

Data collection guidelines for the Kiev report

Prepared by:
Kenneth Wright and Catherine Russel of WRc

Project Manager:
Peter Bosch
European Environment Agency

September 2001



Layout: Brandenburg a/s

EEA contact person:

Peter Bosch
European Environment Agency
Kongens Nytorv 6
DK-1050 Copenhagen K
Fax (45) 33 36 72 93
E-mail: peter.bosch@eea.eu.int

Legal notice

Neither the European Environment Agency nor any person or company acting on behalf of the Agency is responsible for the use that may be made of the information contained in this report.

A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server (<http://europa.eu.int>).

© EEA, Copenhagen, 2001

Reproduction is authorised provided the source is acknowledged.

European Environment Agency
Kongens Nytorv 6
DK-1050 Copenhagen K
Tel. (45) 33 36 71 00
Fax (45) 33 36 71 99
E-mail: eea@eea.eu.int
Internet: <http://www.eea.eu.int>

Contents

1. Introduction	5
2. Data-set sheets	14
Socioeconomic data	17
Energy	20
Industry	24
Agriculture	25
Forestry	30
Fisheries and mariculture	32
Transport	35
Tourism	44
Climate change	46
Stratospheric ozone depletion	52
Air pollution	53
Production, use and dispersion of hazardous chemicals	59
Waste generation and management	60
Water stress (inland and marine)	74
Soil degradation	92
Technological and natural hazards	100
Biological and landscape diversity	102
Progress in managing the environment and sustainable development	104

3. Map sheets	105
Cover maps	107
Agriculture	108
Transport	109
Tourism	110
Climate change	110
Stratospheric ozone depletion	111
Air pollution	112
Production, use and dispersion of hazardous chemicals	113
Water stress (inland and marine)	115
Soil degradation	116
Biological and landscape diversity	118
Annex 1 — Draft list of contents for the Kiev report	119
List of abbreviations and acronyms	134

1. Introduction

1.1. Background

The European Environment Agency (EEA) is required to provide objective, reliable and comparable information on the state of the environment in support of European policy assessment and development. This information is communicated by the regular production of state of the environment and indicator reports, which provide information to assist environmental planning and relate to stages in EU or European policy processes.

To date, the EEA has produced four state of the environment reports, two of which are pan-European reports. The second of these reports, *Europe's environment — The second assessment*, was reviewed at the pan-European Conference of Environment Ministers in Aarhus in 1998. At this conference, the ministers requested that the EEA regularly updates the information in the second assessment and, for future conferences, presents the findings based on indicators to aid decision-making. Several ministers also mentioned the need for prospective analyses, or outlooks, on environmental quality to be included in future reports.

In addition to the state of the environment reports, the EEA also produces an indicator-based report. The second edition of this yearly report, *Environmental signals 2001*, was published in May 2001.

In light of the comments made by the environment ministers at the Aarhus conference, the EEA has planned to produce, together with existing national and international networks, a pan-European indicator-based assessment for the next ministerial conference in Kiev in 2003. The focus of this report will be on progress in the implementation of international environmental conventions and progress in environmental management in general. The working title of the report is 'The Kiev report'.

1.2. Data collection guidelines

The collection of data for environmental reporting is an essential but time-consuming process. To make the data collection for the Kiev report as efficient as possible, this working document has been prepared. It contains guidelines on the collection of all the necessary data required for the production of the indicators and maps to be presented in the Kiev report. The guidelines are to be used as a tool to aid the production of the Kiev report by bringing together all the experience and expertise of EEA staff and the European topic centres (ETCs) in the area of data availability and data collection. As the report was produced at an early stage of the process, some changes can be introduced as the indicators are further developed.

1.3. Development of the list of contents

The first step in the development of the Kiev report was the specification of the contents of the report. A document produced by the EEA containing a draft list of analyses and indicators to be included in the Kiev report was circulated for comments to all European UNECE countries in spring 2000. Comments received were used to develop the 'Draft list of contents for the Kiev report: an indicator-based assessment of Europe's environment' of 27 April 2001. The 'Data collection guidelines' are based on this version of the contents list (Annex 1 at the end of this report). The proposed structure of the Kiev report and the countries to be covered are shown in Tables 1.1 and 1.3.

Table 1.1. Chapter overview of the Kiev report

	Chapter title	Indicative chapter length (pages)
1	Introduction	4
2	Developments in socioeconomic sectors	4-page summary
A	Energy	8
B	Industry	4
C	Agriculture	8
D	Forestry	2
E	Fisheries and mariculture	4
F	Transport	8
G	Tourism	4
	Prominent environmental problems	4-page summary
3	Climate change	12
4	Stratospheric ozone depletion	5
5	Air pollution	12
6	Production, use and dispersion of hazardous chemicals	10
7	Waste generation and management	10
8	Water stress (inland and marine)	16
9	Soil degradation	12
10	Technological and natural hazards	10
11	Biological and landscape diversity	12
12	Progress in managing the environment and sustainable development	14
13	Information needs	4
Annex 1	Country comparison tables	6
Annex 2	International agreements	2
	Total length	Approximately 180–200

Table 1.2. European country groupings used in this report

EU-15	Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden and United Kingdom.
EEA-18	EU-15 plus Iceland, Liechtenstein and Norway
EFTA-4	Iceland, Liechtenstein, Norway and Switzerland
AC-10	Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia
AC-13	AC-10 plus Cyprus, Malta and Turkey (AC-3)
Non-accession Phare	Albania, Bosnia-Herzegovina and FYROM
NIS	Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russian Federation, Ukraine, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan
Western Europe	EU-15, EFTA-4 (Andorra, Monaco and San Marino)
Central and eastern Europe	Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, FYROM, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, Yugoslavia, Cyprus, Malta and Turkey
Central Asian States	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan
UNECE-Europe	All European countries (see Table 1.3)
OECD-Europe	EU-15, Czech Republic, Hungary, Iceland, Norway, Poland, Slovakia, Switzerland and Turkey

Following agreement on the initial list of contents and analyses to be included, the indicators and maps required for the analyses in each chapter have been identified. Consequently, the data sets required for the indicators and maps needed for each analysis could also be

identified. The linkages between the list of chapters, list of analyses, indicators required for each analysis, and the data sets required for each indicator are shown in Table 1.4 at the end of this chapter.

1.4. Description of data sets and data sources

For each data set identified, a one-page guideline sheet has been developed outlining the main data sources, method of data collection, geographical and temporal coverage of the data sets, the timing of the next updates and any known quality or accessibility problems. Areas requiring further work or additional data collection exercises have also been identified, and the personnel responsible for doing this specified.

The data-set guidelines are presented following the order of the chapters and indicators in the Kiev report and each data set has been given a reference number. Table 1.2 shows the main country groupings that have been used.

Countries to be covered in the Kiev report

Table 1.3.

Albania	Czech Republic	Monaco	Poland	Tajikistan
Andorra	Denmark	Netherlands	Portugal	Former Yugoslav Republic of Macedonia (FYROM)
Armenia	Estonia	Greece	Moldova	Turkey
Austria	Finland	Hungary	Romania	Turkmenistan
Azerbaijan	France	Iceland	Russian Federation	Ukraine
Belarus	Georgia	Ireland	San Marino	United Kingdom
Belgium	Germany	Italy	Slovakia	Uzbekistan
Bosnia-Herzegovina	Liechtenstein	Kazakhstan	Slovenia	Yugoslavia
Bulgaria	Lithuania	Kyrgyzstan	Spain	
Croatia	Luxembourg	Latvia	Sweden	
Cyprus	Malta	Norway	Switzerland	

1.5. Organisation of the data collection

Data collection for the Kiev report will be undertaken by a number of personnel and by different processes.

The EEA is supported by five ETCs specialising in the areas of air and climate change, water, waste and material flows, nature protection and biodiversity, and terrestrial environment. Part of the ETCs work programmes is the development and production of indicators within their specialist areas, including the production of the indicators for the Kiev report. Each ETC works with national specialist institutions in countries (national reference centres) to collect and process the data required for these indicators.

Most environmental data for EEA-18 and AC-10 will be collected through this mechanism. For other countries, either national contact points or specialist institutes will be contacted directly for the required information. This data collection process will usually be undertaken by the use of questionnaires.

An important principle for the data collection for the Kiev report is to avoid putting an extra burden on countries. Data from international databases will be used as often as possible (for example, the Eurostat New Cronos database and the Faostat database). Where such databases have insufficient coverage, specific efforts will be undertaken to include as many countries as possible.

All data collected will be stored in a data warehouse, a database at the EEA that is able to capture data from various sources. The data within this warehouse will be made accessible via the Internet to all those involved in the production of the Kiev report.

Table 1.4. Linkages between indicators and data sets for the Kiev report

Chapter	Analysis	Indicator	Data sets required for indicator	
2. Developments in socioeconomic sectors				
A	Energy	Environmental impacts of the energy sector	Energy-related emissions of CO ₂ , SO ₂ and NO _x	Annual emissions of SO ₂ , NO _x , NH ₃ and NMVOCs in total, by sector and energy related
				Annual emissions of individual greenhouse gases (CO ₂ , CH ₄ , N ₂ O, HFC, PFC and SF ₆) and weighted to GWP, total, by sector and energy related
			Nuclear waste generation	Quantity of waste generated by the energy sector
		Energy consumption	Total primary energy supply versus GDP	GDP at market prices (constant prices)
			Total primary energy supply by fuel	Total primary energy supply by fuel type
		Energy efficiency	Power plant efficiency	Fuel inputs for thermal electricity generation
				Thermal electricity generation
		Renewables	Percentage of energy supply from renewable sources	Total primary energy supply by fuel type
B	Industry	Industry and the environment	Index of industrial production	Index of industrial production
			Emissions of major air pollutants by industry	Annual emissions of SO ₂ , NO _x , NH ₃ and NMVOCs in total, by sector and energy related
			Annual emissions of individual greenhouse gases (CO ₂ , CH ₄ , N ₂ O, HFC, PFC and SF ₆) and weighted to GWP, total, by sector and energy related	
C	Agriculture	In what direction is European agriculture developing?	Consumption of pesticides	Total consumption of pesticides
				Agricultural land area
		Relations with the environment	Fertiliser consumption	Total consumption of fertilisers
			Number of livestock	Number of cattle, pigs, sheep, goats and chickens
				Total number of agricultural holdings
Average size of agricultural holdings				
D	Forestry	Effects of transition on the forestry sector	Total felling as a % of annual increment	Felling of trees
				Total annual increment
E	Fisheries and mariculture	Overfishing	Fishing effort: tonnage of the fishing fleet (by main target stock?)	Fish catches by species and area
				Fishing fleet in tonnes, by vessel type and country
		Spawning stock and landings or catches	Total fish catches by regional sea area	
Total spawning stock				
F	Transport	Is the environmental performance of the transport sector improving?	Emissions by the transport sector	Annual emissions of SO ₂ , NO _x , NH ₃ and NMVOCs in total, by sector and energy related
				Annual emissions of individual greenhouse gases (CO ₂ , CH ₄ , N ₂ O, HFC, PFC and SF ₆) and weighted to GWP, total, by sector and energy related

Chapter	Analysis	Indicator	Data sets required for indicator	
F	Are we getting better at managing transport demand and improving the modal split?	Passenger transport by mode	Annual passenger transport by car, bus and coach, rail, water and air	
		Freight transport by mode	Annual freight transport by road, rail, water and air.	
	Are spatial and transport planning becoming better coordinated so as to match transport demand to the needs of access?	Number of passenger cars	Total number of passenger cars by country	
	Are we moving towards a better-balanced intermodal transport system?	Investment in infrastructure	Annual investment in transport infrastructure	
	Are we moving towards a fairer and more efficient pricing system which ensures that external costs are recovered?	Transport fuel prices	Price of road transport fuel — leaded petrol, unleaded petrol and diesel	
	How rapidly are improved technologies being implemented?	Uptake of cleaner fuels	Transport fuel consumption, total, leaded and unleaded petrol and diesel	
		Share of cars with catalytic converters	Number of petrol cars fitted with a catalytic converter	
Energy efficiency		Total final energy consumption by sector		
G	Tourism	Impact of tourism	Arrivals of visitors at borders by type of entrance into country	Arrivals of visitors at borders by type of entrance

Environmental issues

Chapter	Analysis	Indicator	Data sets required for indicator	
3	Climate change	Signs of climate change	European average temperature, 1860–2000 (+ projected 2100)	Annual average European temperature, 1860–2000
				Projected annual average temperature (2100)
		European precipitation, 1860–2000 (north–south/summer–winter)	Annual European precipitation, 1860–2000	
		Rise in sea level — past trend and projected to 2100	Annual rise in sea level (+ projected to 2100)	
		Sea ice and glaciers	Distribution of the growth and melt of sea ice	
		evt. Regional indicators for signs of climate change (ecosystems)		
		evt. Regional indicators for impacts of climate change		
	Progress in the implementation of the Kyoto targets and mechanisms	Emissions of greenhouse gases with respect to Kyoto targets	Annual emissions of individual greenhouse gases (CO ₂ , CH ₄ , N ₂ O, HFC, PFC and SF ₆) and weighted to GWP, total, by sector and energy related	
	Emissions of individual greenhouse gases by sector projected with current and pipeline policies (outlook to 2010 and 2020, including estimation of EU Member State and accession countries' use of the Kyoto mechanisms)	2010 and 2020 projections for emissions of greenhouse gases (CO ₂ , CH ₄ and N ₂ O) by sector		

Chapter		Analysis	Indicator	Data sets required for indicator
3	Climate change (continued)	Progress in the implementation of the Kyoto targets and mechanisms (continued)	Cost estimates for policies and measures for the baseline outlook (no additional measures) and cost-effective reduction potential of additional measures	Description of possible indicators
		Greenhouse gas sinks	Not yet defined	
4	Strato-spheric ozone depletion	Progress in the implementation of the Montreal Protocol	Production of key ozone-depleting substances	Production of key ozone-depleting substances
			Consumption of key ozone-depleting substances	Consumption of key ozone-depleting substances
			Selection of effect/impact indicators taken from the UNEP assessment	To be built on indicators from the UNEP assessment available in 2002
5	Air pollution	Progress in the implementation of the CLRTAP protocols: Reduction of air pollutant emissions	Emissions of SO ₂ , NO _x , NH ₃ and NMVOCs in total, by sector, 1990–2010–2020, compared with 2010 targets	Annual emissions of SO ₂ , NO _x , NH ₃ and NMVOCs in total, by sector
				Annual emissions of PM10 in total, by sector
				2010 and 2020 projections for emissions of SO ₂ , NO _x , NH ₃ , PM10 and NMVOCs by sector
			Cost ranges of abatement measures	Description of possible indicators
		Outcome indicators of 'what if' ancillary benefits study	Description of possible indicators	
	Urban air quality	Exceedances/reductions in urban air quality exceedances (1990–2010–2020)	Population exposed to an exceedance of SO ₂ , PM10, NO _x and O ₃ (1990–2010–2020)	
6	Production, use and dispersion of hazardous chemicals	'Chemicalisation' of society	Production and import of hazardous chemicals	Production and import of hazardous chemicals
7	Waste generation and management	Decrease in the direct material input (DMI) of economies	DMI in European countries	DMI by country
			Total waste generation	Total waste generation
				Waste generated from energy production
				Mining waste
				Construction and demolition waste
		Waste generation	Municipal waste generation versus household expenditure	Municipal waste generation
				Household expenditure by country
			Industrial waste generation versus industrial production	Waste from manufacturing industries
				GVA by sector, constant prices
			Overview of total waste managed/total waste recovered–recycled or percentage of recycled waste as a share of total consumption of glass/paper/construction waste/tyres/plastic	Recycling of waste as a % of total disposal by waste type
Eastern Europe: disposal facilities and their capacities	Number and capacity of disposal facilities by country			
	Hazardous waste management	Generation of hazardous waste	Hazardous waste production; shipment of hazardous waste	

Chapter	Analysis	Indicator	Data sets required for indicator
	Progress in the establishment of waste management plans	Progress in the establishment of waste management plans	Fiscal and economic instruments Status of waste management plans
8	Water stress (inland and marine) Water stress (inland and marine) (continued)	Trends in water stress on a regional basis	Total water abstraction by region
			Final water consumption by region
			Long-term average renewable freshwater resources
		N, P and organic matter (OM) in rivers	Annual concentrations of N, P and OM in rivers by catchment size
		N and P in lakes	Annual concentrations of N and P in lakes by catchment size
		Overall river water quality index: biological and physico-chemical classification of river lengths less than 'good' in national classifications	River water quality by country
		Pesticides in groundwater and surface water	Annual average concentrations of pesticides in groundwater
			Annual average concentrations of pesticides in surface water
		Nitrate in groundwater	Annual average nitrate concentrations in groundwater
		Radionuclides in groundwater	To be built on indicators from the AMAP 2002 nuclear assessment
		Urban wastewater treatment capacity	Capacity of urban wastewater treatment (UWWT) plants
		Drinking water quality	Number of samples failing European drinking water quality standards
		Link between eutrophication and land and sea	Nutrient inputs to sea
	Nutrient concentrations in sea and coastal waters		Annual average concentrations of N and P in marine and coastal waters
	Hot spots in marine water quality	Bathing water quality	Annual average quality of bathing waters
		Input and concentrations of hazardous substances in marine waters	Annual average loadings of hazardous substances in marine and coastal waters
			Annual average concentrations of hazardous substances to marine and coastal waters
		Oil pollution from maritime transport and offshore activities	Regular marine oil spills
	Progress in the implementation of the UNECE Water Convention	Implementation of programmes of measures for shared waters	Number of programmes for the protection of shared waters and the state of implementation of the programmes
		Implementation of monitoring requirements for shared waters	Number of programmes for the protection of shared waters and the state of implementation of the programmes

Chapter		Analysis	Indicator	Data sets required for indicator
9	Soil degradation	Soil erosion problems	Estimate of soil loss per year by erosion from agricultural land	Volume of soil lost annually by erosion from agricultural land
		Salinisation in the southern Russian Federation, central Asia and the southern Caucasus	Area of land affected by salinisation	Area and severity of salinisation in the Russian Federation and central Asian States
			Table: Restoration projects undertaken/planned	Number and type of soil restoration projects in place and proposed
		Aral Sea follow-up problems	Change in the water balance in central Asian States	Water balance in central Asian States
			Area with problems due to wind erosion and salt deposition	Land area with problems due to wind erosion and salt deposition
			Table: Wind erosion prevention projects	Number and type of wind erosion prevention projects in the area of the Aral Sea
		Contaminated sites	Estimated number of potentially contaminated sites	Number of contaminated sites or area of contaminated land by country
			Clean-up projects/costs	Number and costs of clean-up operations of contaminated sites in Europe
		10	Technological and natural hazards	Technological hazards
Number of nuclear incidents	To be built on indicators from the AMAP 2002 nuclear assessment			
Tanker oil spills	Number of spills and volume of oil spilled by tankers in European seas			
Radionuclides	Radioactive waste			To be built on indicators from the AMAP 2002 nuclear assessment
	Distribution of nuclear power stations, fuel-processing plants, nuclear weapons, dumping sites			To be built on indicators from the AMAP 2002 nuclear assessment
	(Arctic) examples of doses to members of population			To be built on indicators from the AMAP 2002 nuclear assessment
Natural extreme events	Number of natural disasters, excluding earthquakes and volcanic activity			Number of natural disasters, excluding earthquakes and volcanic activity
11	Biological and landscape diversity	State and protection of 'high-quality' habitats	Protected areas (IUCN categories)	Area of protected land by IUCN category
		Safeguarding 'ordinary' nature	Number of habitats and species protected under EU directives/Berne Convention with a better/worse status, or semi-natural grasslands as percentage of agricultural areas. To be elaborated	

Chapter		Analysis	Indicator	Data sets required for indicator
12	Progress in managing the environment and sustainable development	Integration of environmental considerations into other policies	Table: Progress in policy integration	
		Price signals (economic integration)	Environmentally unfavourable subsidies	
		Environmental impact assessment (management integration)	Appliance of EIA/SIA in Europe	
		Urban planning (institutional integration/ management integration)	To be defined	
		Coastal zone management (spatial planning/institutional integration)	Qualitative indicator on pressures on coastal zones	
			Progress in integrated coastal zone management (ICZM)	

2. Data-set sheets

The list of data sets required for indicators and their corresponding reference numbers are presented in Table 2.1. The list of data sets required for the maps and their corresponding reference numbers are provided in Chapter 3 'Map sheets' of this report.

Table 2.1. Data sets required for the indicators to be included in the Kiev report

	Chapter	Data set	Ref.
2	Developments in socioeconomic sectors	GDP at market prices	2.1
		GVA at market prices	2.2
		Household consumption expenditure	2.3
A	Energy	Volume of nuclear waste generated from power plants	A.1
		Total primary energy supply by fuel type	A.2
		Thermal electricity generation	A.3
		Fuel inputs for thermal electricity generation	A.4
B	Industry	Index of industrial production	B.1
C	Agriculture	Number of livestock	C.1
		Fertiliser consumption	C.2
		Agricultural land area	C.3
		Pesticide consumption	C.4
		Number and average size of farm holdings	C.5
D	Forestry	Felling of trees	D.1
		Total annual increment	D.2
E	Fisheries and mariculture	Fish catches by species and area	E.1
		Fishing fleet in tonnes, by vessel type	E.2
		Total spawning stock	E.3
F	Transport	Passenger transport by car, bus and coach, and rail	F.1
		Passenger and freight transport by air	F.2
		Freight transport by road, rail, inland waterway and sea	F.3
		Number of passenger cars	F.4
		Investment in transport infrastructure	F.5
		Price of road transport fuel	F.6
		Transport fuel consumption	F.7
		Number of petrol cars fitted with a catalytic converter	F.8
		Total final energy consumption by sector	F.9
G	Tourism	Total number of tourist arrivals	G.1
		Arrivals of visitors at borders by type of entrance in country	G.2
3	Climate change	Average European temperature, 1860–2000	3.1
		European precipitation, 1860–2000	3.2
		Rise in sea level	3.3
		Distribution of the growth and melt of sea ice	3.4
		Emissions of greenhouse gases (CO ₂ , CH ₄ , N ₂ O, HFC, PFC and SF ₆) and weighted to GWP, total and by sector	3.5
		2010 and 2020 projections for emissions of greenhouse gases (CO ₂ , CH ₄ and N ₂ O) by sector	3.6
4	Stratospheric ozone depletion	Production and consumption of ozone-depleting substances	4.1

Data sets required (continued)

Table 2.1.

