 16F0006XIE, Ottawa. (Statistique Canada (plusieurs années: 1996, 1998, 2000, 2001), *Dépenses de protection de l'environnement du secteur des entreprises (1994, 1995, 1996 et 1997 (données révisées), 1998)*, 16F0006XIF, Ottawa).

Statistics Canada (2000), *Waste Management Industry Survey: Business and Government Sectors, 1998*. Catalogue No. 16F0003XPE, Ottawa. (Statistique Canada (2000), *Enquête de l'industrie de la gestion des déchets secteur des entreprises et des administrations publiques, 1998*, no 16F0003XPF au catalogue, Ottawa).

Statistics Canada (1999), *Waste Management Industry Survey: Business and Government Sectors, 1996*. Catalogue No. 16F0003XPE, Ottawa. (Statistique Canada (1999), *Enquête de l'industrie de la gestion des déchets secteur des entreprises et des administrations publiques, 1996*, no 16F0003XPF au catalogue, Ottawa).

Statistics Canada (1998), *Waste Management Industry Survey: Business Sector, 1995*. Catalogue No. 16F0003XPE, Ottawa. (Statistique Canada (1998), *Enquête de l'industrie de la gestion des déchets, 1995 - Secteur des entreprises*, no 16F0003XPF au catalogue, Ottawa).

Statistics Canada (1997), *Econnections: Linking the Environment and the Economy, Indicators and Detailed Statistics*. Catalogue No. 16-200-XKE, Ottawa. (Statistique Canada (1997), *Éconnexions: Pour lier l'environnement et l'économie, Indicateurs et statistiques détaillées*, no 16-200-XKF au catalogue, Ottawa).

Statistics Canada (1996), *Waste Management Industry Survey, 1994 - Business Sector*. Catalogue No 16F0003XPE. (Enquête de l'industrie de la gestion des déchets, 1994 - Secteur des entreprises).

Statistics Canada (1996), *Environmental Protection Expenditures in the Business Sector, 1994*. Catalogue No 16F0006XNE, National Accounts and Environment Division, Ottawa.

Statistics Canada (1995), *Environmental Perspectives, Studies and Statistics 2*. Catalogue No. 11-528E, Ottawa (Perspectives sur l'environnement, Études et Statistiques 2).

Environment Canada (1992), *Market Survey of Environmental Expenditures by Canadian Business*. (Prepared by Duns Marketing Services, Dun & Bradstreet Canada for Environment Canada).

Statistics Canada (1992), *Analysis of the 1989 Pollution Abatement and Control Survey*, Capital Expenditures Section, Investment and Capital Stock Division.

Statistics Canada (1991), *Human Activity and the Environment*, Catalogue No. 11-509E.

Denmark

Etwil P. and Vesselbo E. (1993), *Collection of data on expenditure on the environment by the General Government Sector*, Danmarks Statistik, in Contributions of States and EFTA countries to the SERIEE system, Eurostat F3, Luxembourg, 1994.

Kring Rasmussen, V. (1993), *Collection of Data on Current Expenditure and Investments Relating to Environmental Protection in Industry*, Danmarks Statistik, in Contributions of Member States and EFTA countries to the SERIEE system, Eurostat F3, Luxembourg, 1994.

Finland

Statistics Finland, website : <http://tilastokeskus.fi/til/tymm/index.html>

Statistics Finland (2006), *Environment Statistics*.

Statistics Finland (1996), *Environmental Protection Expenditure by Finnish Industry in 1994*, Environment 1996:5, Helsinki.

Statistics Finland (1995), *Environmental Expenditure by Finnish Industry in 1993*, Environment 1995:9, Helsinki.

Statistics Finland (1994), *Environmental Expenditure of Manufacturing and Related Industries in Finland in 1992*, Environment 1994:4, Helsinki.

France

IFEN website : <http://www.ifen.fr/pages/4ecosoc.htm>

Ministère de l'écologie et du développement durable – Institut français de l'environnement (2006), *L'économie de l'environnement en 2004*. Rapport à la Commission des comptes et de l'économie de l'environnement, Édition 2006, Lavoisier Tec&Doc, Paris.

Ministère de l'écologie et du développement durable – Institut français de l'environnement (2002), *Données économiques de l'environnement – Rapport à la Commission des comptes et de l'économie de l'environnement*, Édition 2002, Lavoisier Tec&Doc, Paris.

Ministère de l'aménagement du territoire et de l'environnement – Institut français de l'environnement (2001), *Données économiques de l'environnement – Rapport à la Commission des comptes et de l'économie de l'environnement*, Édition 2000-2001, La documentation Française, Paris.

Ministère de l'aménagement du territoire et de l'environnement – Institut français de l'environnement (1999), *Données économiques de l'environnement – Rapport à la Commission des comptes et de l'économie de l'environnement*, Édition 1999, La documentation Française, Paris.

Ministère de l'Environnement (1997), *Données économiques de l'environnement*, Economica, Paris.

IFEN (1996), *Les comptes de la dépense de protection de l'environnement - La gestion des déchets 1990-1993*, Etudes et Travaux n° 9, Orléans.

IFEN (1996), *Les comptes de la dépense de protection de l'environnement - La gestion des eaux usées 1990-1994*, Etudes et Travaux n° 10, Orléans.

Ministère de l'Environnement (1996), *Données économiques de l'environnement*, Economica, Paris.

Ministère de l'Environnement (1994), *Données économiques de l'environnement*, éditions 1992-1993, Imprimerie France Quercy, Cahors.

Germany

Statistisches Bundesamt website: http://www.destatis.de/themen/e/thm_environment.htm

Statistisches Bundesamt (2001), *Umweltökonomische Gesamtrechnungen - Ausgaben und Anlagevermögen für Umweltschutz - 2001*, Fachserie 19, Reihe 6, Metzler-Poeschel, Stuttgart.

Statistisches Bundesamt (1996), *Umweltökonomische Gesamtrechnungen - Basisdaten und ausgewählte Ergebnisse - 1996*, Reihe 4, Fachserie 19, Metzler-Poeschel, Stuttgart.

Statistisches Bundesamt (1995), *Umweltökonomische Gesamtrechnungen — Ausgaben und Anlagevermögen für Umweltschutz — 1995*, Reihe 6, Fachserie 19, Metzler-Poeschel, Stuttgart.

Statistisches Bundesamt (1994), *Umweltökonomische Gesamtrechnungen — Basisdaten und ausgewählte Ergebnisse — 1994*, Reihe 4, Fachserie 19, Metzler-Poeschel, Stuttgart.

Greece

Skourtos M. S. and Stefanou P. (1994), *Statistics of Environmental Expenditure in Industry and Services and the State Sector: The Greek Experience*, Athens/Mytilene, Greece, September 1994.

Skourtos M. S. and Stefanou P. (1993), *Collection of data on expenditure on the environment by the General Government Sector of Greece*, in Contributions of Member States and EFTA countries to the SERIEE system, Eurostat F3, Luxembourg.

Italy

ISTAT websites: <http://www.istat.it/Amb/index.htm> and <http://www.istat.it/DATI/Conti/speseimprese97.htm>

Ministry of the environment and territory (2006), *Relazione sullo stato dell'ambiente 2005* [Report on the state of the environment 2005], 23 marzo 2006, Roma, http://www2.minambiente.it/sito/pubblicazioni/rsa_2005/rsa_2005.asp.

ISTAT (2006), *La spesa per la protezione dell'ambiente delle Amministrazioni dello Stato. Anni 2001-2004* [Central Government expenditure for environmental protection – Years 2001-2004], Istat, Statistiche in breve, 19 aprile 2006, <http://www.istat.it/conti/ambientali/>

ISTAT (2006), *Contabilità ambientale e sviluppo* [Environmental accounting for development policies], <http://www.istat.it/ambiente/contesto/ambientale/index.html>. See in particular “Aggregati EPEA di spesa pubblica per la protezione dell'ambiente Regione Lazio, anni 1995-2001” [Environmental protection expenditure of Region Lazio – years 1995-2001].

Regione Lazio (2005), *Rapporto sullo Stato dell'Ambiente del Lazio 2004* [Report on the state of the environment of Lazio 2004], Roma: <http://www.arpalazio.it/pubblicazioni/pubblicazioni.php>.