5	Air pollution	Emissions of SO ₂ , NO _x , NH ₃ and NMVOCs	5.1
		Emissions of PM10	5.2
		Projected air emissions	5.3
		Description — Outcome indicators for air pollution	5.4
		Emission reduction cost projections	5.5
		Population exposed to air quality exceedance	5.6
6	Production, use and dispersion of hazardous chemicals	Production of hazardous chemicals	6.1
7	Waste generation and management	Direct material input	7.1
		Total waste generation	7.2
		Municipal waste	7.3
		Waste from manufacturing industries	7.4
		Waste generated from energy production	7.5
		Mining waste	7.6
		Construction and demolition waste	7.7
		Waste from electric and electronic equipment	7.8
		Hazardous waste production	7.9
		Shipment of hazardous waste	7.10
		Disposal facilities	7.11
		Recycling of waste as % of total disposal	7.12
		Status of waste management plans	7.13
		Fiscal/economic instruments	7.14
8	Water stress (inland and marine)	Water abstraction	8.1
		Water consumption	8.2
		Long-term average renewable freshwater resources	8.3
		Concentrations of N, P and OM in rivers by catchment size	8.4
		Concentrations of N and P in lakes by catchment size	8.5
		River lengths less than 'good' in national classifications	8.6
		Pesticides in groundwater	8.7
		Pesticides in surface water	8.8
		Nitrate concentrations in groundwater	8.9
		Capacity of urban wastewater treatment plants	8.10
		Drinking water quality	8.11
		N and P loadings to sea	8.12
		N and P concentrations in marine and coastal waters	8.13
		Quality of bathing waters	8.14
		Loadings of hazardous substances to marine and coastal waters	8.15
		Concentrations of hazardous substances in marine and coastal waters	8.16
		Regular marine oil spills	8.17
		Programmes of measures and monitoring programmes for the protection of shared waters	8.18

Table 2.1.		Data sets required (continued)	
9	Soil degradation	Soil lost annually from agricultural land	9.1
		Area and severity of salinisation in the Russian Federation and central Asian States	9.2
		Number and type of soil restoration projects in place and proposed	9.3
		Water balance in the central Asian States (1980–99)	9.4
		Aral sea: Area with problems due to wind erosion and salt deposition	9.5
		Number and type of wind erosion prevention projects in the area of the Aral Sea	9.6
		Contaminated sites	9.7
		Number and costs of clean-up operations of contaminated sites	9.8
10	Technological and natural hazards	Number of industrial accidents	10.1
		Number of natural disasters	10.2
11	Biological and landscape diversity	Area of protected land by IUCN category	11.1
		Habitats and protected species	11.2
12	Progress in managing the environment and sustainable development	Pressures on coastal zones	12.1
		Progress in integrated coastal zone management (ICZM)	12.2

Socioeconomic data

Data set: Gross domestic product at market prices

2.1

Used for indicators: Chemical industrial production versus GDP; total primary energy supply versus GDP.	
Data retrieval	
Holding body: Data are available from the Eurostat New Cronos database and from UNECE for NIS countries. The EEA data warehouse currently contains Eurostat data for all EU and EFTA countries.	
Contact name: Eurostat: Dr Silke Stapel (Manager of CEC Non-financial Accounts Data) and Mr Pierre Verdier (Desk Officer for Statistical Cooperation with Russia) UNECE: Mr Darryl Rhoades (Economic Analysis Division)	Contact details: Tel. (352) 43 01-32236 E-mail: silke.stapel@cec.eu.int Tel. (352) 43 01-33351 E-mail: pierre.verdier@cec.eu.int Tel. (41-22) 917 41 72 E-mail: darryl.rhoades@unece.org
Reference: EEA data warehouse: 'GDP at market prices by country' (AGC02U1A). Eurostat, New Cronos: EU-15, EFTA-4, CEC: theme2/aggs/aggs_gdp/a_gdp_k indic-b1gm. UNECE: data are available on request from the Economic Analysis Division.	
Accessibility: Eurostat: data are readily accessible from the New Cronos database, to which the EEA has access; UNECE: data are available on request. There is no charge for these data.	
Format: Eurostat, New Cronos: HTML, Excel, DFT, CSV or Flat file. UNECE: Excel spreadsheets.	
Reason for choosing data holder/Procedure for collecting data: Eurostat and UNECE data have good geographical and temporal coverage, are all collected according to the same ESA 95 definitions and are converted using International Monetary Fund (IMF) exchange rates. Eurostat does not yet produce data for NIS countries apart from Russia. Work is under way to collect these data, but they will not be available for some time.	
Data description	
Definitions: GDP corresponds to the cash value of all goods and services produced by economic units within a given period, less the value of the goods used in the production process. GDP is calculated in accordance with the European system of integrated economic accounts (ESA). Data are for GDP at market prices and at constant 1995 prices.	
Units: Eurostat: millions of ecu/euro. UNECE: data are produced in national currency units so would need to be converted to a common currency.	
Geo coverage: Eurostat: EU-15, Norway, Switzerland, AC-12 (no Turkey). Data are available for Russia only of the NIS. Data for Ukraine will be collected soon but no other NIS countries are currently covered with a complete time series 1990 onwards (EU + EFTA). UNECE: data are available for all UNECE countries.	
Time series: Eurostat: EU and EFTA: 1960, 1970, 1980, 1985, 1990–2001; ACs: 1993–2000. UNECE: 1980–2000 generally for all countries.	
Quality: Data are comparable, as consistent definitions are used by countries. All data are quality checked by Eurostat and UNECE and any queries clarified with the countries themselves.	
Next update: Eurostat: data updated quarterly. UNECE: Data collected and processed as they arrive.	
Previous use: Data for GDP from Eurostat and UNECE have been used in previous EEA 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to collect data from Eurostat for all available countries. Data for countries not covered by Eurostat to be obtained from UNECE and converted to euro.	Comments:

2.2 Data set: Gross value added at market prices

Used for indicators: Agri-environmental efficiency; energy sector environmental efficiency.	
Data retrieval	
Holding body: Data are available from the Eurostat New Cronos database and from UNECE for NIS countries. The EEA data warehouse currently contains Eurostat data for EU-15 countries only.	
Contact name: Eurostat: Dr Silke Stapel (Manager of CEC Non-financial Accounts Data) and Mr Pierre Verdier (Desk Officer for Statistical Cooperation with Russia) UNECE: Mr Darryl Rhoades (Economic Analysis Division)	Contact details: Tel. (352) 43 01-32236 E-mail: silke.stapel@cec.eu.int Tel. (352) 43 01-33351 E-mail: pierre.verdier@cec.eu.int Tel. (41-22) 917 41 72 E-mail: darryl.rhoades@unece.org
Reference: EEA data warehouse: 'GVA at market prices by main branch' (C11A10U1). Eurostat: EU-15, EFTA-4, CEC: theme2/brkdowns/nace_a6/b_a06_k. UNECE: data are available on request from the Economic Analysis Division.	
Accessibility: Eurostat: data are readily accessible from the New Cronos database. UNECE: data are provided on request. There is no charge for these data.	
Format: Eurostat, New Cronos: HTML, Excel, DFT, CSV or Flat file. UNECE: Excel spreadsheets.	
Reason for choosing data holder/Procedure for collecting data: Eurostat and UNECE data have good geographical and temporal coverage, are all collected according to the same ESA 95 definitions and are converted using International Monetary Fund (IMF) exchange rates. Eurostat does not produce data for the NIS; these data are available from UNECE.	
Data description	
Definitions: GVA is calculated in accordance with the European system of integrated economic accounts (ESA). Eurostat produces data divided into six NACE Rev. 1 categories. UNECE produces data in nine sectoral categories: agriculture, total industry, manufacturing, construction, wholesale and retail trade, transport and communication, financial services, other services and total services. Data are for GVA at market prices and at constant 1995 prices.	
Units: Eurostat: millions of ecu. UNECE: national currency units (need converting to common currency).	
Geo coverage: Eurostat: EU-15, Norway, AC-10 and Cyprus. Data are available for Russia only of the NIS. Data for Ukraine will be collected soon but no other NIS countries are currently covered. UNECE: data are available for all UNECE countries.	
Time series: Eurostat: EU-15 and Norway: 1980, 1985, 1990–2000; AC-10 and Cyprus: 1993–99. UNECE: 1990–99 generally for all countries.	
Quality: Data are comparable, as consistent definitions are used by countries. All data are quality checked by Eurostat and UNECE and any queries clarified with the countries themselves.	
Next update: Eurostat: data updated quarterly. UNECE: data collected and processed on a daily basis.	
Previous use: Data for GVA from Eurostat have been used in previous EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to collect data from Eurostat for all available countries with a complete time series 1990 onwards (EU and Norway). Data for countries not covered by Eurostat to be obtained from UNECE and converted to euro.	Comments:

Data set: Final household consumption expenditure

2.3

Used for indicator: Municipal waste generation versus household expenditure.	
Data retrieval	
Holding body: Data are available from the Eurostat New Cronos database and from UNECE. The EEA data warehouse currently contains Eurostat data for all EU and EFTA countries except Iceland.	
Contact name: Eurostat: Dr Silke Stapel (Manager of CEC Non-financial Accounts Data) and Mr Pierre Verdier (Desk Officer for Statistical Cooperation with Russia) UNECE: Mr Darryl Rhoades (Economic Analysis Division)	Contact details: Tel. (352) 43 01-32236 E-mail: silke.stapel@cec.eu.int Tel. (352) 43 01-33351 E-mail: pierre.verdier@cec.eu.int Tel. (41-22) 917 41 72 E-mail: darryl.rhoades@unece.org
Reference: EEA data warehouse: 'Final household consumption by country' (C16A70U1). Eurostat, New Cronos: EU-15, EFTA-4, CEC: theme2/aggs/aggs_gdp/a_gdp_k/blg-m idic — p31ps14. UNECE: data are available on request from the Economic Analysis Division.	
Accessibility: Eurostat: data are readily accessible from the New Cronos database, to which the EEA has access. UNECE: data are provided on request. There is no charge for these data.	
Format: Eurostat, New Cronos: data are available in HTML, Excel, DFT, CSV or Flat file formats. UNECE: data are provided in Excel spreadsheets.	
Reason for choosing data holder/Procedure for collecting data: Eurostat and UNECE data have good geographical and temporal coverage, and are all collected according to the same ESA 95 definitions. Eurostat does not have data for NIS countries but UNECE does.	
Data description	
Definitions: Final household consumption represents the value of goods and market services used for the direct satisfaction of individual needs.	
Units: Eurostat: millions of ecu at constant 1995 prices. UNECE: data are produced in national currency units at constant 1995 prices (need converting to common currency).	
Geo coverage: Eurostat: EU-15, Norway, Switzerland, AC-12 (no Turkey). Data are available for Russia only of the NIS. Data for Ukraine will be collected soon but no other NIS countries are currently covered. UNECE: data are available for all UNECE countries.	
Time series: Eurostat: EU and EFTA: 1960, 1970, 1980, 1985, 1990–2001; ACs: 1993–2000. UNECE: 1990–99 generally for all countries.	
Quality: Consistent definitions are used by countries so data are comparable. All data are quality checked by Eurostat and UNECE and any queries clarified with the countries themselves.	
Next update: Eurostat: data are updated quarterly. UNECE: data are collected and processed on a daily basis.	
Previous use: Data for final household consumption from Eurostat have been used in previous EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to collect data from Eurostat for all available countries with a complete time series 1990 onwards. Data for countries not covered by Eurostat to be obtained from UNECE and converted to euro.	Comments:

Energy

A.1

Data set: Nuclear waste production from power plants

Used for indicator: Generation of nuclear waste from the energy sector.	
Data retrieval	
Holding body: OECD: <i>OECD environmental data compendium</i> . Data are from the OECD-NEA (Nuclear Energy Agency).	
Contact name: OECD-NEA: Mr Hans Riotte (Head of Radiation Protection and Radioactive Waste Management)	Contact details: OECD Nuclear Energy Agency, Le Seine-St Germain, 12, boulevard des Îles, F-92130 Issy-les-Moulineaux Tel. (33) 145 24 10 40 Fax (33) 145 24 11 10 E-mail: hans.riotte@oecd.org
Reference: Table 7.6: 'Nuclear waste: Spent fuel arisings', in <i>OECD environmental data compendium 1999</i> , OECD, Paris, France, 1999.	
Accessibility: Data are readily available from this publication.	
Format: Data are available in paper format only.	
Reason for choosing data holder/Procedure for collecting data: Data are collected using the Eurostat/OECD joint questionnaire. All data are quality checked and have good temporal coverage.	
Data description	
Definitions: Data are for annual spent fuel arisings in nuclear power plants. Spent fuel arisings are one part of the radioactive waste generated at various stages of the nuclear fuel cycle (uranium mining and milling, fuel enrichment, reactor operation, spent fuel reprocessing).	
Units: Tonnes of heavy metals.	
Geo coverage: Data are available for EU-15, EFTA-3 (no Liechtenstein), Czech Republic, Hungary and Turkey.	
Time series: Data are available from 1982 to 2000 with projections for 2005 and 2010. Data for Czech Republic and Hungary are only available from 1995.	
Quality: All data are quality checked and collected according to the same definitions.	
Next update: Data are collected every two years. Data for 2000 will be available in 2001.	
Previous use: OECD nuclear waste data have been used in previous EEA 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to enter the most recent data available from the OECD into the data warehouse. Additional data on nuclear waste may become available from the second assessment report to be prepared by AMAP.	Comments: These data do not represent all radioactive waste generated. Radioactive wastes also arise from other sources and from decontamination and decommissioning of nuclear facilities. It must also be noted that the amounts of spent fuel arisings depend on the share of nuclear electricity in the energy supply and on the nuclear plant technologies.

Data set: Total primary energy supply

A.2

Used for indicators: Total primary energy supply versus GDP; total primary energy supply by fuel; % of energy supply from renewable sources.	
Data retrieval	
Holding body: The EEA data warehouse has IEA data for EU-15, EFTA-3 (no Liechtenstein), Czech Republic, Hungary and Poland. Eurostat has data for EU-15 only. The IEA is the main source for this data set.	
Contact name: IEA: Mr Jean-Yves Garnier (Head of Energy Statistics Division)	Contact details: IEA, 9, rue de la Federation, F-75739 Paris Cedex 15 Tel. (33) 140 57 66 20 E-mail: jean-yves.garnier@iea.org
Reference: EEA data warehouse: 'Total primary energy supply by country and product' TPES) and 'Gross inland consumption' (Euroaeb). IEA: data are available on the World Energy Statistics Service (2000 edition) diskette. The IEA has also recently launched online databases of all its statistics. The home page for this service is: http://data.iea.org/ (go to 'Access services' when a password has been obtained).	
Accessibility: The EEA is sent the diskette with no charge (subject to a copyright agreement). A password for the online database will need to be obtained.	
Format: HTML tables.	
Reason for choosing data holder/Procedure for collecting data: IEA data have excellent geographical and temporal coverage. Data are collected by established methods and are checked when received.	
Data description	
Definitions: Total primary energy supply = Indigenous production + Imports – Exports – International marine bunkers +/- Stock changes. Eurostat terminology is gross inland consumption. Data are produced in the categories coal, oil, gas, nuclear, combustible renewables and waste, hydro, and other. Renewables data are also available separately for geothermal, solar, wind, hydro, and ambient energy.	
Units: 1 000 tonnes of oil equivalent.	
Geo coverage: The IEA has data for all countries to be included in the Kiev report except Andorra, Monaco and San Marino.	
Time series: Data for OECD countries (EU-15, EFTA-4, Czech Republic, Hungary, Poland, Slovakia and Turkey) are available from 1960 to 1998. Data for non-OECD countries are available from 1971 to 1998.	
Quality: Data are collected according to the same definitions and are quality checked by the IEA. Estimates are made where no data are available. Although data are collected by Eurostat and the IEA, using a common questionnaire, there are some small differences in the published data from both organisations. This is due to the conversion factors used by both organisations.	
Next update: IEA data are collected on a monthly and annual basis and finalised progressively from September to July. Annual updates are published in September.	
Previous use: Data from the IEA and Eurostat have been used previously in EEA 'State of the environment' and 'Environmental signals' reports.	
Additional information	
Actions: The EEA data warehouse manager to contact the IEA to establish online data capture by the warehouse and to collect the most recent data for all countries from the IEA.	Comments:

A.3 Data set: Thermal electricity generation

Used for indicator: Power plant efficiency.	
Data retrieval	
Holding body: International Energy Agency (IEA).	
Contact name: IEA: Mr Jean-Yves Garnier (Head of Energy Statistics Division)	Contact details: IEA, 9, rue de la Federation, F-75739 Paris Cedex 15 Tel. (33) 140 57 66 20 E-mail: jean-yves.garnier@iea.org
Reference: IEA data are available on the World Energy Statistics Service (2000 edition) diskette. IEA has also recently launched online databases of all its statistics. The home page for this service is: http://data.iea.org/ (go to 'Access services' when a password has been obtained).	
Accessibility: The EEA is sent the diskette with no charge (subject to a copyright agreement). A password for the online database will need to be obtained.	
Format: HTML tables.	
Reason for choosing data holder/Procedure for collecting data: IEA data have excellent geographical and temporal coverage. Data are collected by established methods and are checked when received.	
Data description	
Definitions: Data are available for electricity generation by thermal, nuclear, hydro and other, where 'other' includes geothermal, solar, wind, combustible renewables and waste. Electricity generation figures exclude pumped storage.	
Units: GWh for electricity generation.	
Geo coverage: The IEA has data for all countries to be included in the Kiev report except Andorra, Monaco and San Marino.	
Time series: Data for OECD countries (EU-15, EFTA-4, Czech Republic, Hungary, Poland, Slovakia and Turkey) are available from 1960 to 1998. Data for non-OECD countries: 1971-98.	
Quality: Data are collected according to the same definitions and are quality checked by the IEA. Estimates are made where no data are available. Although data are collected by Eurostat and the IEA using a common questionnaire, there are some small differences in the published data from both organisations. This is due to the conversion factors used by both organisations.	
Next update: IEA data are collected on a monthly and annual basis and finalised progressively from September to July. Annual updates are published in September.	
Previous use: Data from the IEA have been used previously in EEA 'State of the environment' and 'Environmental signals' reports.	
Additional information	
Actions: The EEA data warehouse manager to contact the IEA to establish online data capture by the warehouse and to collect the most recent data for all countries from the IEA.	Comments:

Data set: Fuel inputs for thermal electricity generation

A.4

Used for indicator: Power plant efficiency.	
Data retrieval	
Holding body: International Energy Agency (IEA).	
Contact name: IEA: Mr Jean-Yves Garnier (Head of Energy Statistics Division)	Contact details: IEA, 9, rue de la Federation, F-75739 Paris Cedex 15 Tel. (33) 140 57 66 20 E-mail: jean-yves.garnier@iea.org
Reference: IEA data are available on the World Energy Statistics Service (2000 edition) diskette. The IEA has also recently launched online databases of all its statistics. The home page for this service is: http://data.iea.org/ (go to 'Access services' when a password has been obtained).	
Accessibility: The EEA is sent the diskette with no charge (subject to a copyright agreement). A password for the online database will need to be obtained.	
Format: HTML tables.	
Reason for choosing data holder/Procedure for collecting data: IEA data have excellent geographical and temporal coverage. Data are collected by established methods and are checked when received.	
Data description	
Definitions: Data are available for fuel inputs of electricity generation for the fuels hydro, nuclear, other, coal, oil and gas where 'other' includes geothermal, solar, wind, combustible renewables and waste. Electricity generation figures exclude pumped storage.	
Units: 1 000 tonnes of oil equivalent.	
Geo coverage: The IEA has data for all countries to be included in the Kiev report except Andorra, Monaco and San Marino.	
Time series: Data for OECD countries (EU-15, EFTA-4, Czech Republic, Hungary, Poland, Slovakia and Turkey) are available from 1960 to 1998. Data for non-OECD countries are available from 1971 to 1998.	
Quality: Data are collected according to the same definitions and are quality checked by the IEA. Estimates are made where no data are available. Although data are collected by Eurostat and the IEA using a common questionnaire, there are some small differences in the published data from both organisations. This is due to the conversion factors used by both organisations.	
Next update: IEA data are collected on a monthly and annual basis and finalised progressively from September to July. Annual updates are published in September.	
Previous use: Data from the IEA have been used previously in EEA 'State of the environment' and 'Environmental signals' reports.	
Additional information	
Actions: The EEA data warehouse manager to contact the IEA to establish online data capture by the warehouse and to collect the most recent data for all countries from the IEA.	Comments:

Industry

B.1	Data set: Index of industrial production	
Used for indicators: Index of industrial production; industrial waste generation versus industrial production.		
Data retrieval		
Holding body: The best data sets are available from UNECE. The EEA data warehouse currently contains Eurostat data for EU-15 only.		
Contact name: UNECE: Mr Darryl Rhoades (Economic Analysis Division)		Contact details: Tel. (41-22) 917 41 72 E-mail: darryl.rhoades@unece.org
Reference: UNECE: data are available on request from the Economic Analysis Division.		
Accessibility: There is currently no online database available, although UNECE is working to make this facility available. Data are available at no charge.		
Format: Excel spreadsheets.		
Reason for choosing data holder/Procedure for collecting data: UNECE is the best source of data as the geographical and temporal coverage are excellent for all categories of industry. Eurostat does produce data for EU, EFTA and AC countries but there are gaps in the data set and NIS countries are not covered.		
Data description		
Definitions: Indices of industrial production are fixed base indices measuring the changes in the volume of the gross value added created by industry.		
Units: Data are indexed to 1989 (1989 = 100).		
Geo coverage: All UNECE countries (55 countries). All countries to be included in the Kiev report are covered.		
Time series: Coverage varies between countries but generally data are available for all countries from 1992 to 1998.		
Quality: The quality of the data sets reflects the quality of the national statistics; however, the data are constantly cross-checked by UNECE using statistical methods and economic analyses. All problems are clarified with the country concerned. Quality is therefore good.		
Next update: Data are collected from monthly, quarterly and annual publications, and updated and processed on a daily basis.		
Previous use: Eurostat data for EU-15 countries have previously been used in EEA 'State of the environment' and 'Environmental signals' reports.		
Additional information		
Actions: The EEA data warehouse manager to collect data for all countries to be covered in the Kiev report from UNECE.		Comments:

Agriculture

Data set: Number of livestock

C.1

Used for indicator: Livestock trends in European regions.	
Data retrieval	
Holding body: FAO (Faostat database). The EEA data warehouse currently contains FAO data for some countries.	
Contact name: FAO: Mr Edward Gillin (Senior Officer, Statistics Division)	Contact details: E-mail: edward.gillin@fao.org
Reference: EEA data warehouse: 'Animal population by country' (D9502E). FAO: www.apps.fao.org/ (go to 'Agriculture/Agricultural production/Live animals').	
Accessibility: Data are available from the Faostat online database. No payment is required unless downloads greater than 500 records per query are needed, where an annual subscription of approximately USD 1 500 is payable.	
Format: Data from the FAO are available in HTML tables or CSV files.	
Reason for choosing data holder/Procedure for collecting data: The FAO was chosen because it has the best geographical and temporal coverage. Data are regularly updated and easily accessible. The data collecting practices are well established.	
Data description	
Definitions: Data are for all domestic animals irrespective of age, place or purpose of breeding. Data are available for cattle, goats, sheep, chickens and pigs.	
Units: Head (1 000 head for chickens).	
Geo coverage: EU-15, EFTA-4, AC-13, non-accession Phare and NIS countries are all covered by the FAO.	
Time series: EU-15, EFTA-4, Albania, Bulgaria, Cyprus, Hungary, Malta, Poland, Romania and Turkey: 1961–2000; NIS, Bosnia-Herzegovina, Estonia, FYROM, Latvia, Lithuania and Slovenia: 1992–2000; Czech Republic and Slovakia: 1993–2000. (All data for 2000 are provisional only.)	
Quality: There are known problems with the FAO data as the definitions vary between data submitting countries. FAO data include imputed values as each set of data is not collected every year. For many countries, FAO data for 'Poultry' are given as a single total and classified as 'Chickens', so the definitions used by countries are not always the same.	
Next update: Data are collected annually and updates are finalised in mid-April by the FAO. Eurostat data are one year behind those produced by the FAO. This is because the FAO collects data annually finishing on 30 September, so livestock enumerated between 1 October and 30 September of the following year are shown under the latter year. Eurostat collects data annually from December.	
Previous use: FAO data have previously been used in EEA 'State of the environment' and 'Environmental signals' reports.	
Additional information	
Actions: The EEA data warehouse manager to collect the most recent data for all European countries from the FAO.	Comments:

C.2 Data set: Fertiliser consumption

Used for indicator: Trends in fertiliser consumption.	
Data retrieval	
Holding body: Data are available in the EEA data warehouse for some countries. The source of these data is the FAO (Faostat database), which also has data for other countries.	
Contact name: FAO: Mr Pratap Narain (Senior Officer, Statistics Division)	Contact details: E-mail: pratap.narain@fao.org
Reference: EEA data warehouse: 'Use of fertilisers by country' (D9543E). FAO: www.apps.fao.org/ (go to 'Agriculture/Means of production/Fertilisers').	
Accessibility: Data for countries not covered in the data warehouse are readily accessible from the FAO online database. No payment is required unless downloads greater than 500 records per query are needed, where an annual subscription of approximately USD 1 500 is payable.	
Format: Data from the FAO are available in HTML tables or CSV files.	
Reason for choosing data holder/Procedure for collecting data: The FAO data have excellent geographical and temporal coverage. Data are regularly updated and easily accessible. The data collecting practices are well established.	
Data description	
Definitions: Data are for the quantity of plant nutrients (nitrogen (N), phosphate (P ₂ O ₅) or potash (K ₂ O)) in fertilisers consumed in the fertiliser year 1 July to 30 June.	
Units: Tonnes.	
Geo coverage: Data from the FAO currently in the EEA data warehouse are for: EU-15, EFTA-3 (no Liechtenstein), AC-10, non-accession Phare countries, plus Belarus, Croatia, Malta, Moldova, Russia, Ukraine and Yugoslavia. The FAO has data for all other NIS countries and Turkey, but not for Liechtenstein.	
Time series: The FAO has data for EU-15, EFTA-3, Albania, Bulgaria, Cyprus, Hungary, Malta, Poland, Romania and Turkey for 1960–98; Bosnia-Herzegovina, Estonia, FYROM, Latvia, Lithuania and Slovenia: 1992–98; Czech Republic and Slovakia: 1993–98; all other NIS countries: 1992–98.	
Quality: There are known problems with the FAO data as the definitions vary between data submitting countries. FAO data include imputed values as each set of data is not collected every year.	
Next update: Data are collected and updated annually in May (final data are available in June).	
Previous use: FAO fertiliser data have previously been used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to collect more recent FAO data and data for all European countries.	Comments:

Data set: Land use (agricultural land area)

C.3

Used for indicators: Trends in fertiliser consumption; trends in pesticide consumption.	
Data retrieval	
Holding body: FAO (Faostat database). Some data are also currently available in the EEA data warehouse (EU-15, EFTA-4 and AC-10 only).	
Contact name: FAO: Mr Pratap Narain (Senior Officer, Statistics Division)	Contact details: E-mail: pratap.narain@fao.org
Reference: Data warehouse: 'Land use by country' (D9541E). FAO: www.apps.fao.org (go to 'Agriculture/Land use').	
Accessibility: Data are readily accessible from the Faostat online database. No payment is required unless downloads greater than 500 records per query are required, where an annual subscription of approximately USD 1 500 is payable.	
Format: Data in Faostat are available in HTML tables or CSV files.	
Reason for choosing data holder/Procedure for collecting data: FAO data have good geographical and temporal coverage. Data are regularly updated and easily accessible. The data collecting practices are well established.	
Data description	
Definitions: Data are required for agricultural area, forests and woodland, land area and total area. Definitions are as follows: <i>Total area:</i> total area of the country including inland water bodies (major rivers and lakes). <i>Land area:</i> total area excluding areas under inland water bodies. <i>Forests and woodland:</i> land under natural or planted stands of trees, whether productive or not. Includes land from which forests have been cleared but that will be reforested in the foreseeable future, but excludes woodland or forest used only for recreational purposes. Data for shrub land and savannah woodland are not included from 1995. <i>Agriculture area:</i> total area of land included in arable land and permanent crops, and permanent pastures.	
Units: 1 000 ha.	
Geo coverage: The FAO has data for EU-15, EFTA-4 and AC-13 countries, all NIS countries and the non-accession Phare countries.	
Time series: Czech Republic and Slovakia: 1993–98; NIS countries, Bosnia-Herzegovina, Estonia, FYROM, Latvia, Lithuania and Slovenia: 1992–98; EU-15, EFTA-4, Albania, Bulgaria, Cyprus, Hungary, Malta, Poland, Romania and Turkey: 1961–98.	
Quality: There are known quality problems with these data because reporting countries vary in the definitions used when collecting these data. FAO data include imputed values as each data are not collected every year.	
Next update: Data are collected and updated annually in mid-April.	
Previous use: FAO land-use data have previously been used in EEA 'State of the environment' and 'Environmental signals' reports.	
Additional information	
Actions: The EEA data warehouse manager to update the land-use data from the FAO currently in the warehouse with more recent data and increased geographical coverage.	Comments:

C.4 Data set: Pesticide consumption

Used for indicator: Trends in pesticide consumption.	
Data retrieval	
Holding body: FAO (Faostat database).	
Contact name: FAO: Mr Pratap Narain (Senior Officer, Statistics Division)	Contact details: FAO, Statistical Analysis Service (ESSA), Statistics Division, Viale delle Terme di Caracalla, I-00100 Rome Tel. (39) 06 57 05 41 27 Fax (39) 06 57 05 56 15 E-mail: pratap.narain@fao.org
Reference: www.apps.fao.org/ (go to 'Agriculture/Means of production/Pesticides consumption').	
Accessibility: Data are readily accessible from the FAO online database. No payment is required unless downloads greater than 500 records per query are needed, where an annual subscription of approximately USD 1 500 is payable.	
Format: Data are available in HTML tables or CSV files.	
Reason for choosing data holder/Procedure for collecting data: FAO pesticide consumption data have good geographical and temporal coverage. Data are regularly updated and are easily accessible from the FAO online database. No other source is known to produce pesticide consumption data with pan-European coverage.	
Data description	
Definitions: Data refer to the quantity of pesticides used in the agricultural sector expressed in tonnes of active ingredients.	
Units: Tonnes of active ingredients.	
Geo coverage: EU-14 (excluding Spain. Data for Belgium and Luxembourg are combined), EFTA-2 (no Liechtenstein or Iceland), AC-13, Albania and FYROM, NIS countries (excluding Azerbaijan, Belarus, Georgia and Uzbekistan).	
Time series: EU-14, EFTA-2, Bulgaria, Cyprus, Hungary, Malta, Poland, Romania and Turkey: 1990–97; NIS, Albania, Estonia, FYROM, Latvia, Lithuania and Slovenia: 1992–97; Czech Republic and Slovakia: 1993–97.	
Quality: Some countries have used different definitions when collecting these data; thus, comparability is limited. FAO data include imputed values as each set of data is not collected every year. The FAO also states that some countries may have reported in formulation weight rather than active ingredients without specific indication.	
Next update: Data are collected and updated depending on the availability of data from countries.	
Previous use: FAO data for pesticide consumption have not previously been used before by the EEA.	
Additional information	
Actions: The EEA data warehouse manager to collect the most recent data available and to contact the FAO regarding coverage of the eight missing countries.	Comments: Data from Eurostat have previously been used by the EEA and are available in the data warehouse. However, Eurostat only covers the EU-15 countries; pan-European data are not available. Indicator may be developed by using arable land use (see C.3).

Data set: Agricultural holdings

C.5

Used for indicators: Total number of holdings and average size per holding.	
Data retrieval	
Holding body: The FAO holds world agricultural census data for individual countries/years. Some data are also currently available in the EEA data warehouse (EU-15 only), originating from Eurostat.	
Contact name: FAO: Mr Gonzalez Villalobos, (Senior Officer, Statistical Development Service)	Contact details: FAO, Viale delle Terme di Caracalla, I-00100, Rome Fax (39) 06 57 05 56 15 E-mail: A.GonzalezVillalobos@fao.org
Reference: Eurostat: theme5/eurofarm/ef_main/farm — 'Total agricultural area (AA)' and 'Total number of holdings'. FAO: http://www.fao.org/WAICENT/FAOINFO/ECONOMIC/ESS/census/wcares/WCARESFR.HTM (select individual countries).	
Accessibility: Data are readily accessible from the Agricultural World Census Programme section of the FAO web site. No payment is required. Eurostat data are also freely available to the EEA.	
Format: Eurostat: HTML, Excel, DFT, CSV or Flat file formats; FAO: HTML tables.	
Reason for choosing data holder/Procedure for collecting data: Eurostat data have better temporal and geographical coverage of EU-15. Eurostat data collection techniques are well established. FAO data have better geographical coverage of other countries. Data from both organisations are regularly updated and easily accessible.	
Data description	
Definitions: Eurostat defines an agricultural holding as 'a single unit both technically and economically, which has single management and the output of which is agricultural products'. FAO data are divided into number and area of holdings within a range of holding size classes (e.g. number of holdings between 10 and 20 ha).	
Units: Number of holdings; area (ha).	
Geo coverage: Eurostat: region/district data for EU-15; FAO: EU-15 (excluding Germany, Greece and Sweden), Albania, Cyprus, former Czechoslovakia, Norway, Poland, Slovenia, Switzerland and Turkey.	
Time series: Eurostat: 1990, 1993, 1995 and 1997; FAO: Cyprus: 1985; France: 1988; Denmark, Netherlands, Norway, Portugal and Spain: 1989; Austria, Belgium, Finland, former Czechoslovakia, Italy, Luxembourg, Poland and Switzerland: 1990; Ireland, Slovenia and Turkey: 1991; UK: 1993; Albania: 1995.	
Quality: Eurostat data are collected according to rules governing farm structure surveys, laid down in a number of Council regulations and Commission decisions which are published in the <i>Official Journal of the European Communities</i> . However, most published data contain sampling errors that can be estimated and, in most cases, obtained from Eurostat on request. There are known quality problems with FAO data as definitions vary between data submitting countries. Details of data are inconsistent between countries, with total area of holdings, within different ranges, frequently omitted. To the extent possible, the FAO interpolates data to provide an international comparison of number of holdings by size class.	
Next update: FAO data are updated as and when national census data are submitted. Results of the Eurostat 2000 farm survey are not yet available from New Cronos.	
Previous use: FAO data have previously been used in EEA 'State of the environment' and 'Environmental signals' reports. Eurostat data are currently available through the EEA data warehouse.	
Additional information	
Actions: The EEA data warehouse manager to update data in the warehouse with more recent data from Eurostat when it is available. The FAO to be contacted for holdings data for countries not covered by Eurostat.	Comments:

Forestry

D.1 Data set: Annual felling of trees

Used for indicator: Total felling as % of annual increment.	
Data retrieval	
Holding body: UNECE Timber Committee.	
Contact name: UNECE: Mr Alexander Korotkov (TBFRA Coordinator, UNECE Timber Committee)	Contact details: Tel. (41-22) 917 28 79 Fax (41-22) 917 00 41 E-mail: alexander.korotkov@unece.org
Reference: Data are those produced in the UNECE/FAO TBFRA 2000 report <i>Forest resources of Europe, CIS, North America, Australia, Japan and New Zealand</i> (http://www.unece.org/trade/timber/fra/pdf/contents.htm) Table 47. Data in this report are available in the UNECE/FAO TBFRA 2000 database and on CD-ROM.	
Accessibility: The UNECE/FAO TBFRA 2000 publication is freely available on the Internet. The CD-ROM is available at no charge on request from the UNECE Timber Committee.	
Format: The UNECE/FAO TBFRA 2000 database is available in Access 97 and 2000 on the CD-ROM.	
Reason for choosing data holder/Procedure for collecting data: The TBFRA 2000 assessment contains data collected according to internationally agreed definitions of the UNECE forestry resources assessment. UNECE data have good geographical coverage and are freely available.	
Data description	
Definitions: <i>Annual fellings:</i> average annual standing volume of all trees, living or dead, measured overbark to a minimum diameter at breast height (d.b.h.) of 0 cm that are felled during the given reference period, including the volume of trees or parts of trees that are not removed from the forest, other wooded land or other felling site. Includes: silvicultural and pre-commercial thinnings and cleanings left in the forest, and natural losses that are recovered (harvested).	
Units: m ³ .	
Geo coverage: UNECE has data for all UNECE countries.	
Time series: UNECE: 2000.	
Quality: All data are quality checked and are collected according to the same definitions.	
Next update: The forest resources assessment is updated every 10 years.	
Previous use: Annual fellings have not previously been presented in EEA 'Environmental signals' or 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to obtain the TBFRA 2000 CD-ROM from UNECE and to upload data for all countries into the data warehouse.	Comments: Data allow for an indicator for the year 2000 only.

Data set: Total annual increment in forestry

D.2

Used for indicator: Total felling as a % of annual increment.	
Data retrieval	
Holding body: UNECE Timber Committee.	
Contact name: UNECE: Mr Alexander Korotkov (TBFRA Coordinator, UNECE Timber Committee)	Contact details: Tel. (41-22) 917 28 79 Fax (41-22) 917 00 41 E-mail: alexander.korotkov@unece.org
Reference: Data are those produced in the UNECE/FAO TBFRA 2000 report <i>Forest resources of Europe, CIS, North America, Australia, Japan and New Zealand</i> (http://www.unece.org/trade/timber/fra/pdf/contents.htm) Table 42. Data in this report are available in the UNECE/FAO TBFRA 2000 database and on CD-ROM.	
Accessibility: The UNECE/FAO TBFRA 2000 publication is freely available on the Internet. The CD-ROM is available at no charge on request from the UNECE Timber Committee.	
Format: The UNECE TBFRA 2000 database is available in Access 97 and 2000 on the CD-ROM.	
Reason for choosing data holder/Procedure for collecting data: The TBFRA 2000 assessment contains data collected according to internationally agreed definitions of the UNECE forestry resources assessment. UNECE data have good geographical coverage and are freely available.	
Data description	
Definitions: <i>Net annual increment:</i> average annual volume over the given reference period of gross increment less that of natural losses on all trees to a minimum diameter at breast height (d.b.h.) of 0 cm. Also included is the recruitment (in-growth) of small trees when they reach the minimum diameter.	
Units: 1 000m ³ overbark.	
Geo coverage: UNECE has data for all UNECE countries.	
Time series: UNECE: 2000.	
Quality: All data are quality checked and are collected according to the same definitions.	
Next update: The forest resources assessment is updated every 10 years.	
Previous use: Net annual increment has not previously been presented in EEA 'Environmental signals' or 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to obtain the TBFRA 2000 CD-ROM from UNECE and to upload data for all countries into the data warehouse.	Comments: Data allow for an indicator for the year 2000 only.

Fisheries and mariculture

E.1 Data set: Fish catches by species

Used for indicators: Fishing effort: tonnage of the fishing fleet (by main target stock); spawning stock and catches.	
Data retrieval	
Holding body: FAO (Faostat database).	
Contact name: FAO: Ms Adele Crispoldi (Senior Officer, Statistics Division)	Contact details: E-mail: adele.crispoldi@fao.org
Reference: FAO: http://apps.fao.org/ (go to 'Fisheries/Fish catches').	
Accessibility: Data are readily accessible from the FAO online database. No payment is required unless downloads greater than 500 records per query are needed, where an annual subscription of approximately USD 1 500 is payable.	
Format: Data from the FAO are available in HTML tables or CSV files. Downloadable Statistical Database FISHSTAT PLUS, which contains more detail than FAOSTAT on line.	
Reason for choosing data holder/Procedure for collecting data: FAO data have excellent geographical and temporal coverage. Data are regularly updated and easily accessible. The data collecting practices are well established.	
Data description	
Definitions: Data are for annual catches of freshwater, brackish water, and marine species of fish killed, caught, trapped or collected for all commercial, industrial, recreational and subsistence purposes. Catch data are derived from the landed quantities of the fishery products, the landed weight being converted to the live weight equivalent by the application of factors. Data are available for all species for which catches are reported to international organisations.	
Units: Million tonnes of live weight equivalents.	
Geo coverage: Data for all UNECE countries are available in the Faostat database. Data are available by country and by major fishing area (both inland and marine).	
Time series: 1961–98.	
Quality: The FAO does not quality check data. There are known comparability problems as certain countries are unable to supply data for recreational fisheries.	
Next update: Data are updated on an annual basis and are generally two years behind.	
Previous use: FAO fish catch data have previously been used in EEA 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water will collect the most recent available data from the FAO, and check with ICES database.	Comments: The ETC/Water is developing a core list of fisheries indicators as part of its 2001 work programme. The indicators and data sets required for this chapter of the Kiev report may therefore change in light of these core indicators.

Data set: Tonnage of the fishing fleet

E.2

Used for indicator: Fishing effort: tonnage of the fishing fleet.	
Data retrieval	
Holding body: FAO.	
Contact name: Fishery Information, Data and Statistics Unit	Contact details: FAO, Fishery Information, Data and Statistics Unit (FIDI), Fisheries Department Fax (39) 06 57 05 24 76 E-mail: FIDI-Inquiries@fao.org
Reference: http://www.fao.org/fi/statist/fisoft/FLEET.asp (for data information). Data will eventually be available from the FAO fisheries global information system (FIGIS), an online database at http://www.fao.org/fi/figis/ . This database is currently under construction.	
Accessibility: FAO data will eventually be freely available from the FIGIS online database facility.	
Format: Data will be available in HTML format.	
Reason for choosing data holder/Procedure for collecting data: FAO data have good geographical and temporal coverage. Data will eventually be freely accessible from the FIGIS online database. Data are collected according to well-established methods.	
Data description	
Definitions: Data are the gross registered tonnage (GRT) of fishing vessels.	
Units: Tonnes.	
Geo coverage: All UNECE countries.	
Time series: 1970, 1975 and 1980–98.	
Quality: The data sets contain estimates of missing data. The FAO does not quality check data.	
Next update: Data are updated annually.	
Previous use: FAO data for tonnage of the fishing fleet have previously been used in EEA 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water will collect the most recent available data from the FAO.	Comments: The ETC/Water is developing a core list of fisheries indicators as part of its 2001 work programme. The indicators and data sets required for this chapter of the Kiev report may therefore change in light of these core indicators.

E.3 Data set: Fish spawning stock

Used for indicator: Spawning stock and landings or catches.	
Data retrieval	
Holding body: International Council for the Exploration of the Sea (ICES) from the Working Group Stock Assessments, and other.	
Contact name: ICES Marine Data Centre for NE Atlantic; for the Mediterranean Sea: GFCM; for Baltic Sea: IBSFC	Contact details: ICES Palægade 2–4, DK-1261 Copenhagen Tel. (45) 33 15 42 25 Fax (45) 33 93 42 15 E-mail: ices.info@ices.dk
Reference: http://www.ices.dk/committe/acfm/acfm.htm .	
Accessibility: Permission from ICES is needed before the data set can be obtained and used.	
Format: Data available through fishery commissions, national institution publications and scientific literature.	
Reason for choosing data holder/Procedure for collecting data: ICES produces data with good geographical and temporal coverage. Data are collected using well-established methods and are quality checked.	
Data description	
Definitions: Data are for the stocks of fish by species and by European fishing area.	
Units: Estimated number of fish.	
Geo coverage: European fishing areas.	
Time series: 1960–2000 (there are slight variations between fish stocks).	
Quality: There are known quality problems with reported data, so ICES frequently uses supplementary information when analysing the status of fish stocks.	
Next update: Data are updated annually.	
Previous use: ICES fish stock data have previously been used in EEA 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water to contact ICES and the other organisations, including the FAO Fishery Information, Data and Statistics Unit (FIDI, see E.2), including a possible data source for the Black Sea to obtain the most recent available data.	Comments: The ETC/Water is developing a core list of fisheries indicators as part of its 2001 work programme. The indicators and data sets required for this chapter of the Kiev report may therefore change in light of these core indicators. Spawning stock data are expressed as numbers of spawning fish, whereas fish catches (see E.1) are expressed in terms of caught weight. This may cause problems when comparing the two types of data.