Ministry of the economic development – ISTAT (2005), *Development policies and the environment: using environmental accounts for better decision making*, http://www.dps.tesoro.it/documentazione/uval/materiali_uval/MUVAL5_eng.pdf

ISTAT (2005), *La spesa per la protezione dell'ambiente delle Amministrazioni dello Stato. Anni 1995-2002* [Central Government expenditure for environmental protection – Years 1995-2002], Istat, Statistiche in breve, 17 maggio 2005, <http://www.istat.it/conti/ambientali/>

ISTAT (2005), *Spesa delle Amministrazioni pubbliche per funzione. Serie SEC95 - anni 2001-2004* [General Government expenditure by function. ESA95 series – Years 2001-2004], Statistiche in breve, 19 dicembre 2005, <http://www.istat.it/conti/nazionali/>

ISTAT (2005), *Environment Statistics. 2004*, http://www.istat.it/dati/catalogo/20051114_00/

ISTAT (2004), *Spesa delle Amministrazioni pubbliche per funzione. Serie SEC95 - anni 1990-2002* [General Government expenditure by function. ESA95 series – Years 1990-2002], Statistiche in breve, 12 febbraio 2004, <http://samoa.istat.it/Economia/Conti-nazi/Storico/index.htm>

ISTAT (2004), *Spesa delle Amministrazioni pubbliche per funzione. Serie SEC95 - anni 2000-2003* [General Government expenditure by function. ESA95 series – Years 2000-2003], Statistiche in breve, 15 dicembre 2004, <http://www.istat.it/conti/nazionali/>

ISTAT (2003), *Environment Statistics. 2002*, http://www.istat.it/dati/catalogo/20031029_01/.

ISTAT (2003), *Prima applicazione del conto EPEA per l'Italia. Conto satellite delle spese per la protezione dell'ambiente per i settori della gestione delle acque reflue e della gestione dei rifiuti* [The first Italian EPEA for waste and wastewater management], Roma, <http://www.istat.it/conti/ambientali/>

Ministero dell'ambiente (2001), *Relazione sullo stato dell'ambiente 2001* (the State of the Environment 2001), Istituto Poligrafico e Zecca dello Stato.

ISTAT (1996), *Statistiche Ambientali*.

Ministero dell'ambiente (1993), *Report on the State of the Environment in Italy, Survey for the Environmental Impact Assessment, Public Information and the Report on the State of the Environment*, Istituto Poligrafico e Zecca dello Stato.

Ministero dell'ambiente (1989), *Relazione sullo stato dell'ambiente, 1989*, Istituto Poligrafico e Zecca dello Stato.

Korea

Statistics Korea, website: <http://ecos.bok.or.kr/>

Luxembourg

Ministère de l'Environnement (2000), *La dépense de protection de l'environnement au Grand-Duché de Luxembourg*. Document de travail No 1, Ministère de l'Environnement, Novembre 2000.

Netherlands

Netherlands Central Bureau of Statistics (various years, regular publication), *Environmental Statistics of the Netherlands*, Voorburg/Heerlen. See also: <http://www.cbs.nl>

National Institute of Public Health and the Environment (RIVM)/Netherlands Central Bureau of Statistics (2002), *Dutch Environmental Data Compendium 2001* [<http://arch.rivm.nl/environmentaldata>]

Netherlands Central Bureau of Statistics (1996), *Environmental Statistics of the Netherlands*, 1996, Voorburg/Heerlen.

New Zealand

Statistics New Zealand website for EPE: www.stats.govt.nz/environment/environmental-statistics/environmental-accounts/environment-protection-expenditure.htm

Statistics New Zealand (2002), *Environmental Protection Expenditure Account – For the Public Sector. Year ended June 2001*, Statistics New Zealand, July 2002.

Norway

Statistics Norway, website: (in English),

Municipal wastewater: http://www.ssb.no/english/subjects/01/04/20/avlok_en/

Industry: http://www.ssb.no/english/subjects/01/06/20/miljokostind_en/

Statistics Norway (1996), *Environmental Protection expenditure in Norway*, Andrew K. Essilfie, Division for Environmental Statistics.