Transport

Data set: Passenger transport by rail and road

E.1

Used for indicator: Passenger transport by mode.	
Data retrieval	
Holding body: Eurostat (New Cronos) and UNECE.	
Contact name: Eurostat: Mr John Allen (Principal Administrator, Transport Unit) UNECE: Mr André Sceia (Economic Affairs Officer, Transport Division, will be replaced)	Contact details: Tel. (352) 43 01-37291/33608 E-mail: john.allen@cec.eu.int Tel. (41-22) 917 13 13 Fax (41-22) 917 00 39 E-mail: Stat.trans@unece.org
Reference: Eurostat: Theme8/milieu/term/volume/term10 for EU-15 TERM data; Theme7 all domains for common questionnaire data; Theme1/cec/cec_g/gtra/gtra05 for CECs. UNECE: <i>Annual Bulletin of Transport Statistics for Europe and North America</i> , 2000 edition.	
Accessibility: Eurostat data are available from the New Cronos database to which the EEA has access. UNECE data are available on request.	
Format: Eurostat data are available in HTML, Excel, DFT, CSV or Flat file formats. The UNECE publication is currently only available in paper format. UNECE is in the process of developing a European transport statistics database.	
Reason for choosing data holder/Procedure for collecting data: Eurostat/UNECE/ECMT data are all collected by the common questionnaire on transport and follow <i>Glossary of transport statistics</i> definitions so are therefore comparable. Eurostat has separate data collecting activities for the CECs also according to the glossary definitions. Eurostat has better coverage of EU-15 and CECs and data are more accessible. UNECE is the best source of data for the NIS.	
Data description	
Definitions: <i>Rail, car, bus and coach passenger:</i> definitions used are those listed in the <i>Glossary of transport statistics</i> , Second edition (Ref.: http://www.unece.org/trans/main/wp6/pdfdocs/glossen2.pdf).	
Units: Passenger-km (a unit of measure representing the transport of one passenger over a distance of 1 km).	
Geo coverage: Eurostat: data are available for EU-15, Norway, Switzerland and CECs. UNECE: sends the questionnaire to all UNECE countries but some countries do not always send responses.	
Time series: Eurostat: 1970–97 for TERM; 1990–98/99 for common questionnaire data; CEC data are available for 1993–98. UNECE: coverage varies between countries but data for 1990–98 are available for most countries.	
Quality: Both organisations quality check data. Data are generally comparable but, where countries have used different definitions, they are asked to provide footnotes.	
Next update: Data are collected annually and are generally two years behind.	
Previous use: Eurostat data have previously been used in EEA 'State of the environment', 'Environmental signals' and TERM reports.	
Additional information	
Actions: The EEA data warehouse manager to upload the most recent data for EU-15, EFTA and CECs from Eurostat into the data warehouse and to contact UNECE to obtain the most recent data for the remaining countries.	Comments:

F.2

Data set: Passenger and freight transport by air

Used for indicators: Passenger transport by mode; freight transport by mode.	
Data retrieval	
Holding body: The Energy and Transport DG produces data for EU-15 in passenger-km in the <i>EU transport in figures</i> report. Data for freight transport are in tonnes by airline only. Eurostat produces data for freight and passenger transport for the CEECs only.	
Contact name: Eurostat: Mr John Allen (Principal Administrator, Transport Unit)	Contact details: European Commission, Energy and Transport DG, Unit B.1, rue de la Loi/Wetstraat 200 B-1049 Brussels Eurostat: Tel. (352) 43 01-37291/33608 E-mail: john.allen@cec.eu.int
Reference: Energy and Transport DG: <i>EU transport in figures</i> : http://europa.eu.int/comm/transport/tif/index.htm (Tables 5.15 and 8.7). Eurostat: New Cronos (http://europa.eu.int/newcronos) Theme1/cec/cecg/gtra04 and gtra05.	
Accessibility: Energy and Transport DG: freely available from web site. Eurostat: New Cronos: EEA has access.	
Format: Energy and Transport DG: HTML tables or the report can be downloaded in PDF format. Eurostat: New Cronos: HTML, Excel, DFT, CSV or Flat file formats.	
Reason for choosing data holder/Procedure for collecting data: Eurostat has good coverage of the CEECs and is a reliable data source. The Energy and Transport DG is the only organisation found which produces data in passenger-km for EU-15. Other data sources only produce data by airline, not by country, and in tonnes/passengers, rather than tonne-km/passenger-km.	
Data description	
Definitions: <i>Air passenger:</i> all passengers whose air journey begins or terminates at the reporting airport, including connecting passengers. Direct transit passengers are also to be counted (direct transit passengers are passengers who continue their journey on a flight having the same flight number as the flight on which they arrived). <i>Air freight:</i> any property loaded/unloaded onto/off aircraft other than stores and baggage. Freight includes express and diplomatic bags but not passenger baggage. Freight does not include mail, defined as correspondence and other objects tendered by, and intended for delivery to, postal administrations.	
Units: Air passenger-km: a unit of measure representing the transport of one air passenger by air over a distance of 1 km; air tonne-km: the aggregate product of the quantity of goods multiplied by the distance over which they have been conveyed.	
Geo coverage: EU-15, Norway and AC-10.	
Time series: EU-15: 1990, 1995–98; AC-10: 1993–98.	
Quality: Some data for AC-10 have been estimated and countries have not always used the same definitions. Data for EU-15 exclude non-EU traffic, so data are not fully comparable with AC-10.	
Next update: Energy and Transport DG: August 2001 (data for 1999). Eurostat: mid-2001 (data for 1999).	
Previous use: Air passenger transport in passenger-km has previously only been used in the TERM report for EU-15.	
Additional information	
Actions: The EEA data warehouse manager to update the warehouse with data for EU-15 from the Energy and Transport DG and for AC-10 from Eurostat. Eurostat will be contacted about the possibility of extending its data collection exercise to other countries.	Comments:

Data set: Freight transport by road, rail, inland waterway and sea

E.3

Used for indicator: Freight transport by mode.	
Data retrieval	
Holding body: Eurostat (New Cronos) and UNECE.	
Contact name: Eurostat: Mr John Allen (Principal Administrator, Transport Unit) UNECE: Mr André Sceia (Economic Affairs Officer, Transport Division, will be replaced)	Contact details: Tel. (352) 43 01-37291/33608 E-mail: john.allen@cec.eu.int Tel. (41-22) 917 13 13 Fax (41-22) 917 00 39 E-mail: Stat.trans@unece.org
Reference: Eurostat: Theme8/milieu/term/volume/term11 for EU-15 TERM data; Theme7 all domains for common questionnaire data; Theme1/cec/cec_g/gtra/gtra04 for CECs. UNECE: <i>Annual Bulletin of Transport Statistics for Europe and North America</i> , 2000 edition.	
Accessibility: Eurostat: EEA has access to New Cronos. UNECE: data available on request.	
Format: Eurostat data are available in HTML, Excel, DFT, CSV or Flat file formats. The UNECE publication is currently only available in paper format. UNECE is in the process of developing a European transport statistics database.	
Reason for choosing data holder/Procedure for collecting data: Eurostat/UNECE/ECMT data are all collected by the common questionnaire on transport and follow <i>Glossary of transport statistics</i> definitions so are therefore comparable. Eurostat has separate data collecting activities for the CECs also according to the glossary definitions. Eurostat has better coverage of EU-15 and CECs and data are more accessible. UNECE is the best source of data for the NIS.	
Data description	
Definitions: <i>Road, rail, inland waterway and marine freight</i> : definitions used are those listed in the <i>Glossary of transport statistics</i> , Second edition (Ref.: http://www.unece.org/trans/main/wp6/pdfdocs/glossen2.pdf).	
Units: Tonne-km: a unit of measure of goods transport of 1 tonne of goods over a distance of 1 km. The distance to be covered is the distance actually run. UNECE data for freight transport by sea are available in tonnes only.	
Geo coverage: Eurostat: data are available for EU-15, Norway, Switzerland and CECs. UNECE sends questionnaires to all UNECE countries, but data are not always received from some countries.	
Time series: Eurostat: 1970–97 for TERM; 1990–1998/99 for common questionnaire data; CEC data are available for 1993–98. UNECE: coverage varies between countries but data for 1990–98 are available for most countries.	
Quality: Both organisations quality check data. Data are comparable but, where countries have used different definitions, they are asked to provide footnotes.	
Next update: Data are collected annually and are generally two years behind.	
Previous use: Eurostat data have previously been used in EEA 'State of the environment', 'Environmental signals' and TERM reports.	
Additional information	
Actions: The EEA data warehouse manager to upload the most recent data for EU-15, EFTA and CECs from Eurostat into the data warehouse, and to contact UNECE to obtain the most recent data for the remaining countries.	Comments:

F.4	Data set: Number of passenger cars	
Used for indicator: Number of passenger cars.		
Data retrieval		
Holding body: UNECE, Eurostat and the ECMT all collect data using the joint questionnaire; however, UNECE compiles the most complete and comparable data set for the number of passenger cars by country.		
Contact name: UNECE: Mr André Sceia (Economic Affairs Officer, Transport Division, will be replaced)	Contact details: Tel. (41-22) 917 13 13 Fax (41-22) 917 00 39 E-mail: Stat.trans@unece.org	
Reference: UNECE: <i>Annual Bulletin of Transport Statistics for Europe and North America</i> , 2000 edition.		
Accessibility: Data are accessible from the publication or can be provided on request.		
Format: The publication is currently only available in paper format. UNECE is in the process of developing a European transport statistics database.		
Reason for choosing data holder/Procedure for collecting data: UNECE collects data for all UNECE countries according to the same definitions. Data are therefore comparable and have good geographical and temporal coverage.		
Data description		
Definitions: <i>Road vehicle:</i> a vehicle running on wheels and intended for use on roads. <i>Passenger car:</i> road motor vehicle, other than a motorcycle, intended for the carriage of passengers and designed to seat no more than nine persons (including the driver). The term 'passenger car' therefore covers microcars (need no permit to be driven), taxis and hired passenger cars, provided they have fewer than 10 seats. The category may also include pick-ups.		
Units: Number.		
Geo coverage: UNECE collects data from all UNECE countries. Coverage is fairly complete.		
Time series: Coverage varies between countries but data are available from 1990 to 1999 for most countries.		
Quality: No known quality problems.		
Next update: Data are collected annually and are two years behind. Data for 2000 will therefore be published in 2002.		
Previous use: UNECE number of cars data have previously been used in EEA 'State of the environment' reports.		
Additional information		
Actions: The EEA data warehouse manager to contact UNECE for the most recent available data for all European countries.	Comments:	

Data set: Investment in transport infrastructure

F.5

Used for indicator: Investment in infrastructure.	
Data retrieval	
Holding body: The ECMT produces data for all ECMT countries. Data currently in the EEA data warehouse are taken from the 1996 report of the European Centre for Infrastructure Studies but are for EU-15 only.	
Contact name: OECD: Mr Mario Barreto (Statistics Administrator)	Contact details: Tel. (33) 145 24 97 22 E-mail: mario.barreto@oecd.org
Reference: ECMT, <i>Investment in transport infrastructure 1985–95</i> , European Conference of Ministers for Transport, Paris, France, 1999.	
Accessibility: Data are available from the above publication.	
Format: Data are available in paper format only. The ECMT currently does not have a database facility for external users.	
Reason for choosing data holder/Procedure for collecting data: ECMT has reported on investment in transport infrastructure since 1987 so collection practices are well established. Data are collected for all ECMT countries so geographical coverage is good.	
Data description	
Definitions: Total transport infrastructure investment by both public and private investors. Data are available for roads, railways, urban railways, inland waterways, oil pipelines, ports and airports.	
Units: Billion ecu/euro.	
Geo coverage: ECMT countries: EU-15, EFTA-3 (no Liechtenstein), AC-10, non-accession Phare countries, Azerbaijan, Belarus, Croatia, Georgia, Moldova, Russian Federation, Turkey and Ukraine.	
Time series: Data for EU and EFTA countries are generally available for 1985 to 1995. Data for the AC and NIS countries are generally available from 1993 to 1995.	
Quality: Although ECMT data are of good quality, international comparisons are not always possible as there is usually limited available data on private investments.	
Next update: Data are collected every five years. Data for 1996–2000 will be published by the ECMT in 2001.	
Previous use: ECMT data have previously been used in the EEA <i>TERM 2000</i> report.	
Additional information	
Actions: The EEA data warehouse manager to collect the most recent data from the ECMT and upload it into the data warehouse.	Comments:

F.6 Data set: Road transport fuel prices

Used for indicator: Transport fuel prices.	
Data retrieval	
Holding body: Eurostat produces data for EU-15 countries. The IEA produces data for OECD countries and selected non-OECD countries.	
Contact name: IEA: Ms Carrie Pottinger (Energy Prices and Taxes Statistics Division)	Contact details: IEA, 9, rue de la Federation, F-75739 Paris Cedex 15 Tel. (33) 140 57 66 40 E-mail: carrie.salama@iea.org
Reference: Eurostat: theme8/milieu/term/prices/term53 or theme8/sirene/s-price/sir3s. IEA: data are available on the 'Energy prices and taxes' diskette. The IEA has also recently launched online databases of all its statistics. The home page for this service is http://data.iea.org/ (go to 'Access services' when a password has been obtained).	
Accessibility: Eurostat: The EEA has access to New Cronos. The EEA has previously been sent the IEA diskette with no charge (subject to a copyright agreement). A password for the online database will need to be obtained.	
Format: HTML tables.	
Reason for choosing data holder/Procedure for collecting data: Eurostat data have better coverage of EU-15. IEA data have better coverage of the CEC and NIS countries. Data are collected by both organisations by established methods and are checked when received.	
Data description	
Definitions: End-user prices include transport costs to the consumer and taxes which have to be paid by the consumer as part of the transaction, which are not refundable. All prices are the prices actually paid if not otherwise noted. The transport fuel end-user prices are generally available for gasoline (premium leaded, premium unleaded, regular unleaded) and automotive diesel oil.	
Units: Eurostat: euro. IEA: US dollars or national currency at current prices (needs converting to euro).	
Geo coverage: IEA: energy price data for the EU countries, excluding Greece and Italy, Norway and Switzerland, Hungary, Poland and Turkey plus Kazakhstan, Romania, Russia and Slovakia. Eurostat: data for EU-15 and Norway.	
Time series: Eurostat have data for 1985–2000. IEA data for OECD countries are currently available from 1960 to 1998. Data for non-OECD countries are available from 1971 to 1998.	
Quality: Data are collected according to the same definitions and are quality checked by the IEA and Eurostat. The IEA estimates figures where no data are available.	
Next update: Data are collected and published quarterly.	
Previous use: IEA energy price data have previously been used in EEA 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to contact the IEA to establish online data capture by the warehouse and to collect the most recent data for AC and NIS countries from the IEA. Currency conversion to be established. The data warehouse manager also to obtain the most recent available data from Eurostat for EU-15 to fill the gaps.	Comments:

Data set: Transport fuel consumption

E.7

Used for indicator: Uptake of cleaner fuels.	
Data retrieval	
Holding body: The IEA produces data for fuel consumption by the transport sector.	
Contact name: IEA: Mr Jean-Yves Garnier (Head of Energy Statistics Division)	Contact details: IEA, 9, rue de la Federation, F-75739 Paris Cedex 15 Tel. (33) 140 57 66 20 E-mail: jean-yves.garnier@iea.org
Reference: IEA data are available on the World Energy Statistics Service 2000 diskette. The IEA has also recently launched online databases of all its statistics. The home page for this service is: http://data.iea.org/ (go to 'Access services' when a password has been obtained).	
Accessibility: The EEA has previously been sent the IEA diskette with no charge (subject to a copyright agreement). A password for the online database will need to be obtained.	
Format: HTML tables.	
Reason for choosing data holder/Procedure for collecting data: IEA data are collected according to well-established practices, are quality checked and have good coverage of OECD countries.	
Data description	
Definitions: Data are available for energy consumption for transport activity by road, air and inland navigation. Fuel types are leaded and unleaded gasoline and diesel.	
Units: 1 000 tonnes of oil equivalent.	
Geo coverage: The IEA collects data from OECD countries and non-OECD countries. Data are provided by all OECD countries, but very few non-OECD countries report the breakdown of transport fuel consumption.	
Time series: OECD countries: 1960–98; non-OECD countries: 1971–98.	
Quality: The IEA quality checks data.	
Next update: Data are collected and published quarterly.	
Previous use: This data set has previously been used in EEA 'State of the environment' reports. Data were collected according to an EEA general questionnaire sent to the EU-15, EFTA-4, AC-13, non-accession Phare countries, Armenia, Azerbaijan, Belarus, Croatia, Georgia, Moldova, Russian Federation Ukraine and Yugoslavia. Data are available in the data warehouse (ULEGAS_D, LEAGAS_D, OTHER_D, GASDIS_D). Data are available for 1980–96 but there are many gaps in the coverage as countries did not respond for all fuel types and for no fuel types in some cases.	
Additional information	
Actions: The EEA data warehouse manager to contact the IEA to establish online data capture by the warehouse and to collect the most recent data for OECD countries. The EEA to re-send a questionnaire for updated information from countries not covered by the IEA.	Comments:

F.8

Data set: Number of cars fitted with a catalytic converter

Used for indicator: Share of cars with catalytic converters.	
Data retrieval	
Holding body: Eurostat has data for EU-15 only. A joint ECMT/UNECE/Eurostat pilot questionnaire is under way, including coverage of the NIS and accession countries, but few data are as yet available.	
Contact name: Eurostat: Mr Graham Lock	Contact details: Tel. (352) 43 01-33406 E-mail: graham.lock@cec.eu.int
Reference: Eurostat, New Cronos: Theme 8/milieu/term/efficien/term68.	
Accessibility: The EEA has access to data in New Cronos.	
Format: Data in New Cronos are available in HTML, Excel, DFT, CSV or Flat file formats.	
Reason for choosing data holder/Procedure for collecting data: Eurostat statistics are quality checked and comparable and have good coverage of EU-15. Data for other countries are currently not held by an international organisation, but may be made available from the pilot ECMT/UNECE/Eurostat joint questionnaire.	
Data description	
Definitions: Eurostat data are for the share of petrol cars fitted with catalytic converters.	
Units: Eurostat: % of petrol-engine cars fitted with a catalytic converter.	
Geo coverage: Eurostat: EU-15 only.	
Time series: Eurostat: 1990–97.	
Quality: Eurostat data are estimates based on the estimated age distribution of cars.	
Next update:	
Previous use: The data currently in the warehouse have been used in <i>Europe's environment — The second assessment</i> . The current coverage in the data warehouse is for the EU (except Portugal), EFTA (except Iceland), Czech Republic, Estonia, Lithuania and Slovakia for 1987–97. The unit is the number of cars. Eurostat data have been used in the EEA <i>TERM 2000</i> report.	
Additional information	
Actions: The EEA data warehouse manager to upload the most recent data from New Cronos into the data warehouse, and to explore the outcomes of the pilot questionnaire.	Comments:

Data set: Total final energy consumption

E.9

Used for indicator: Energy efficiency of the transport sector.	
Data retrieval	
Holding body: The EEA data warehouse has IEA data for EU-15, EFTA-3 (no Liechtenstein) and AC-10, and Eurostat data for EU-15 EFTA-4 only. The IEA has data for all European countries so is the main source for this data set.	
Contact name: IEA: Mr Jean-Yves Garnier (Head of Energy Statistics Division)	Contact details: IEA, 9, rue de la Federation, F-75739 Paris Cedex 15 Tel. (33) 140 57 66 20 E-mail: jean-yves.garnier@iea.org
Reference: IEA: data are available on the World Energy Statistics Service (2000 edition) diskette. The IEA has also recently launched online databases of all its statistics. The home page for this service is: http://data.iea.org/ (go to 'Access services' when a password has been obtained).	
Accessibility: The EEA is sent the diskette with no charge (subject to a copyright agreement). A password for the online database will need to be obtained.	
Format: HTML tables.	
Reason for choosing data holder/Procedure for collecting data: IEA data have excellent geographical and temporal coverage. Data are collected by established methods and are checked when received.	
Data description	
Definitions: Total final energy consumption = Energy available for consumption – Distribution losses – Transportation losses – Consumption of the energy sector – Statistical differences. Data are produced in the ISIC Rev. 3 sector categories of energy sector, industrial sector, transport sector and other sectors. The transport sector includes all fuels for transport except international marine bunkers (ISIC Divisions 60, 61 and 62). It includes transport in the industry sector and covers road, railway, air, and internal navigation (including small craft and coastal shipping not included under marine bunkers), fuels used for transport of materials by pipeline and non-specified transport.	
Units: 1 000 tonnes of oil equivalent.	
Geo coverage: The IEA has data for all countries to be included in the Kiev report except Andorra, Monaco and San Marino.	
Time series: OECD countries (EU-15, EFTA-4, Czech Republic, Hungary, Poland, Slovakia and Turkey): 1960–98; non-OECD countries: 1971–98.	
Quality: Data are collected according to the same definitions and are quality checked by the IEA. Estimates are made where no data are available. Although data are collected by Eurostat and the IEA using a common questionnaire, there are some small differences in the published data from both organisations. This is due to the conversion factors used by both organisations.	
Next update: IEA data are collected on a monthly and annual basis and finalised progressively from September to July. Annual updates are published in September.	
Previous use: Data from the IEA have previously been used in EEA 'State of the environment' and 'Environmental signals' reports.	
Additional information	
Actions: The EEA data warehouse manager to contact the IEA to establish online data capture by the warehouse and to collect the most recent data for all countries from the IEA.	Comments:

Tourism

G.1 Data set: Number of tourist arrivals

Used for indicator: Number of tourist arrivals.	
Data retrieval	
Holding body: The data with the best coverage are available from the World Tourism Organisation (WTO). The EEA data warehouse currently has WTO data for EU-15, EFTA-4 and CECs.	
Contact name: WTO: Mr Antonio Massieu (Chief, Statistics and Economic Measurement of Tourism)	Contact details: WTO, Capitan Haya, 42, E-28020 Madrid Tel. (34) 915 67 81 96 Fax (34) 915 67 82 17 E-mail: amassieu@world-tourism.org
Reference: Data are available from the WTO publications <i>Yearbook of tourism statistics</i> and <i>Compendium of tourism statistics</i> or from the WTO online database (http://www.world-tourism.org/framestat/frame_statistics.html).	
Accessibility: A password is required to access the online database. Access is free for governmental institutions and members of such institutions.	
Format: Data from the database are available in HTML format.	
Reason for choosing data holder/Procedure for collecting data: WTO data have excellent temporal and geographical coverage. Data from Eurostat do not have such good coverage. WTO data are all collected directly from national statistical offices and quality checked when received.	
Data description	
Definitions: <i>Tourist:</i> a visitor who stays at least one night in a collective or private accommodation in the country visited. <i>Arrivals:</i> arrivals refer to actual arrivals and not the number of people travelling. One person visiting the country several times during the year is counted as a new arrival. The same person visiting several countries during the same trip is counted each time as a new arrival.	
Units: Million persons.	
Geo coverage: All European countries (EU-15, EFTA-4, AC-13, non-accession Phare countries, NIS).	
Time series: The WTO has data from 1985 to 2000 for EU and EFTA countries, and generally from 1990 to 2000 for the CEC and NIS countries.	
Quality: WTO data are collected directly from national statistical offices and are quality checked when received. All queries are clarified with the country concerned. Estimates are made where no figures are available.	
Next update: Data are collected on an annual basis but data in the database are updated monthly using estimates.	
Previous use: WTO statistics for the number of tourist arrivals have previously been used in EEA 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to contact the WTO to establish online data capture by the warehouse and to collect the most recent data set from the WTO.	Comments:

Data set: Arrivals of visitors at borders by type of entrance

G.2

Used for indicator: Arrivals of visitors at borders by type of entrance into country.	
Data retrieval	
Holding body: The best data are available from the World Tourism Organisation (WTO). The EEA data warehouse has Eurostat data for EU-15, EFTA-4 and CECs (data set: ARRIVAL).	
Contact name: WTO: Mr Antonio Massieu (Chief, Statistics and Economic Measurement of Tourism)	Contact details: WTO, Capitan Haya, 42, E-28020 Madrid Tel. (34) 915 67 81 96 Fax (34) 915 67 82 17 E-mail: amassieu@world-tourism.org
Reference: WTO: data are available from the WTO publications <i>Yearbook of tourism statistics</i> and the <i>Compendium of Tourism Statistics</i> or from the WTO online database (http://www.world-tourism.org/frameset/frame_statistics.html).	
Accessibility: A password is required to access the online database. Access is free for governmental institutions and members of such institutions.	
Format: Data from the database are available in HTML format.	
Reason for choosing data holder/Procedure for collecting data: WTO data have excellent temporal and geographical coverage. Data are collected directly from national statistical offices and are quality checked when received.	
Data description	
Definitions: <i>Tourist:</i> a visitor who stays at least one night in a collective or private accommodation in the country visited. <i>Arrivals:</i> arrivals refer to actual arrivals and not the number of people travelling. One person visiting the country several times during the year is counted as a new arrival. The same person visiting several countries during the same trip is counted each time as a new arrival. Data are available for entrances by rail, air, road and sea.	
Units: 1 000 persons.	
Geo coverage: The WTO collects and produces data for all European countries. There are some gaps in the coverage.	
Time series: The WTO has data for 1985 to 1998 with data for some countries for 1999.	
Quality: WTO data are collected directly from national statistical offices and are quality checked when received. All queries are clarified with the country concerned.	
Next update: Data are collected on an annual basis but data in the database are updated monthly using estimates.	
Previous use: WTO statistics for arrivals by type of entrance have previously been used in EEA 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to contact the WTO to establish online data capture by the warehouse and to collect the most recent data set for all countries.	Comments: The data set from Eurostat currently in the EEA data warehouse is no longer available as it was never fully integrated into New Cronos. It comprised voluntarily submitted data from countries from an ad hoc exercise. The data set is under development but is currently not available in New Cronos.

Climate change

3.1 Data set: Average European temperature

Used for indicator: Annual average European temperature, 1860–2000 (+ projected 2100).	
Data retrieval	
Holding body: Summarised European average temperature data are available from CRU found at the IPCC Data Distribution Centre (data from CRU Global Climatologies).	
Contact name:	Contact details: IPCC: E-mail: ipcc.ddc@uea.ac.uk CRU: E-mail: d.viner@uea.ac.uk
Reference: Data can be obtained by contacting CRU directly. Data are also available from IPCC Data Distribution Centre: http://ipcc-ddc.cru.uea.ac.uk (go to 'Scenario data gateway', 'Download data' and 'Observed data download').	
Accessibility: Data are freely available both from CRU and the IPCC online database.	
Format: Data are available as ASCII file, with values for cells of a large grid that can be displayed through a GIS program.	
Reason for choosing data holder/Procedure for collecting data: The data set is reliable, with a low uncertainty. CRU data have good geographical and temporal coverage and result from meteorological temperature records usually collected hourly. The data collecting practices are well established.	
Data description	
Definitions: Data relate to mean annual temperature over Europe and spatial variation thereof.	
Units: °C.	
Geo coverage: Europe (there is a need to document and check the definitions of 'Europe' used to compile the information from the CRU data sets).	
Time series: Data from 1856 to 2000 are available from CRU. Data for 1901–90 are provided on the IPCC Data Distribution Centre web site. Possible to include projections up to 2100 using IPCC data and/or the Image model.	
Quality: Although the coverage of meteorological stations varies over the time series, this is generally considered to be a reliable time series.	
Next update: Data are collected hourly but CRU aggregates and averages the data to produce annual averages.	
Previous use: CRU data have previously been used in EEA 'State of the environment' and 'Environmental signals' reports.	
Additional information	
Actions: The ETC/Air and Climate Change to collect the most recent data set from CRU. The ETC/Air and Climate Change to investigate linking with projections up to 2100.	Comments: The definition of 'Europe' needs to be checked to ensure it covers the relevant land area (NIS, CEE countries, etc.).

Data set: European precipitation, 1860–2000

3.2

Used for indicator: Annual European precipitation, 1860–2000 (+ projected 2100).	
Data retrieval	
Holding body: Summarised European average precipitation data can be found at the IPCC Data Distribution Centre, originating from the Climatic Research Unit (CRU) online database. Information will also be available in reports from European and international programmes (e.g. Acacia, IPCC-TAR, Eumetnet).	
Contact name:	Contact details: CRU: E-mail: d.viner@uea.ac.uk
Reference: CRU web site: http://www.cru.uea.ac.uk/link/ (go to 'Data and software' and 'Global precipitation').	
Accessibility: CRU data are freely available from the CRU online database. No payment is required for downloads. Files are large (5 and 10 Mb).	
Format: CRU data are available as ASCII gridded (2.5 or 5 degree units) data format, for display through GIS program.	
Reason for choosing data holder/Procedure for collecting data: CRU data have good geographical and temporal coverage and result from meteorological temperature records collected regularly. The data collecting practices are well established.	
Data description	
Definitions: Data relate to mean annual precipitation over Europe and its spatial variation within a grid of resolution 2.5 or 5.0 degrees.	
Units: mm/day.	
Geo coverage: Europe. Although there is a need to document and check the definitions of 'Europe' used to compile the information from the CRU data sets.	
Time series: 1900–2000. Including projections up to 2100 (using information from the IPCC and/or the Image model should be considered).	
Quality: Although the coverage of meteorological stations varies over the time series, this is generally considered to be a reliable time series.	
Next update: Data are updated annually.	
Previous use: Precipitation intensity pattern data from the World Meteorological Institute have previously been used in Dobris +3. CRU precipitation data have not previously been used.	
Additional information	
Actions: The ETC/Air and Climate Change will review the information held by CRU and information in existing European and international reports (e.g. Acacia, Eumetnet, IPCC-TAR) to select the best source of data for annual precipitation. The ETC/Air and Climate Change will investigate the feasibility of including projections up to 2100. Map presentation should be considered.	Comments:

3.3 Data set: Rise in sea level

Used for indicator: Annual rise in sea level (+ projected to 2100).	
Data retrieval	
Holding body: This information will be taken from recent reports from European and international programmes (e.g. Acacia, IPCC-TAR, ACIA (Arctic climate impact assessment)) following a review by the ETC/Air and Climate Change.	
Contact name:	Contact details:
Reference: Eumetnet: <i>European climate assessment 2000</i> . IPCC: <i>Third Assessment Report Working Groups 1 and 2</i> . Acacia project: <i>Assessment of potential effects and adaptations for climate change in Europe</i> . Arctic Council: <i>Arctic climate impact assessment</i> (report due 2001/02).	
Accessibility:	
Format:	
Reason for choosing data holder/Procedure for collecting data: These reports will provide a good overview of the impacts of climate change.	
Data description	
Definitions:	
Units:	
Geo coverage:	
Time series:	
Quality:	
Next update:	
Previous use: Rise in sea level has not previously been presented as a quantitative indicator in EEA indicator reports.	
Additional information	
Actions: The ETC/Air and Climate Change will review the information available in the listed reports and select the best available information to use for this data set.	Comments: Additional information is available from the Permanent Service for Mean Sea Level (PSML) hosted by the Proudman Oceanic Laboratory.

Data set: Sea ice growth and melt extent

3.4

Used for indicator: Distribution of the growth and melt of sea ice.	
Data retrieval	
Holding body: Information on the extent of Arctic sea ice will be available in the ACIA (Arctic climate impact assessment) report, expected to be published in 2001/02.	
Contact name: ACIA: Professor Gunter Weller (Executive Director, ACIA Secretariat)	Contact details: E-mail: gunter@gi.alaska.edu
Reference: ACIA web site: http://www.acia.uaf.edu/default.html (for outline of the proposed document, go to 'Assessment outline').	
Accessibility: Outline of the proposed ACIA document downloadable free of charge.	
Format: Document outline as HTML text or Adobe Acrobat (PDF) file.	
Reason for choosing data holder/Procedure for collecting data: This report will provide a detailed study of the Arctic region.	
Data description	
Definitions: Data will be for the distribution of Arctic sea ice growth and melt.	
Units:	
Geo coverage: Arctic region.	
Time series:	
Quality:	
Next update:	
Previous use: Data for sea ice have not previously been presented in EEA reports.	
Additional information	
Actions: The ETC/Air and Climate Change to obtain the ACIA report, when published, and to compile a 'Sea ice growth and melt extent' data set.	Comments: Data are also available from the Hadley Centre (Global Sea-Ice and SST Data — GISST) via ftp server and on CD-ROM from the British Atmospheric Data Centre.

3.5 Data set: Annual emissions of greenhouse gases (CO₂, CH₄, N₂O, HFCs, PFCs and SF₆)

Used for indicators: Total emissions of greenhouse gases with respect to Kyoto targets; emissions of individual greenhouse gases by sector.	
Data retrieval	
Holding body: Data from the UNFCCC are compiled by the ETC/Air and Climate Change and are in the EEA data warehouse (EU-15, EFTA-4 (excluding Liechtenstein) and AC-10 only). Additional data for HFCs, PFCs and SF ₆ for countries that do not submit data to the UNFCCC are taken from the Ecofys report prepared for the EC.	
Contact name: Mr Manfred Ritter	Contact details: E-mail: RitterM@ubavie.gv.at
Reference: Data for EU countries (in CRF format) are available in the Corinair emissions database at the ETC/Air and Climate Change. Data warehouse: 'Trend in emissions of greenhouse gases' (UNFCCC1). UNFCCC: www.unfccc.de — Greenhouse gas inventory database held at: http://62.225.2.23/default1.htm?time=05 %3A54 %3A21+PM . <i>Economic evaluation of emission reductions of HFCs, PFCs and SF₆ in Europe</i> , Ecofys, 2000.	
Accessibility: Data from the UNFCCC are readily available. No payment is required.	
Format: Data from the UNFCCC are available in HTML tables.	
Reason for choosing data holder/Procedure for collecting data: UNFCCC data have good geographical and temporal coverage, with high sectoral resolution in many cases. Data are regularly updated and easily accessible. The data collecting practices are well established.	
Data description	
Definitions: Data from the UNFCCC are annual emissions of N ₂ O, CO ₂ , CH ₄ , HFCs, PFCs and SF ₆ from individual countries. Sectoral classifications (IPCC classifications) are provided in many cases in the categories of: industrial processes, waste, agriculture, transport, energy industries, fugitive emissions, land-use change and forestry, and international bunkers.	
Units: Million tonnes (UNFCCC reporting format). Data can also be converted to their global warming potential (100-year time horizon).	
Geo coverage: The UNFCCC receives submissions from 30 Annex 1 parties and 27 non-parties. European countries covered are EU-15, EFTA-4, AC-10, Armenia, Azerbaijan, Georgia, Kazakhstan, Russia and Ukraine. The Ecofys report covers EU-15 only.	
Time series: Data from the UNFCCC are available from 1990 to 1998 but there are gaps for some countries for some years. Data from Ecofys are estimates for 1990 and 1995.	
Quality: Data are reported following agreed procedures, for example regarding source-sector split. GWP weightings are in accordance with the agreed UNFCCC and EU monitoring mechanism procedure. Estimates from Ecofys may not be entirely consistent with UNFCCC data.	
Next update: Data are submitted and updated annually (usually in September).	
Previous use: National and sectoral emission data, as officially reported to the UNFCCC, have previously been used in EEA 'Environmental signals' reports.	
Additional information	
Actions: The ETC/Air and Climate Change will update its existing data for the EEA-18 countries and, if funds are made available, will increase the coverage of the data held to all countries to be covered in the Kiev report.	Comments:

Data set: Greenhouse gas emission projections

3.6

Used for indicator: Emissions of individual greenhouse gases (CH ₄ , CO ₂ , N ₂ O) by sector projected with current and pipeline policies (outlook to 2010 and 2020, including estimation of EU Member State and accession country use of the Kyoto mechanisms).	
Data retrieval	
Holding body: Projection data contained within ETC-AQ/IIASA/NTUA/ETC-AE report <i>Air pollution outlooks — an evaluation</i> , published December 2000.	
Contact name: ETC/ACC: Mr Wolf Garber and Mr Bernd Strobel (UBA, Germany)	Contact details: Umweltbundesamt, Bismarckplatz 1, Postbox 14193, D-330022 Berlin Tel. (49-30) 89 03 22 82 Fax (49-30) 89 03 25 82 E-mail: wolf.garber@uba.de
Reference: ETC/Air Quality, <i>Air pollution outlooks — an evaluation</i> , December 2000.	
Accessibility: The ETC/Air and Climate Change has access to the information. The report is not yet available on the IIASA web site.	
Format: Data presented in text tables within the document.	
Reason for choosing data holder/Procedure for collecting data: The modelling performed by the IIASA is thought to be comprehensive and covers a wide geographical area. The ShAIR scenario updates previous models by incorporating recent policy information.	
Data description	
Definitions: Projected CO ₂ emissions by sector for the EU as a whole and, separately, for a group of seven accession countries, as calculated by the ShAIR model. Data are presented expressing energy-related CO ₂ emission projections by country for 14 EU Member States and as a percentage change in CO ₂ emissions for 14 EU Member States over the periods 1990–2000, 1990–2010 and 1990–2020. In addition, projected low resolution CH ₄ and N ₂ O emission projection data for EU-15 as a whole are presented.	
Units: Emissions of CO ₂ by sector and CH ₄ and N ₂ O for EU-15 as a whole: million tonnes; energy-related CO ₂ emissions by country: 1 000 million kg.	
Geo coverage: CO ₂ : EU-15 as a whole (energy-related data for individual EU countries, excluding Luxembourg), Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Slovenia. CH ₄ , N ₂ O: EU-15 as a whole.	
Time series: 1990, 2010 and 2020.	
Quality: ShAIR scenarios update previous models by incorporating 'current' EU policies (up to June 2000), thereby providing a more accurate picture of greenhouse gas emissions within the region for the next 20 years. In addition, smaller adaptations have been made in order to overcome differences in base year figures and new assumptions in the driving forces.	
Next update: The report mentions several areas of potential improvement to the ShAIR scenario in the near future, but no specific dates are mentioned.	
Previous use: This data set has not previously been used in EEA 'State of the environment' or 'Environmental signals' reports.	
Additional information	
Actions: The ETC/Air and Climate Change will use the information in the report and information arising from updates of this study to compile this data set.	Comments: Data will also become available from third national communications to be submitted to the UNFCCC in November 2001. However, these may not be available in time for the compilation of the Kiev report.

Stratospheric ozone depletion

4.1 Data set: Production and consumption of key ozone-depleting substances

Used for indicator: Production of key ozone-depleting substances with respect to Montreal Protocol targets.	
Data retrieval	
Holding body: The EEA data warehouse has data for EU-15 and AC-10 for consumption, and EU-15 only for production. The source of these data is the UNEP report <i>Production and consumption of ozone-depleting substances</i> .	
Contact name: Senior Scientific Affairs Officer, Secretariat for the Vienna Convention and Montreal Protocol E-mail: Nelson.Sabogal@unep.org	Contact details: E-mail: Ozoneinfo@unep.org
Reference: EEA data warehouse: 'Production of ozone-depleting substances in EU-15' (PROD_EU); 'Consumption of ozone-depleting substances' (CONS_EU). UNEP: http://www.unep.org — Report held at: http://www.unep.org/ozone/DataReport99.shtml .	
Accessibility: Data not available in the EEA data warehouse are included in the latest UNEP ODS production and consumption report, available free of charge on the UNEP web site.	
Format: EEA warehouse data as HTML tables or .csv (ASCII Delimited format). The UNEP report is available as a PDF file.	
Reason for choosing data holder/Procedure for collecting data: UNEP data have good geographical coverage, with values for individual substances. Data are updated annually and collecting practices are well established.	
Data description	
Definitions: Data relate to production and consumption figures, from individual countries, of the following ozone-depleting substances (ODS): carbon tetrachloride (CTC), CFCs, HCFCs, halons, methyl bromide, and methyl chloroform. Consumption is defined as production plus imports minus exports of controlled substances. ODP (ozone-depletion potential) is the weighting given to emission data for individual gases approved by the Montreal Protocol.	
Units: Million kg in the EEA data warehouse; ODP tonnes in the UNEP report.	
Geo coverage: EEA data warehouse: data for production are for EU-15 as a whole only; data for consumption are for EU-15 (excluding Portugal and Ireland) and AC-10. UNEP: the latest (1999) report data for EU, EFTA, AC and NIS countries.	
Time series: Production: data are available from the late 1980s until 1998. There are gaps for some countries. Consumption: 1990–98. There are gaps for some countries. Data are also not available for all countries for all ODS.	
Quality: UNEP attempts to ensure consistent data quality by advising contributing countries about formats/ definitions etc. A general explanation of the data presented is given in the UNEP report.	
Next update: UNEP ODS production data are updated annually.	
Previous use: Production data from European Commission's Environment DG have previously been used in EEA 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to update the data warehouse with data presented in the 1999 UNEP report <i>Production and consumption of ozone-depleting substances 1986–98</i> , for countries/years described above.	Comments:

Air pollution

Data set: Emissions of SO₂, NO_x, NH₃ and NMVOCs

5.1

Used for indicator: Emissions of SO ₂ , NO _x , NH ₃ and NMVOCs, in total and by sector, 1990–2010–2020, compared with 2010 targets.	
Data retrieval	
Holding body: Sectoral and total emissions data are available in the EEA data warehouse. Source of data is EMEP (EMEP database), which also has data for other countries.	
Contact name: EMEP data: Mr Vigdis Vestring (MSC-W); Corinair data: Mr Manfred Ritter YIR2001 data: Mr Justin Goodwin	Contact details: E-mail: vigdis.vestring@dnmi.no E-mail: RitterM@ubavie.gv.at E-mail: justin.goodwin@aeat.co.uk
Reference: EMEP: http://www.emep.int/index.html (for sectoral data, go to 'Detailed reports per country' (http://www.emep.int/areas/index.html)).	
Accessibility: The ETC/Air and Climate Change has access to this data and holds a copy of the national reports to EMEP in the Corinair air emissions database.	
Format: Data from EMEP are available in HTML tables.	
Reason for choosing data holder/Procedure for collecting data: EMEP data have previously been used by the EEA and have good geographical and temporal coverage. Data are regularly updated and easily accessible through the EMEP web site. The data collecting practices are well established.	
Data description	
Definitions: Data relate to anthropogenic emissions of NO _x , SO ₂ , NH ₃ and NMVOCs from individual countries. Sectoral data is provided following EMEP (SNAP) criteria for the following sectors: waste, energy industries, fugitive emissions, industrial sources, road transport, other transport, agriculture, and other.	
Units: ktonnes.	
Geo coverage: EMEP site: EU-15, EFTA-4, AC-10, and Armenia, Bosnia-Herzegovina, Belarus, Croatia, Cyprus, FYROM, Georgia, Moldova, Russian Federation, Serbia-Montenegro, Turkey and Ukraine.	
Time series: SO ₂ and NO _x : Sectoral — EU-15, EFTA-4 (excluding Liechtenstein), accession countries, Cyprus, FYROM and Turkey (1997), Armenia, Croatia, Moldova, Russia, Serbia-Montenegro, Ukraine: mostly 1990–98, with few country/year gaps; Total: above, plus Belarus, Bosnia-Herzegovina (1990, SO ₂ only), Georgia and Liechtenstein. NH ₃ and NMVOCs: Sectoral — EU-15, Norway, Switzerland, accession countries, Turkey (NMVOCs), Iceland (NMVOCs), Armenia, Croatia, Moldova, Russia, Ukraine: mostly 1990–98, with few country/year gaps; Total: above, plus Belarus (1990, 1994–98 for NH ₃ , 1990–98 for NMVOCs) and Liechtenstein (1980, 1984, 1990 for NH ₃ , 1990–94 for NMVOCs).	
Quality: Strict guidance for sampling/analytical techniques is provided to contributing countries; however, reporting can be incompatible for some countries.	
Next update: Data should be submitted to the Chemical Coordination Centre twice a year.	
Previous use: National and sectoral emission data, as officially reported to UNECE/CLRTAP/EMEP, have previously been used in EEA 'State of the environment' and 'Environmental signals' reports.	
Additional information	
Actions: The ETC/Air and Climate Change will identify additional data needs for non-EU countries (as part of a project funded separately from Kiev report work) and update its data with information for other countries if funds are available.	Comments: Core set of air emission indicators previously included in <i>Environmental signals 2000, 2001</i> and <i>SoE99</i> are to be reviewed, as part of the ETC/Air and Climate Change 2001 work plan. Included in this review will be the identification of additional data needs for non-EU countries. Relations between air quality and air emission indicators are also to be reviewed.