Poland

Statistics Poland, website: www.stat.gov.pl

Statistics Poland, *Ochrona Środowiska (Environment 2005)* / chapter Economic Aspects of Environment Protection (annual).

Statistics Poland, Collective publications: *Rocznik Statystyczny Rzeczypospolitej Polskiej (Statistical Yearbook of the Republic of Poland)* (annual)

Statistics Poland, *Mały Rocznik Statystyczny (Concise Statistical Yearbook of Poland)* (annual)

Statistics Poland, *Rocznik Statystyczny Rolnictwa i Obszarów Wiejskich (Statistical Yearbook of Agriculture and Rural Areas)* (annual)

Statistics Poland, *Rocznik Statystyczny Województw (Statistical Yearbook of the Regions - Poland)* (annual)

Statistics Poland, *Rocznik Statystyczny Przemysłu (Statistical Yearbook of Industry)* (annual)

Statistics Poland, *Powiaty w Polsce (Poviats in administrative districts)* (biannual)

Portugal

INE website: <http://www.ine.pt>

Ribeiro (1992), *Methodological problems inherent in setting up an economic database on the environment*, Portugal.

Spain

Ministerio de Medio Ambiente: *Gasto público en medio ambiente 1996*, Madrid.

Ministerio de Medio Ambiente (1998), *Gasto público en medio ambiente 1995, análisis comparativo 1987 - 1995*, Madrid.

Ministerio de Medio Ambiente (1996), *Gasto público en medio ambiente en 1992 y 1993 y datos comparativos 1987-1993*, Madrid.

Ministerio de Medio Ambiente: *Encuesta, estudio y resultados del gasto de las administraciones públicas en la protección del medio ambiente y en el uso y gestión de los recursos naturales en los años 1997, 1998 y 1999*, Madrid.

Ministerio de Obras Públicas, Transportes y Medio Ambiente (1994), *Gasto público en medio ambiente en 1991 y datos comparativos 1987-1991*, Madrid.

Sweden

Statistics Sweden, website: www.scb.se.

Statistics Sweden (2002), *Environmental protection expenditure in industry 2001*.

Statistics Sweden (2001), *Environmental protection expenditure by industry 1999 and 2000*

Statistics Sweden (1998), *Environmental protection expenditure by industry 1997*

Björnsell M. (1993), *Environmental Expenditures in the Swedish Manufacturing Industries, An Inventory of Problems*, Statistics Sweden, in Contributions of Member States and EFTA countries to the SERIEE system, Eurostat F3, Luxembourg, 1994.

Switzerland

Bundesamt für Statistik (2002), *Environment Switzerland 2002 - Statistics and Analyses*
[http://www.statistik.admin.ch/stat_ch/ber02/env_ch/eenv01-02.htm]

Bundesamt für Statistik (1996), *Umweltausgaben und -investitionen in der Schweiz 1992/1993*, Ergebnisse einer Pilotstudie 2 Raum, Landschaft und Umwelt, Bern.

United Kingdom

Department for Environment, Food and Rural Affairs (DEFRA) website:

<http://www.defra.gov.uk/environment/statistics/index.htm>

Information about the UK Environmental Protection Expenditure by Industry survey on:

<http://www.defra.gov.uk/environment/statistics/envsurvey/index.htm>

HMSO (1996), *Environmental Protection Expenditure by Industry, A survey of environmental protection expenditure by extraction, manufacturing, energy and water supply industries in the UK*, Department of the Environment.

HMSO (1993), *A Review of UK Environmental Expenditure*, A Final Report to the Department of the Environment by Ecotec Research and Consulting Ltd, London.

United States

US Census Bureau website: *Survey of Pollution Abatement Costs and Expenditure*
[<http://www.census.gov/econ/www/mu1100.html>]

Becker, R.A. and R.J. Shadbegian (2004), *A change of PACE: Comparing the 1994 and 1999 pollution abatement costs and expenditure surveys*. CES 04-09, Center for Economic Studies, July 2004.

US Census Bureau (2002), *Pollution Abatement Costs and Expenditures: 1999*

Vogan, C.R. (1996), *Pollution Abatement and Control Expenditures, 1972-94*, Survey of Current Business, September 1996.