5.2 Data set: Emissions of PM10

Used for indicator: Emissions of SO ₂ , NO _x , NH ₃ , NMVOCs and PM10, in total and by sector, 1990–2010–2020, compared with 2010 targets.	
Data retrieval	
Holding body: Particulate emissions for 1995 are available from the Cepmeip project, performed by TNO within the EMEP work programme. This study also provides emission factors that can be used for updates of the ShAIR study projections.	
Contact name: For EMEP data: Mr Jan Schaug (Chemical Coordinating Centre) For Cepmeip: Mr Tinus Pulles (TNO)	Contact details: EMEP: E-mail: Jan.Schaug@nilu.no Cepmeip: E-mail: m.p.j.pulles@mep.tno.nl
Reference: For Auto-Oil II report, go to: http://europa.eu.int/comm/environment/autooil/auto-oil_en.pdf . For PM10 precursors, go to the EMEP web site: http://www.emep.int/areas/index.html and select detailed reports per country. For PM10 emissions, go to http://www.mep.tno.nl/emissions .	
Accessibility: NO _x , SO ₂ and NH ₃ emissions data are readily accessible from the EMEP online database. No payment is required for downloads. The Auto-Oil II report can be downloaded from the European Commission web site, free of charge.	
Format: EMEP data: HTML tables. Auto-Oil II document: Adobe Acrobat (PDF). Cepmeip data in MS Excel pivot tables.	
Reason for choosing data holder/Procedure for collecting data: EMEP data have previously been used by the EEA and have good geographical and temporal coverage. Data are regularly updated and easily accessible through the EMEP web site. The data collecting practices are well established. The Auto-Oil II programme data have previously been used for primary PM10 assessment by the ETC/Air Emissions.	
Data description	
Definitions: Auto-Oil II data express anthropogenic emissions of Primary PM10 for EU-15, by country and by sector (for the entire EU-15 region only). PM10 precursor-emission data express annual anthropogenic emissions of NO _x , SO ₂ and NH ₃ by country and sector.	
Units: ktonnes.	
Geo coverage: Auto-Oil II primary PM10 data: EU-15 only. EMEP (PM10 precursors) data available for EU-15, EFTA-4, accession countries, Armenia, Belarus, Bosnia-Herzegovina, Croatia, Cyprus, Georgia, Moldova, Russia, Serbia-Montenegro, Turkey and Ukraine.	
Time series: Auto-Oil II primary PM10 data: 1990, 1995 and projections for 2000, 2005, 2010, 2015 and 2020. PM10 precursors, as reported to EMEP: 1990–98.	
Quality: Available primary PM10 data set does not include all years and therefore may require interpolation for missing years. Incomplete reporting and resultant extrapolation may obscure some trends. The aerosol formation factors, used to convert PM10 precursors, do not, as yet, have wide support or recognition.	
Next update: EMEP: data should be submitted to the Chemical Coordinating Centre twice a year. One of the aims of Auto-Oil II is to provide a foundation (in terms of data and modelling tools) for the transition towards longer-term air quality studies covering all emission sources. No specific dates for the delivery of such studies have been given.	
Previous use: National and sectoral PM10-precursor-emission data, as officially reported to UNECE/CLRTAP/EMEP, have previously been used in EEA 'Environmental signals' fact sheets, as have primary PM10 data resulting from the Auto-Oil II programme.	
Additional information	
Actions: The ETC/Air and Climate Change will identify additional data needs for non-EU countries (as part of a project funded separately from Kiev report work) and collect data from non-EEA-18 countries if funds are available.	Comments:

Data set: Projected air emissions

5.3

Used for indicator: Emissions of SO ₂ , NO _x , NH ₃ , PM10 and NMVOCs, in total and by sector, 1990–2010–2020, compared with 2010 targets.	
Data retrieval	
Holding body: Projection data contained within ETC-AQ/IIASA/NTUA/ETC-AE report <i>Air pollution outlooks — an evaluation</i> , published December 2000.	
Contact name: ETC/Air and Climate Change: Mr Justin Goodwin IIASA: Mr Markus Amann (Transboundary Air Pollution Group)	Contact details: E-mail: justin.goodwin@aeat.co.uk International Institute for Applied Systems Analysis, Schlossplatz 1, A-2361 Laxenburg Tel. (43-2236) 80 73 42 Fax (43-2236) 713 13 E-mail: markus.amann@iiasa.ac.at
Reference: ETC/Air Quality, <i>Air pollution outlooks — an evaluation</i> , December 2000.	
Accessibility: The ETC/Air and Climate Change has access to the information. The report is not yet available on the IIASA web site.	
Format: Data presented in text tables within the document.	
Reason for choosing data holder/Procedure for collecting data: The modelling performed by the IIASA is thought to be comprehensive and covers a wide geographical area.	
Data description	
Definitions: Total projected emissions of individual gases by country: NO _x , SO ₂ , VOCs, NH ₃ , PM10, for 1990, 2010 and 2020.	
Units: ktonnes.	
Geo coverage: NO _x , SO ₂ , NH ₃ , VOCs: EU-15, AC-10, Albania, Belarus, Bosnia-Herzegovina, Croatia, FYROM, Moldova, Norway, Russia, Switzerland, Ukraine and Yugoslavia. PM10: EU-15, AC-10, Albania, Belarus, Bosnia-Herzegovina, Croatia, Cyprus, FYROM, Moldova, Norway, Russian Federation, Serbia and Montenegro, Switzerland and Ukraine.	
Time series: 1990, 2010 and 2020.	
Quality: The results included in the study are thought to reflect an improvement in the understanding of model input variables, as the study made use of experiences gained in recent scenario studies in the context of policy processes in the EU in order to produce an updated (ShAIR) scenario. Data provided in the report are in the form of national totals only for NO _x , SO ₂ , VOCs, and NH ₃ . Data for PM10 are provided sectorally for the European region as a whole (i.e. not by sector for each country). Certain limitations of the models used are outlined in the conclusion to the report, including the need to agree on which data sets are used for the base year and the development of a clear set of conversion factors to ensure consistent definitions of economic sectors across studies performed by various institutes.	
Next update: Meaningful results for particulate matter (PM), for the whole of Europe, are not yet available. More comprehensive results regarding emissions and dispersion of primary and secondary fine particles in Europe are expected during early 2001. Currently, as part of a joint UNECE, European Commission and EEA programme, the TNO and NILU are improving the particulate matter emission database. In 2001, this will lead to an update of the 1995 PM figures.	
Previous use: This data set has not previously been used in EEA 'State of the environment' or 'Environmental signals' reports.	
Additional information	
Actions: The ETC/Air and Climate Change will review the information in this study. Data from the IIASA study will be updated with more reliable PM data now the TNO and NILU study results are available. Additionally, outputs from the ETC/Air and Climate Change study into integrated assessments (for 2004 EEA report) are to be incorporated.	Comments: Core set of air emission indicators previously included in <i>Environmental signals 2000, 2001</i> and SoE99 are to be reviewed, as part of the ETC/Air and Climate Change 2001 work plan. Included in this review will be the identification of additional data needs for non-EU countries.

5.4 Data set: Description — Outcome indicators for air pollution

Used for indicator: Outcome indicators of 'what if' ancillary benefits study.	
Data retrieval	
Holding body: The 'what if' ancillary benefits could be derived from the 'priorities study', performed by a consortium led by RIVM for the Environment DG This study presents 'spillover' effects of climate change policies for acidification, tropospheric ozone and particulates.	
Contact name: ETC/Air and Climate Change: Mr Hans Eerens	Contact details: E-mail: Hans.Eerens@rivm.nl
Reference: <i>European environmental priorities: An integrated economic and environmental assessment</i> , RIVM, 2001.	
Accessibility: Published; data available via the ETC/Air and Climate Change.	
Format: Report and databases.	
Reason for choosing data holder/Procedure for collecting data: Study accepted by the Environment DG.	
Data description	
Definitions:	
Units:	
Geo coverage: Europe	
Time series:	
Quality:	
Next update:	
Previous use:	
Additional information	
Actions: The ETC/Air and Climate Change will select the indicators to be presented.	Comments:

Data set: Emission reduction cost projections

5.5

Used for indicator: Cost ranges of abatement measures.	
Data retrieval	
Holding body: Projection data contained within the IIASA report <i>Integrated assessment of acidification, eutrophication, and tropospheric ozone impacts in Europe</i> , published October 2000.	
Contact name: IIASA: Ms Margret Gottsleben (Transboundary Air Pollution Group)	Contact details: International Institute for Applied Systems Analysis, Schlossplatz 1, A-2361 Laxenburg Tel. (43-2236) 80 73 42 Fax (43-2236) 713 13 E-mail: gottsleb@iiasa.ac.at
Reference: Table 4.19 on page 33 of the report details the required information.	
Accessibility: The ETC/Air and Climate Change has access to this information. The report is not yet available on the IIASA web site.	
Format: Data presented in text table within the document.	
Reason for choosing data holder/Procedure for collecting data: The modelling performed by the IIASA is thought to be comprehensive and covers a wide geographical area. The ShAIR scenario for future gas emissions updates previous models by incorporating recent policy information. The RAINS model of future emission abatement costs is thought to be an improvement on previous cost scenarios.	
Data description	
Definitions: RAINS model-projected emission control costs in 2010 and 2020 for individual countries, based on prediction outputs of the ShAIR scenario — for NO _x + VOC, SO ₂ , NH ₃ and total. The estimate of emission control costs includes additional production costs of fuels of better quality as well as costs of pollution control equipment necessary to reach the assumed emission standards or ceilings. Costs were calculated by the RAINS model in constant 1990 prices, annualising the investments over the full technical lifetime of the equipment, with a 4 % real interest rate.	
Units: Million euro/year, constant 1990 prices.	
Geo coverage: EU-15, AC-10, Albania, Belarus, Bosnia-Herzegovina, Croatia, FYROM, Norway, Moldova, Russia, Switzerland, Ukraine and Yugoslavia.	
Time series: Predictions for 2010 and 2020.	
Quality: ShAIR gas emission projection scenarios, on which costs of abatement measures are based, update previous models by incorporating 'current' EU policies (up to June 2000), thereby providing a more accurate picture of greenhouse gas emissions within the region for the next 20 years. In addition, smaller adaptations have been made in order to overcome differences in base year figures and new assumptions in the driving forces.	
Next update: Currently, as part of a joint UNECE, European Commission and EEA programme, the TNO and NILU are improving the particulate-matter emission database. In 2001, this will lead to an update of the 1995 PM figures. Updates will be incorporated into model predictions of future abatement costs.	
Previous use: This indicator has not previously been used in EEA 'State of the environment' or 'Environmental signals' reports.	
Additional information	
Actions: The ETC/Air and Climate Change will review the information in this report and identify the need for additional data for non-EU countries as part of the 2001 work plan.	Comments: Outputs from an ETC/Air and Climate Change study into integrated assessments (for 2004 EEA report) are to be incorporated into air emission projection scenarios and, therefore, into projections of abatement costs.

5.6 Data set: Population exposed to air quality exceedances

Used for indicator: Exceedances/reductions in urban air quality exceedances (SO ₂ , PM10, NO _x and O ₃), 1990–2010–2020.	
Data retrieval	
Holding body: Projection data contained within (1) ETC-AQ/IIASA/NTUA/ETC-AE report <i>Air pollution outlooks — an evaluation</i> , published December 2000, and (2) the IIASA report <i>Integrated assessment of acidification, eutrophication, and tropospheric ozone impacts in Europe</i> , published October 2000.	
Contact name: ETC/Air and Climate Change: Mr Hans Eerens IIASA: Mr Markus Amann (Transboundary Air Pollution Group)	Contact details: E-mail: Hans.Eerens@rivm.nl International Institute for Applied Systems Analysis, Schlossplatz 1, A-2361 Laxenburg Tel. (43-2236) 80 73 42 Fax (43-2236) 713 13 E-mail: amann@iiasa.ac.at
Reference: Table 4.22 on page 38 of report (1) provides tropospheric ozone data. Figures 6.6 and 6.7 on page 103 of report (2) provide NO ₂ and SO ₂ population exposure data.	
Accessibility: The ETC/Air and Climate Change has access to the information.	
Format: Data are presented as graphs and in text tables within the documents.	
Reason for choosing data holder/Procedure for collecting data: The modelling performed by the IIASA is thought to be comprehensive and covers a wide geographical area. Updated/improved versions of the OFIS and UAQAM models are used in the calculation of air quality predictions. The ShAIR scenario for future gas (tropospheric ozone) emissions updates previous models by incorporating recent policy information.	
Data description	
Definitions: NO ₂ , SO ₂ : fraction of the urban population living in cities where the hourly or daily objectives are exceeded. Tropospheric O ₃ : population exposure indices (AOT60) (cumulative and average) in the ShAIR scenario.	
Units: NO ₂ , SO ₂ : % of population exposed to quality exceedance. Tropospheric O ₃ : cumulative — million person.ppm.hours; average — ppm.hours.	
Geo coverage: NO ₂ , SO ₂ : cities in EU-15, AC-10, Cyprus, Iceland, Liechtenstein, Malta, Norway. Tropospheric O ₃ : EU-15, AC-10, Albania, Belarus, Bosnia-Herzegovina, Croatia, FYROM, Norway, Moldova, Russia, Switzerland, Ukraine and Yugoslavia.	
Time series: 1990, 2010 and 2020.	
Quality: NO ₂ , SO ₂ : an improved/updated version of the OFIS model (Moussiopoulos and Sahm, 1998) is applied to assess urban ozone levels in numerous large European cities. Compared to the model version used for the EU98 report, this version takes into account local circulation systems and emissions from neighbouring cities. Background boundary layer concentrations are computed with a 20-layer box model embedded in OFIS, instead of the 3-layer box model that was used in the previous version. The UAQAM model has been extended with a procedure to estimate a health indicator. O ₃ : ShAIR gas emission projection scenarios, on which costs of abatement measures are based, update previous models by incorporating 'current' EU policies (up to June 2000), thereby providing a more accurate picture of greenhouse gas emissions within the region for the next 20 years.	
Next update:	
Previous use: Air quality exceedance projections have been used in EEA 'State of the environment' reports.	
Additional information	
Actions: Data from the IIASA study will be updated with more reliable PM data now the TNO and NILU study results are available. The ETC/Air and Climate Change will use this information to produce a data set. The ETC/Air and Climate Change will also identify the additional data needs for non-EU countries as part of its 2001 work plan.	Comments:

Production, use and dispersion of hazardous chemicals

Data set: Production of hazardous chemicals

6.1

Used for indicator: Production and import of hazardous chemicals.	
Data retrieval	
Holding body: Eurostat.	
Contact name: Eurostat: Ms Rosemary Montgomery	Contact details: E-mail: rosemary.Montgomery@cec.eu.int
Reference: Indicator Tx3 in <i>Towards environmental pressure indicators 2001</i> .	
Accessibility: The EEA does not have direct access to hazardous chemical production data. Production of the data set involves a number of compilation steps.	
Format:	
Reason for choosing data holder/Procedure for collecting data: The Eurostat (Tx3 pressure) indicator is the most advanced indicator for expressing production of hazardous substances. It is still in an experimental stage, however.	
Data description	
Definitions: Dangerous chemicals intensity expresses the general 'chemicalisation' of society by linking total production of selected hazardous chemicals.	
Units: Kilograms of hazardous substances or hazardous ingredients (for refinery products).	
Geo coverage: EU-15.	
Time series: 1991–98.	
Quality:	
Next update: 2002.	
Previous use: Production and import of hazardous chemicals has not previously been included in EEA publications.	
Additional information	
Actions: Author of the chapter to contact Eurostat to be informed of indicator compilation methodology.	Comments:

Waste generation and management

7.1

Data set: Direct material input

Used for indicator: Direct material input (DMI) by country.	
Data retrieval	
Holding body: The Wuppertal Institute and Eurostat work together to compile DMI figures, utilising existing Eurostat data and newly compiled data.	
Contact name: Wuppertal Institute: Mr Stephan Moll	Contact details: E-mail: stephan.moll@wupperinst.org
<p>Reference: (1) EEA Technical report No 55, <i>Total material requirement of the European Union</i>, available on the EEA web site at: http://reports.eea.eu.int/Technical_report_no_55/en/. (2) An update of DMI figures for EU-15 has been compiled in a second Wuppertal study for Eurostat/ Environment DG 'Compilation of an aggregated material balance of the EU'. (3) A Eurostat task force (comprising several members from Member States' statistical offices and research institutes) developed a 'Methodological guide' for calculating 'economy-wide material flow accounts and derived indicators' such as DMI. This 'Methodological guide' (published by Eurostat, theme 'Economy and finance', collection <i>Methods and nomenclatures</i>: http://europa.eu.int/comm/eurostat/Public/datashop/print-catalogue/EN?catalogue=Eurostat&theme=2-Economy%20and%20Finance&product=KS-34-00-536-_-I-EN) may serve as an agreed data framework for future provision of DMI and other material flow indicators by Member States' statistical authorities.</p>	
Accessibility: The ETC/Waste and Material Flows has access to both studies through the Wuppertal Institute.	
Format: First report is downloadable as PDF (Adobe Acrobat) file. All data are available from the Wuppertal Institute's database (Excel format).	
Reason for choosing data holder/Procedure for collecting data: The Wuppertal Institute (in collaboration with Eurostat) is the organisation currently producing comparative information on DMI and maintaining an overview of completed country studies.	
Data description	
Definitions: <i>Direct material input (DMI)</i> : this measures the direct input of materials for use into the economy, i.e. all materials which are of economic value and are used in production and consumption activities; DMI equals domestic (used) extraction plus imports. DMI is not additive across countries. For example, for EU totals of DMI, the intra-EU foreign trade flows must be netted out from the DMIs of Member States.	
Units: Million tonnes; tonnes per capita; kg per GDP (US dollars and euro).	
Geo coverage: EU-15 only. Data for the Czech Republic and Poland may be available by 2002. It will not be possible to collect data for the remaining AC and NIS countries before publication of the Kiev report.	
Time series: For EU-15 and Member States: 1980–97.	
Quality: EEA Technical report No 55 contains the results of the first calculation of the total material requirement of the EU. In the second study ('Compilation of an aggregated material balance of the EU' on behalf of Eurostat/ Environment DG), data have been refined and time series coverage has been extended.	
Next update: The recommendation is given to statistical offices of the Member States to develop time series accounts of total domestic material requirements according to the 'Methodological guide'.	
Previous use: DMI has previously been presented in the EEA <i>Environmental signals 2000</i> report.	
Additional information	
Actions: The ETC/Waste and Material Flows will use the data maintained in the Wuppertal Institute's database to produce this indicator together with eventual new country information.	Comments:

Data set: Total waste generation

7.2

Used for indicator: Total waste generation versus GDP.	
Data retrieval	
Holding body: Data are collected by the joint OECD/Eurostat questionnaire on waste. These data are available in Eurostat/New Cronos.	
Contact name: Eurostat: Mr Cornelis Van Beusekom (Waste Statistics Specialist)	Contact details: E-mail: Cornelis.Van-Beusekom@cec.eu.int
Reference: Eurostat/New Cronos: Table waq1a, 'Generation of waste by economic sector and households': http://europa.eu.int/newcronos/exec/extract/en/theme8/milieu/wa/waq1a.htm	
Accessibility: Data can be downloaded from New Cronos to which the EEA has access. Reproduction of Eurostat data in any publication will include a reference to Eurostat New Cronos.	
Format: Eurostat: data are available in HTML, Excel, DFT, CSV or Flat file formats.	
Reason for choosing data holder/Procedure for collecting data: Eurostat/OECD statistics are the official EU statistics collected by Member States (EU) and member countries (EEA, EFTA, OECD and AC-10, AC-3).	
Data description	
Definitions: Data describe amount (mass) of waste generated, annually, within countries, divided amongst the following economic sectoral classifications: agricultural, mining and quarrying, industrial (manufacturing industry), waste from energy production, waste from water purification and distribution, waste from construction, municipal waste, and other waste. The sectoral breakdown follows the major sections of NACE Rev. 1.	
Units: ktonnes.	
Geo coverage: Eurostat/OECD statistics are collected for a good geographical and temporal coverage of the AC-10, EFTA, AC-3 and EU-15 countries; nevertheless, a number of countries fail in reporting the total waste generation or there is inconsistency between the total and the sum of waste from different sources (the sector breakdown).	
Time series: Generally 1990 and 1994–98, with many country/year gaps.	
Quality: In some cases, definitions of different waste sectors vary between countries as a result of different interpretations of the questions put forward by the questionnaire.	
Next update: Data currently in New Cronos are from the 1998 data collection exercise. Validated results from the 2000 questionnaire are due to be available through New Cronos from June 2001.	
Previous use: Eurostat data have previously been uploaded to the EEA data warehouse and used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Waste and Material Flows will use the most recent data from the Eurostat/OECD questionnaire and, if appropriate and agreed upon, statistics from national sources. If funding is received, coverage of waste generation data will be extended to other UNECE countries. The EEA data warehouse manager will update waste generation data in the warehouse as and when new data appear on the New Cronos site.	Comments:

7.3 Data set: Municipal waste

Used for indicator: Municipal waste generation.	
Data retrieval	
Holding body: Data are collected by the joint OECD/Eurostat questionnaire on waste. These data are available in Eurostat/New Cronos.	
Contact name: Eurostat: Mr Cornelis Van Beusekom (Waste Statistics Specialist)	Contact details: E-mail: Cornelis.Van-Beusekom@cec.eu.int
Reference: Eurostat/New Cronos: Table waq1a, 'Generation of waste by economic sector and households': http://europa.eu.int/newcronos/exec/extract/en/theme8/milieu/wa/waq1a.htm ('Municipal waste' can be selected from pull-down menus). Other tables on municipal waste are waq5a, waq5b and waq5c.	
Accessibility: Data can be downloaded from New Cronos to which the EEA has access. Reproduction of Eurostat data in any publication will include a reference to Eurostat New Cronos.	
Format: Eurostat: data are available in HTML, Excel, DFT, CSV or Flat file formats.	
Comment on relative usefulness and value of data/information: Eurostat/OECD data have good geographical and temporal coverage of the AC-10, EFTA and EU-15 countries (particularly municipal waste data). The OECD/Eurostat joint questionnaire is the most comprehensive survey of waste management practices across the EU and other countries.	
Data description	
Definitions: Data describe amount (mass) of municipal waste generated (collected) and treatment, annually, within countries.	
Units: ktonnes.	
Geo coverage: Municipal: EU-15, EFTA-4 (excluding Liechtenstein), AC-10. Industrial: EU-15 (excluding Italy), EFTA-4 (excluding Liechtenstein), AC-10 (excluding Estonia, Latvia and Lithuania).	
Time series: Municipal: generally 1990–98 with country/year gaps (especially for AC-10, which tend to run from 1993 to 1998).	
Quality: In some cases, definitions of different waste sectors vary between countries as a result of different interpretations of the questions put forward by the questionnaire. The provider for municipal waste data is in practice the responsible authority for municipal waste collection. Thus, the given amounts of waste reflect the amounts of waste collected.	
Next update: Data currently in New Cronos are from the 1998 data collection exercise. Validated results from the 2000 questionnaire are due to be available through New Cronos from June 2001.	
Previous use: Eurostat data have previously been uploaded to the EEA data warehouse and used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Waste and Material Flows will use the most recent data from the Eurostat/OECD questionnaire. If funding is received, coverage of waste generation data will be extended to other UNECE countries. The EEA data warehouse manager will update waste generation data in the warehouse as and when new data appear on the New Cronos site.	Comments:

Data set: Waste from manufacturing industries

7.4

Used for indicator: Industrial waste generation versus industrial production.	
Data retrieval	
Holding body: Data are collected by the joint OECD/Eurostat questionnaire on waste. These data are available in Eurostat/New Cronos and from the OECD.	
Contact name: Eurostat: Mr Cornelis Van Beusekom (Waste Statistics Specialist)	Contact details: E-mail: Cornelis.Van-Beusekom@cec.eu.int
Reference: Eurostat/New Cronos: Table waq1a, 'Generation of waste by economic sector and households': http://europa.eu.int/newcronos/exec/extract/en/theme8/milieu/wa/waq1a.htm ('Industrial waste' can be selected from pull-down menus).	
Accessibility: Data can be downloaded from New Cronos to which the EEA has access. Permission must be obtained for reproduction of Eurostat data in any publication.	
Format: Eurostat: data are available in HTML, Excel, DFT, CSV or Flat file formats.	
Comment on relative usefulness and value of data/information: Eurostat/OECD data have good geographical and temporal coverage of the AC-10, EFTA and EU-15 countries (particularly municipal waste data). The OECD/Eurostat joint questionnaire is the most comprehensive survey of waste management practices across the EU and other countries.	
Data description	
Definitions: Data describe amount (mass) of industrial waste generated, annually, within countries. The breakdown by sector follows the major sections of NACE Rev. 1.	
Units: ktonnes.	
Geo coverage: Industrial: EU-15 (excluding Italy), EFTA-4 (excluding Liechtenstein), AC-10 (excluding Estonia, Latvia and Lithuania).	
Time series: Generally 1990 and 1994–98, with many country/year gaps.	
Quality: In some cases, definitions of different waste streams vary between countries as a result of different interpretations of the questions put forward by the questionnaire.	
Next update: Data currently in New Cronos are from the 1998 data collection exercise. Validated results from the 2000 questionnaire are due to be available through New Cronos from June 2001.	
Previous use: Eurostat data have previously been uploaded to the EEA data warehouse and used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Waste and Material Flows will use the most recent data from the Eurostat/OECD questionnaire. If funding is received, coverage of waste generation data will be extended to other UNECE countries. The EEA data warehouse manager will update waste generation data in the warehouse as and when new data appear on the New Cronos site.	Comments:

7.5

Data set: Waste generated from energy production

Used for indicator: Waste generated by the energy sector.	
Data retrieval	
Holding body: Data are collected by the joint OECD/Eurostat questionnaire on waste. These data are available in Eurostat/New Cronos and from the OECD.	
Contact name: Eurostat: Mr Cornelis Van Beusekom (Waste Statistics Specialist)	Contact details: E-mail: Cornelis.Van-Beusekom@cec.eu.int
Reference: Eurostat/New Cronos: Table waq1a.	
Accessibility: Data can be downloaded from New Cronos to which the EEA has access. In case of reproduction of Eurostat data in any publication, a reference to Eurostat New Cronos should be included.	
Format: Eurostat: data are available in HTML, Excel, DFT, CSV or Flat file formats.	
Comment on relative usefulness and value of data/information: The Eurostat/OECD data have geographical and temporal coverage of the AC-10, EFTA and EU-15 countries. The OECD/Eurostat joint questionnaire is the most comprehensive survey of waste management practices across the EU and other countries.	
Data description	
Definitions: Data describe amount (mass) of waste generated from energy production (NACE 40), annually, within countries.	
Units: ktonnes.	
Geo coverage: Data and information should cover EU-15, EFTA-4 and AC-13.	
Time series: 1990–94–98 with gaps in years and countries.	
Quality:	
Next update: Data currently available are from the 1998 data collection exercise. Validated results from the 2000 questionnaire are due to be available through New Cronos from June 2001.	
Previous use: Eurostat data have previously been uploaded to the EEA data warehouse and used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Waste and Material Flows will use the most recent data from the Eurostat/OECD questionnaire. If funding is received, coverage of waste generation data will be extended to other UNECE countries. The EEA data warehouse manager will update waste generation data in the warehouse as and when new data appear on the New Cronos site.	Comments:

Data set: Mining waste

7.6

Used for indicator: Mining waste generation.	
Data retrieval	
Holding body: Data are collected by the joint OECD/Eurostat questionnaire on waste. These data should be available from Eurostat/New Cronos and from the OECD. In addition, the JRC in Ispra has further information.	
Contact name: Eurostat: Mr Cornelis Van Beusekom (Waste Statistics Expert) JRC: Mr Giovanni Bidoglio (Environment Institute)	Contact details: E-mail: Cornelis.Van-Beusekom@cec.eu.int E-mail: Giovanni.bidoglio@jrc.it
Reference: Eurostat (Eurostat/OECD joint questionnaire 2000) New Cronos: Table waq1a, 'Generation of waste by economic sector and households'. JRC in Ispra.	
Accessibility: Data can be downloaded from New Cronos to which the EEA has access. JRC in Ispra.	
Format: Eurostat: data are available in HTML, Excel, DFT, CSV or Flat file formats.	
Comment on relative usefulness and value of data/information: Eurostat/OECD data should provide geographical and temporal coverage of EU-15, AC-13 and EFTA. The JRC in Ispra should be able to provide additional information.	
Data description	
Definitions: Eurostat: data describe amount (mass) of waste generated within the (NACE) economic activity 'mining and quarrying', annually, within countries.	
Units: ktonnes.	
Geo coverage: The data and information should cover EU-15, AC-13 and EFTA-4.	
Time series: Eurostat New Cronos 1990–94–98 with gaps in countries and years.	
Quality: Interpretation of what should be included in this specific waste stream and/or economic activity can vary in the different countries.	
Next update: Data currently in New Cronos are from the 1998 data collection exercise. Validated results from the 2000 questionnaire are due to be available through New Cronos from June 2001.	
Previous use: Eurostat data have previously been uploaded to the EEA data warehouse and used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Waste and Material Flows will use the most recent data from the Eurostat/OECD questionnaire. If funding is received, coverage of waste generation data will be extended to other UNECE countries. The EEA data warehouse manager will update waste generation data in the warehouse as and when new data appear on the New Cronos site.	Comments:

7.7

Data set: Construction and demolition waste

Used for indicators: Generation of construction and demolition waste; disposal/recovery rates for construction and demolition waste (%)	
Existing data and information sources	
Joint OECD/Eurostat questionnaire on waste. ETC/W report on specific waste streams. Symonds et al (1999), Report to the Environment DG, European Commission, <i>Construction and demolition waste management practices and their economic impacts</i> . Others.	
Data retrieval	
Holding body: (1) Data are collected by the joint OECD/Eurostat questionnaire on waste. These data should be available in Eurostat/New Cronos and from the OECD.	
Contact name: Eurostat: Mr Cornelis Van Beusekom (Waste Statistics Expert)	Contact details: E-mail: Cornelis.Van-Beusekom@cec.eu.int
Reference: Eurostat/New Cronos: Table waq1a, 'Generation of waste by economic sector and households': http://europa.eu.int/newcronos/exec/extract/en/theme8/milieu/wa/waq1a.htm . Environment DG: report on construction and demolition waste.	
Accessibility: Data can be downloaded from New Cronos to which the EEA has access. In case of reproduction of Eurostat data in any publication, a reference to Eurostat New Cronos should be included.	
Format: Eurostat: data are available in HTML, Excel, DFT, CSV or Flat file formats.	
Comment on relative usefulness and value of data/information: Eurostat/OECD data have geographical and temporal coverage of the AC-10, EFTA and EU-15 countries.	
Data description	
Definitions: Data describe amount (mass) of construction and demolition waste generated, annually, within countries.	
Units: ktonnes.	
Geo coverage: The data and information should cover EU-15, AC-13 and EFTA-4.	
Time series: 1990–94–98 with gaps in years and countries.	
Quality: Definitions of construction and demolition waste vary in different countries due to the different interpretation of what should be in/excluded in this waste category.	
Next update: Data currently available are from the 1998 data collection exercise. Validated results from the 2000 questionnaire are due to be available from Eurostat/OECD in June 2001.	
Previous use: Eurostat data have previously been uploaded to the EEA data warehouse and used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Waste and Material Flows will use the most recent data from the Eurostat/OECD questionnaire. If funding is received, coverage of waste generation data will be extended to other UNECE countries. The EEA data warehouse manager will update waste generation data in the warehouse as and when new data appear on the New Cronos site.	Comments:

Data set: Waste from electric and electronic equipment

7.8

Used for indicator: Overview of total waste managed/total waste recovered–recycled or percentage of recycled waste as a share of total consumption of electric and electronic equipment.	
Data retrieval	
Holding body: Eurostat/New Cronos holds data for production import and export of certain classes of electric and electronic equipment (EEE). For waste from EEE, the 2000 joint questionnaire is a new source (Table 2B).	
Contact name: Eurostat: Mr Cornelis Van Beusekom (Waste Statistics Expert)	Contact details: E-mail: Cornelis.Van-Beusekom@cec.eu.int
Reference: Eurostat/New Cronos: Table waq2b, 'Generation of waste by selected waste streams'.	
Accessibility: Data can be downloaded from New Cronos, to which the EEA has access.	
Format:	
Reason for choosing data holder/Procedure for collecting data: The Eurostat data are the only data available with this level of detail for individual countries. Eurostat also gives a quality check of all data.	
Data description	
Definitions: Data describe production, import and export of specific goods including EEE according to the used statistical classification(s). Waste: according to the 2000 joint questionnaire.	
Units: Number of, for example, refrigerators placed on the market and the presumed future waste generation thereof.	
Geo coverage: Presumed EU-15 (excluding Luxembourg), EFTA-4 (excluding Liechtenstein).	
Time series: 1990–2000, with few country/year gaps. Waste: 1998–99, with many gaps.	
Quality:	
Next update: Data: annually in New Cronos.	
Previous use: Topic centre reports on waste from EEE.	
Additional information	
Actions: The ETC/Waste and Material Flows to connect to Eurostat for most recent data. Usefulness of data collection for other countries to be discussed.	Comments:

7.9

Data set: Hazardous waste production

Used for indicator: Generation of hazardous waste.	
Data retrieval	
Holding body: Data are available from Eurostat/New Cronos. The source of these data is the OECD/Eurostat questionnaire on the state of the environment.	
Contact name: Eurostat: Mr Cornelis Van Beusekom (Waste Statistics Specialist)	Contact details: E-mail: Cornelis.Van-Beusekom@cec.eu.int
Reference: Eurostat/New Cronos: Theme 8/milieu/wa/waq2a, 'Amounts of waste generated by sector' ('Total amount generated (national definition)' or 'Total amount generated (Basel definition)' can be selected from a pull-down menu).	
Accessibility: Data are readily accessible from the New Cronos database, to which the EEA has access.	
Format: Eurostat data are available in HTML, Excel, DFT, CSV or Flat file formats.	
Reason for choosing data holder/Procedure for collecting data: The data in New Cronos are collected using the Eurostat/OECD joint questionnaire on the state of the environment. Eurostat and the OECD quality check all data.	
Data description	
Definitions: Data describe amount (weight) of hazardous waste generated annually within countries, according to national classifications and internationally agreed Basel Convention definitions of hazardous waste. Rather than adopting one definition of hazardous waste, the Basel Convention takes a broad view that there are 45 categories of wastes presumed to be hazardous in the convention; 18 of them are waste streams (e.g. clinical wastes) and 27 others are wastes having clearly identified constituents (e.g. mercury). However, in order to be classified as hazardous, these categories of wastes need to exhibit one or more hazardous characteristics, such as being flammable, oxidising, poisonous, infectious, corrosive or ecotoxic.	
Units: ktonnes.	
Geo coverage: Revise for 2000 joint questionnaire national definition: Vlaams Gewest region of Belgium, Germany, Greece, Spain, France, Ireland, Luxembourg, Netherlands, Austria, Portugal, Finland, UK, Norway, Switzerland and AC-10. Basel definition: Sweden only.	
Time series: National definition generally 1990 and 1992–97, with many country/year gaps. Basel definition 1990 and 1994 only.	
Quality: National definition: likely to vary between countries and therefore lead to data inconsistency. Basel definition: waste categories listed in the questionnaire (Y1–Y18) referred to the 18 categories of waste streams to be controlled according to the Basel Convention but the serious lack of data reported lead to non-comparability between countries and to no consistent correlation between the quantities of waste and the potential toxicity.	
Next update: Data currently in New Cronos are from the 1998 data collection exercise. Validated results from the 2000 joint questionnaire are due to be available through New Cronos from June 2001.	
Previous use: The Eurostat/OECD joint questionnaire data have previously been uploaded to the EEA data warehouse and used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Waste and Material Flows to obtain the most recent data from Eurostat when it is available. If funding is received, coverage of waste generation data will be extended to other UNECE countries.	Comments: This data set will not include nuclear waste generation (see Chapter 10 'Technological and natural hazards').

Data set: Shipment of hazardous waste

7.10

Used for indicator: Import and export of hazardous waste.	
Data retrieval	
Holding body: Data are available from the Basel Convention.	
Contact name: Ms Nalini Basavaraj (Secretariat of the Basel Convention)	Contact details: 15, chemin des Anémones, Building D, CH-1219 Châtelaine
Reference:	
Accessibility: Data are readily accessible from the Secretariat of the Basel Convention.	
Format:	
Reason for choosing data holder/Procedure for collecting data: Covers all countries and is the internationally recognised collector of data on hazardous waste.	
Data description	
Definitions: Data describe amount (weight) of hazardous waste imported and exported annually within countries, according to internationally agreed classifications: Basel Convention definitions of hazardous waste. Rather than adopting one definition of hazardous waste, the Basel Convention takes a broad view that there are 45 categories of wastes presumed to be hazardous in the convention; 18 of them are waste streams (e.g. clinical wastes) and 27 others are wastes having clearly identified constituents (e.g. mercury). However, in order to be classified as hazardous, these categories of wastes need to exhibit one or more hazardous characteristics, such as being flammable, oxidising, poisonous, infectious, corrosive or ecotoxic.	
Units: ktonnes.	
Geo coverage: Should cover all UN countries.	
Time series: Basel definition 1990 and onwards.	
Quality:	
Next update:	
Previous use: No previous use in the reports of the EEA.	
Additional information	
Actions: The ETC/Waste and Material Flows to obtain the most recent data from the Basel Convention Secretariat when it is available.	Comments: This data set will not include nuclear waste imports or exports (see Chapter 10 'Technological and natural hazards').

7.11 Data set: Disposal facilities

Used for indicator: Disposal facilities and their capacities.	
Data retrieval	
Holding body: Eurostat (New Cronos) and the OECD have data from the Eurostat/OECD joint questionnaire on the state of the environment for OECD countries.	
Contact name: Eurostat: Mr Cornelis Van Beusekom (Waste Statistics Expert)	Contact details: E-mail: Cornelis.Van-Beusekom@cec.eu.int
Reference: Eurostat, New Cronos: Theme8/milieu/wa/waq6, 'Waste recovery and disposal operations'.	
Accessibility: Eurostat: data are readily accessible from the New Cronos database, to which the EEA has access.	
Format: Eurostat, New Cronos: data in CSV or Flat file formats.	
Comment on relative usefulness and value of data/information: The data in New Cronos are collected using the Eurostat/OECD joint questionnaire on the state of the environment. Eurostat and the OECD quality check all data.	
Data description	
Definitions: Number and capacity of landfill remaining capacity, incineration and treatment facilities for individual countries.	
Units: Capacity: 1 000 tonnes/year and remaining capacity in years.	
Geo coverage: EU-15 (excluding Italy and UK), Czech Republic, Estonia, Hungary, Norway, Romania, Slovakia and Switzerland. The number of sites is reported more frequently than their capacities.	
Time series: Data tend to be reported for one or two selected years between 1990 and 1998.	
Quality: Data describe the number and capacity of hazardous waste-disposal facilities and facilities for non-hazardous waste. There are many country/year gaps.	
Next update: New Cronos will soon be updated with the results of the 2000 joint questionnaire.	
Previous use: The Eurostat/OECD joint questionnaire data have previously been used in EEA 'State of the environment' reports.	
Additional information	
Actions: The ETC/Waste and Material Flows to obtain the most recent data from Eurostat when it is available. If funding is received, coverage of waste generation data will be extended to other UNECE countries.	Comments:

Data set: Recycling of waste as % of total disposal

7.12

Used for indicator: Overview of total waste managed/total waste recovered–recycled or percentage of recycled waste as a share of total consumption of glass/paper/construction/waste/tyres/plastic.	
Data retrieval	
Holding body: Eurostat/New Cronos holds data for paper and glass only. These data have been collected by the OECD/Eurostat joint questionnaire on waste.	
Contact name: Eurostat: Mr Cornelis Van Beusekom (Waste Statistics Specialist)	Contact details: E-mail: Cornelis.Van-Beusekom@cec.eu.int
Reference: Eurostat/New Cronos: Table waq5, 'Recycling activities for selected waste streams': http://europa.eu.int/newcronos/exec/extract/en/theme8/milieu/wa/waq5.htm ('Paper' and 'Glass' can be selected from pull-down menu, as can 're0001' ('Recycling of waste type as % of total disposal') under pull-down menu 'Recycling activities').	
Accessibility: Data can be downloaded from New Cronos, to which the EEA has access.	
Format: Eurostat: data are available in HTML, Excel, DFT, CSV or Flat file formats.	
Reason for choosing data holder/Procedure for collecting data: The Eurostat/OECD data are the only data available with this level of detail for individual countries. Eurostat and the OECD also quality check all data.	
Data description	
Definitions: Data describes recycling rates (recycling of waste type as % of total disposal) of waste types 'paper' and 'glass' for individual countries annually.	
Units: %.	
Geo coverage: EU-15 (excluding Luxembourg), EFTA-4 (excluding Liechtenstein).	
Time series: 1990–96, with few country/year gaps.	
Quality: Some inconsistency is expected to result from the agglomeration of results from a variety of independent national studies/communications, as compiled by the ETC/Waste and Material Flows and the EEA.	
Next update: Data currently in New Cronos are from the 1998 data collection exercise. Validated results from the 2000 questionnaire are due to be available through New Cronos from June 2001.	
Previous use: Eurostat/OECD data have previously been used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Waste and Material Flows to collect the most recent data regarding recycling rates of plastic, tyres, and construction wastes from Eurostat and to extend the geographical coverage of data collection activities to AC-10. If funding is available, data collection from the NIS countries will occur.	Comments:

7.13 Data set: Status of waste management plans

Used for indicator: Progress in the establishment of waste management plans.	
Data retrieval	
Holding body: Abstracts of national (and often local authority) waste management plans are held by the EEA. However, information contained in these abstracts is largely qualitative, describing the status of national and local authority waste management plans within European countries. It would be difficult to produce data based on figures, and any that were produced are likely to be inaccurate and to have minimal meaningful value.	
Contact name:	Contact details:
Reference:	
Accessibility:	
Format:	
Reason for choosing data holder/Procedure for collecting data: These abstracts are the only source available that compile existing information regarding details of national and local authority waste management plans within the EU and other European countries.	
Data description	
Definitions:	
Units:	
Geo coverage: EU-15.	
Time series:	
Quality: Inconsistency expected as a result of differing national definitions of waste streams, waste management techniques, etc.	
Next update:	
Previous use:	
Additional information	
Actions: The ETC/Waste and Material Flows to review the material in the abstracts to determine the most meaningful way of presenting the information.	Comments: As the abstracts held by the EEA are abstracts containing largely qualitative information, quantitative representation of the status of national waste management plans is likely to require too many resources for the scope of the Kiev project. Qualitative reference to the information is therefore recommended.

Data set: Fiscal and economic instruments

7.14

Used for indicator: Level of landfill tax, tax on disposal of goods and other fiscal instruments with regulation of 'waste behaviour'.	
Data retrieval	
Holding body: Eurostat on the revenue from taxation and the OECD database on fiscal instruments in environment policy.	
Contact name:	Contact details:
Reference:	
Accessibility:	
Format:	
Reason for choosing data holder/Procedure for collecting data: The OECD database on economic instruments has the best available information. Since this area is under constant change, it might be appropriate to focus member countries on the validation of this information at an early stage.	
Data description	
Definitions:	
Units: Euro/1 000 tonnes or other appropriate units.	
Geo coverage: OECD countries.	
Time series: Data tend to be reported for years between 1990 and 2000.	
Quality:	
Next update:	
Previous use: Data have previously been used in EEA <i>Environmental signals 2000</i> .	
Additional information	
Actions: The ETC/Waste and Material Flows to obtain the most recent data from the OECD and Eurostat when it is available. National reference centres to be involved in the validation of information provided.	Comments:

Water stress (inland and marine)

8.1	Data set: Water abstraction	
Used for indicator: Water exploitation index.		
Data retrieval		
Holding body: Data from the OECD/Eurostat joint questionnaire are available from Eurostat (New Cronos).		
Contact name: ETC/Water: Ms Concha Lallana (Core Team)		Contact details: Tel. (44-1491) 63 66 62 Fax (44-1491) 57 90 94 E-mail: Lallana_c@wrcplc.co.uk
Reference: EEA data warehouse: 'Water abstraction by sector and country' (IOS1445). Eurostat, New Cronos: Theme 8/milieu/water/Table iwq2.		
Accessibility: Eurostat data are readily accessible from the New Cronos database. Data will also be available on a CD-ROM in summer 2001, which will be sent to the ETC/Water.		
Format: Eurostat, New Cronos: data are available in HTML, Excel, DFT, CSV or Flat file formats.		
Reason for choosing data holder/Procedure for collecting data: Eurostat data are collected using the Eurostat/OECD joint questionnaire and have good temporal and geographical coverage. Data are quality checked when received and are readily available from the New Cronos database.		
Data description		
Definitions: <i>Water abstraction</i> : water removed from any source, either permanently or temporarily. Mine water and drainage water are included. Water abstractions from groundwater resources in any given time period are defined as the difference between the total amount of water abstraction from aquifers and the total amount charged artificially or injected into aquifers. The amounts of water artificially charged or injected are considered as abstractions from whichever water resource they were originally taken from.		
Units: Million m ³ .		
Geo coverage: Data from the joint questionnaire are available for EU-15, Bulgaria, Czech Republic, Estonia, Iceland, Lithuania, Norway, Poland, Slovakia and Slovenia.		
Time series: Data are generally available from Eurostat/OECD for 1980, 1985, 1990–99, although there are some data gaps for some countries.		
Quality: There are some known quality problems with this data set due to no standardised procedure to estimate water abstractions.		
Next update: The Eurostat/OECD joint questionnaire is sent every two years. The next questionnaire will be sent in 2002 and will collect data up to 2001.		
Previous use: The data set in the EEA data warehouse has previously been used in EEA 'State of the environment' and 'Environmental signals' reports.		
Additional information		
Actions: The ETC/Water will collect the most recent data from Eurostat for EU, EFTA and AC countries and will collect data for countries not covered by Eurostat/OECD by means of a questionnaire to NRCs.		Comments:

Data set: Water consumption

8.2

Used for indicator: Water consumption index.	
Data retrieval	
Holding body: Eurostat has data from the Eurostat/OECD joint questionnaire on the state of the environment for OECD countries.	
Contact name: ETC/Water: Ms Concha Lallana (Core Team)	Contact details: Tel. (44-1491) 63 66 62 Fax (44-1491) 57 90 94 E-mail: Lallana_c@wrcplc.co.uk
Reference: Eurostat, New Cronos: Theme 8/milieu/water/Table iwq2.	
Accessibility: Eurostat data are readily accessible from the New Cronos database. Data will also be available on a CD-ROM in summer 2001, which will be sent to the ETC/Water.	
Format: Eurostat, New Cronos: data are available in HTML, Excel, DFT, CSV or Flat file formats.	
Reason for choosing data holder/Procedure for collecting data: Eurostat data are collected using the Eurostat/OECD joint questionnaire and have good temporal and geographical coverage. Data are quality checked when received and are readily available from the New Cronos database.	
Data description	
Definitions: Water consumption: Water abstracted which is not longer available for use because it has evaporated, transpired, been incorporated into products and crops, consumed by man or livestock, ejected directly to the sea, or otherwise removed from freshwater resources. Water losses during the transport of water between the point or points of abstraction and the point or points of use are excluded.	
Units: Million m ³ .	
Geo coverage: Data from the joint questionnaire are available for EU-15, Bulgaria, Czech Republic, Estonia, Iceland, Latvia, Lithuania, Norway, Poland and Slovakia.	
Time series: Data are generally available from Eurostat/OECD for 1980, 1985, 1990–99 although there are some data gaps for some countries.	
Quality: There are some known quality problems with this data set due to no standardised procedure to estimate water consumption.	
Next update: The OECD/Eurostat joint questionnaire is sent every two years. The next questionnaire will be sent in 2002 and will collect data up to 2001.	
Previous use: Eurostat/OECD data have previously been used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water will collect the most recent data from Eurostat for EU, EFTA and AC countries and will collect data for countries not covered by Eurostat/OECD by means of a questionnaire to NRCs.	Comments:

8.3 Data set: Renewable freshwater resources

Used for indicators: Water consumption index; water exploitation index.	
Data retrieval	
Holding body: Eurostat has data from the Eurostat/OECD joint questionnaire on the state of the environment for OECD countries.	
Contact name: ETC/Water: Ms Concha Lallana (Core Team)	Contact details: Tel. (44-1491) 63 66 62 Fax (44-1491) 57 90 94 E-mail: Lallana_c@wrcplc.co.uk
Reference: Eurostat, New Cronos: Theme 8/milieu/water/Table iwq1.	
Accessibility: Eurostat data are readily accessible from the New Cronos database. Data will also be available on a CD-ROM in summer 2001, which will be sent to the ETC/Water.	
Format: Eurostat, New Cronos: data are available in HTML, Excel, DFT, CSV or Flat file formats.	
Reason for choosing data holder/Procedure for collecting data: Eurostat data are collected using the Eurostat/OECD joint questionnaire and have good temporal and geographical coverage. Data are quality checked when received and are readily available from the New Cronos database.	
Data description	
Definitions: <i>Total freshwater resources:</i> the long-term average freshwater balance for a country, calculated as precipitation minus actual evapotranspiration plus actual external inflows of water from neighbouring countries. This ignores differences in storage and represents the maximum quantity of water on average available.	
Units: Million m ³ .	
Geo coverage: Data from Eurostat/OECD are available for EU-15, EFTA-3 (no Liechtenstein), Hungary, Lithuania and Poland.	
Time series: Data are generally available for 1980, 1985, and 1990–99 although there are some data gaps for some countries.	
Quality: There are some known quality problems with this data set due to no standardised procedure to estimate total freshwater resources.	
Next update: The Eurostat/OECD joint questionnaire is sent every two years. The next questionnaire will be sent in 2002 and will collect data up to 2001.	
Previous use: Eurostat/OECD water resources data have previously been used in EEA 'State of the environment' and 'Environmental signals' reports.	
Additional information	
Actions: The ETC/Water will collect the most recent data from Eurostat for EU, EFTA and AC countries and will collect data for countries not covered by Eurostat/OECD by means of a questionnaire to NRCs.	Comments:

Data set: Nitrogen, phosphorus and organic matter in rivers

8.4

Used for indicator: Nitrogen, phosphorus and organic matter in rivers by catchment size and type.	
Data retrieval	
Holding body: Waterbase (ETC/Water database containing Eurowaternet data) for EEA-18 and AC-10 countries. There is a special initiative under way to extend the coverage of Eurowaternet to NIS countries, subject to approval. If approval is not granted, questionnaires to NRCs will be used.	
Contact name: ETC/Water: Mr Justin Miles (Data Manager)	Contact details: Tel. (44-1491) 63 66 47 E-mail: miles_j@wrcplc.co.uk
Reference: ETC/Water, Waterbase.	
Accessibility: Waterbase is a database without Internet access that is maintained by the ETC/Water. A reference version of Waterbase will eventually be available through the Internet.	
Format: Waterbase is an Access database.	
Reason for choosing data holder/Procedure for collecting data: Eurowaternet is the best-known source of data for N, P and OM in European rivers by catchment size. Data are comparable and have good geographical and temporal coverage.	
Data description	
Definitions: Data are available for rivers of the following catchment sizes: Small: < 50 km ² Medium: 50 to 250 km ² Large: 250 to 1 000 km ² Very large: 1 000 to 2 500 km ² Largest: > 2 500 km ² . Data are available for 'representative' monitoring stations, i.e. those which reflect the majority of rivers in a region/area with human activities in the catchment consistent with the region's/area's activities.	
Units: mg/l N and mg/l P.	
Geo coverage: Eurowaternet currently collects data from all EEA-18 and AC-10 countries. However, information was not received from Sweden, Finland and Romania for nitrogen, or from Romania for phosphorus. The initiative to extend Eurowaternet will cover all NIS countries, Albania, Bosnia-Herzegovina, Cyprus, FYROM, Malta and Turkey if approval is granted.	
Time series: The most consistent time series for which data are available in Waterbase is 1990–98.	
Quality: Data provided are nationally assured data. NFPs will also be asked to provide additional quality information for the 2001 update.	
Next update: Data are updated annually. Data for 2000 will be available by December 2001.	
Previous use: Eurowaternet data have previously been used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water will collect 2000 data from Eurowaternet countries. The ETC/Water will also extend the coverage of Eurowaternet to all UNECE countries if approval is granted. If not, questionnaires will be sent to the NRCs of the countries not already covered.	Comments:

8.5 Data set: Nitrogen and phosphorus in lakes

Used for indicator: Nitrogen and phosphorus in lakes (by catchment size and type).	
Data retrieval	
Holding body: Waterbase (ETC/Water database containing Eurowaternet data) for EEA-18 and AC-10 countries. There is a special initiative under way to extend the coverage of Eurowaternet to NIS countries, subject to approval. If approval is not granted, questionnaires to NRCs will be used.	
Contact name: ETC/Water: Mr Justin Miles (Data Manager)	Contact details: Tel. (44-1491) 63 66 47 E-mail: miles_j@wrcplc.co.uk
Reference: ETC/Water, Waterbase.	
Accessibility: Waterbase is a database without Internet access that is maintained by the ETC/Water. A reference version of Waterbase will eventually be available through the Internet.	
Format: Waterbase is an Access database.	
Reason for choosing data holder/Procedure for collecting data: Eurowaternet is the best-known source of data for N and P in European lakes. Data are comparable and have good geographical and temporal coverage.	
Data description	
Definitions: Data are available for lakes of the following catchment sizes: Small: < 50 km ² Medium: 50 to 250 km ² Large: 250 to 1 000 km ² Very large: 1 000 to 2 500 km ² Largest: > 2 500 km ² . Data are available for 'representative' monitoring stations, i.e. those which reflect the majority of lakes in a region/area with human activities in the catchment consistent with the region's/area's activities.	
Units: mg/l N and mg/l P.	
Geo coverage: Eurowaternet currently collects data from all EEA-18 and AC-10 countries. However, information was not received from Austria for phosphorus, from Poland for nitrogen or from the Czech Republic, Romania and Slovakia for either nitrogen or phosphorus. The initiative to extend Eurowaternet will cover all NIS countries, Albania, Bosnia-Herzegovina, Cyprus, FYROM, Malta and Turkey if approval is granted.	
Time series: The most consistent time series for which data are available in Waterbase is 1990–98.	
Quality: Data provided are nationally assured data. NFPs will also be asked to provide additional quality information for the 2001 update.	
Next update: Data are updated annually. Data for 2000 will be available by December 2001.	
Previous use: Eurowaternet data have previously been used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water will collect 2000 data from Eurowaternet countries. The ETC/Water will also extend the coverage of Eurowaternet to all UNECE countries if approval is granted. If not, questionnaires will be sent to the NRCs of the countries not already covered.	Comments:

Data set: River water quality index

8.6

Used for indicator: Overall river water quality index: biological and physico-chemical classification of river lengths less than 'good' in national classifications.	
Data retrieval	
Holding body: Data will be collected by the ETC/Water from countries' state of the environment (SoE) reports.	
Contact name:	Contact details:
Reference:	
Accessibility: Information should be readily accessible from SoE reports.	
Format: Information is likely to be available in paper format only.	
Reason for choosing data holder/Procedure for collecting data: There are no harmonised monitoring programmes for river water quality across Europe and no international data holder of this information. Information is only available from SoE reports.	
Data description	
Definitions: River water quality is widely monitored by countries but numerous methods and classifications are used. Classification criteria will be used to harmonise the information gathered from national assessments (as used in Dobris+3, Box 9.3).	
Units: River lengths/stations as a proportion of total river stations in a country and normalised to the country's surface area.	
Geo coverage: This will depend on the information available but as many countries as possible will be included.	
Time series: This will depend on the information available.	
Quality: Quality will vary depending on countries' monitoring methods. Definitions used may also vary so the information will therefore not be fully comparable.	
Next update:	
Previous use: River quality index has previously been presented in EEA 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water will collect information on river water quality from countries' state of the environment reports and develop an overall river water quality index.	Comments:

8.7 Data set: Pesticides in groundwater

Used for indicator: Pesticides in groundwater and surface water.	
Data retrieval	
Holding body: Data may be collected as part of future Eurowaternet data collecting activities but this has not yet been determined. Data can currently be obtained from national SoE reports and from questionnaires sent to countries' NRCs.	
Contact name: ETC/Water: Mr Steve Nixon (Technical Director)	Contact details: Tel. (44-1491) 63 66 08 Fax (44-1491) 57 90 94 E-mail: nixon@wrcplc.co.uk
Reference:	
Accessibility:	
Format:	
Reason for choosing data holder/Procedure for collecting data: There is no international data holder for this information and no harmonised monitoring procedures for the collection of these data. Data can therefore currently only be obtained from the countries themselves.	
Data description	
Definitions:	
Units: mg/l total pesticides.	
Geo coverage: Data for all European UNECE countries will be collected if pesticides are included as part of Eurowaternet's data collecting activities. If not, as many countries' SoE reports as possible will be reviewed for information.	
Time series:	
Quality: As there is no harmonised monitoring procedure, data collection and definitions will not be entirely consistent between countries.	
Next update:	
Previous use: Pesticides in groundwater has not previously been presented as a quantitative indicator in EEA indicator reports.	
Additional information	
Actions: The ETC/Water will collect data from national SoE reports and using questionnaires sent to NRCs. If Eurowaternet activities include collecting pesticide information, then these data will be used when received.	Comments:

Data set: Pesticides in surface water

8.8

Used for indicator: Pesticides in groundwater and surface water.	
Data retrieval	
Holding body: The European Commission Commps database may be used but this will provide a crude assessment only. Data may be collected as part of future Eurowaternet data collecting activities but this has not yet been determined. Data can otherwise be obtained from national SoE reports and from countries' NRCs.	
Contact name: ETC/Water: Mr Steve Nixon (Technical Director)	Contact details: Tel. (44-1491) 63 66 08 Fax (44-1491) 57 90 94 E-mail: nixon@wrcplc.co.uk
Reference:	
Accessibility: The European Commission Commps database is not available to the public. Permission has been given to the EEA to use the information previously but this will need to be confirmed by the EEA.	
Format: The European Commission Commps database is an Access database. Information from SoE reports will generally be available in paper format only.	
Reason for choosing data holder/Procedure for collecting data: There is no international data holder for this information and no harmonised monitoring procedures for the collection of these data. The Commps database has information for EU-15 and can only provide a crude assessment. Data for other countries can therefore currently only be obtained from the countries themselves.	
Data description	
Definitions:	
Units: mg/l total pesticides.	
Geo coverage: European Commission Commps database: EU-15 only. SoE reports for as many countries as possible will be reviewed for information. If Eurowaternet receives funding to collect pesticide information, all European UNECE countries will be covered.	
Time series: European Commission Commps database: early to mid-1990s only.	
Quality: There is no harmonised monitoring procedure so data collection and definitions will not be entirely consistent between countries.	
Next update:	
Previous use: Pesticides in surface water has not previously been presented as a quantitative indicator in EEA indicator reports.	
Additional information	
Actions: The EEA to confirm its access to the Commps database. The ETC/Water will collect any available data from the European Commission Commps database for EU-15, if permission is granted. National SoE reports and questionnaires sent to NRCs will be used to obtain data for other countries. If Eurowaternet activities are extended to include pesticide information, then these data will be used when received.	Comments:

8.9 Data set: Nitrate in groundwater

Used for indicator: Nitrate in groundwater.	
Data retrieval	
Holding body: Waterbase (ETC/Water database containing Eurowaternet data) for EEA-18 and AC-10 countries. There is a special initiative under way to extend the coverage of Eurowaternet to NIS countries, subject to approval. If approval is not granted, questionnaires to NRCs will be used.	
Contact name: ETC/Water: Mr Justin Miles (Data Manager)	Contact details: Tel. (44-1491) 63 66 47 E-mail: miles_j@wrcplc.co.uk
Reference: ETC/Water, Waterbase.	
Accessibility: Waterbase is a database without Internet access that is maintained by the ETC/Water. A reference version of Waterbase will eventually be available through the Internet.	
Format: Waterbase is an Access database.	
Reason for choosing data holder/Procedure for collecting data: Eurowaternet is the best-known source of data for nitrate in European groundwater bodies. Data are comparable and have good geographical and temporal coverage.	
Data description	
Definitions: Data are for concentrations of N measured at different types of well (surveillance wells, drinking water wells, industrial wells and wells used for other purposes) in each water body.	
Units: mg/l N.	
Geo coverage: Eurowaternet currently collects data from all EEA-18 and AC-10 countries. However, information was not received from Belgium, Iceland, Italy, Liechtenstein, Luxembourg, Norway, Portugal, Latvia and Romania. The initiative to extend Eurowaternet will cover all NIS countries, Albania, Bosnia-Herzegovina, Cyprus, FYROM Malta and Turkey if approval is granted.	
Time series: Of the countries that provided data, data are generally available from 1990 to 1998.	
Quality: Data provided are nationally assured data. NFPs will also be asked to provide additional quality information for the 2001 update.	
Next update: Data are updated annually. Data for 2000 will be available by December 2001.	
Previous use: Eurowaternet data have previously been used in EEA 'Environmental signals' and 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water will collect 2000 data from Eurowaternet countries. The ETC/Water will also extend the coverage of Eurowaternet to all UNECE countries if approval is granted. If not, questionnaires will be sent to the NRCs of the countries not already covered.	Comments:

Data set: Urban wastewater treatment capacity

8.10

Used for indicator: Urban wastewater treatment capacity.	
Data retrieval	
Holding body: Data are available from Eurostat/OECD for EU, EFTA and AC countries. The European Commission report on Council Directive 91/271/EEC of 27 February 1998 also provides predictions for developments in the capacity of collecting systems in EU Member States.	
Contact name: ETC/Water: Ms Concha Lallana (Core Team)	Contact details: Tel. (44-1491) 63 66 62 Fax (44-1491) 57 90 94 E-mail: Lallana_c@wrcplc.co.uk
Reference: Eurostat, New Cronos: Theme 8/milieu/water/iwq5. European Commission report on Council Directive 91/271/EEC of 27 February 1998.	
Accessibility: Eurostat/OECD data are readily available from the New Cronos online database. Data will also be available on a CD-ROM in summer 2001, which will be sent to the ETC/Water.	
Format: Eurostat data are available in HTML, Excel, DFT, CSV or Flat file formats. The information in the European Commission report is also in paper format.	
Reason for choosing data holder/Procedure for collecting data: Eurostat data are collected using the Eurostat/OECD joint questionnaire and have good temporal and geographical coverage. Data are quality checked when received and are readily available from the New Cronos database.	
Data description	
Definitions: Eurostat/OECD data are available for plant capacity in the sectors public sewage treatment, other wastewater treatment, and independent treatment. Data are also available for the following technologies: mechanical treatment (primary treatment); biological treatment (secondary treatment); advanced treatment (tertiary treatment); total treatment; total of which with denitrification facilities; and total of which with dephosphatation facilities.	
Units: Person equivalents.	
Geo coverage: Eurostat/OECD countries: EU-15, EFTA-3 (no Liechtenstein), AC-8 (no Latvia and Romania). Predictions from the European Commission report are available for EU-15 only.	
Time series: Generally from 1980 to 1998 (data are available for 1999 for some countries). Predictions are available for 2005.	
Quality: There are some variations in definitions of different classes of treatment between countries so data are not completely comparable.	
Next update: Data are collected by the Eurostat/OECD joint questionnaire every two years. The results from the 2000 questionnaire with data for 1999 will be available in 2001.	
Previous use: Eurostat/OECD urban wastewater treatment (UWWT) data have previously been used in EEA 'State of the environment' and 'Environmental signals' reports.	
Additional information	
Actions: The ETC/Water will collect the most recent data from Eurostat for EU, EFTA and AC countries and will collect data from countries not covered by Eurostat/OECD by means of a questionnaire to NRCs.	Comments:

8.11 Data set: Drinking water quality

Used for indicator: Drinking water quality.	
Data retrieval	
Holding body: The European Commission (Environment DG) has data for EU-15 from national reports submitted under Reporting Directive 91/692/EEC for Drinking Water Directive 80/778/EEC. Data up to 1998 are available but have not yet been analysed. WHO and the ETC/Water produced the 'Monograph on water resources and human health in Europe', which has drinking water quality data for European countries.	
Contact name: ETC/Water: Mr Steve Nixon (Technical Director)	Contact details: Tel. (44-1491) 63 66 08 Fax (44-1491) 57 90 94 E-mail: nixon@wrcplc.co.uk
Reference: ETC/Water and WHO, 1998, 'Monograph on water resources and human health in Europe'.	
Accessibility: The monograph is available from the ETC/Water.	
Format: Data are available in Excel format and on paper.	
Reason for choosing data holder/Procedure for collecting data: There is little consolidated information available on drinking water quality in Europe. However, the data from the ETC/Water and WHO monograph have good geographical coverage, include EC drinking water directive returns, and were collected using a questionnaire sent to individual countries.	
Data description	
Definitions: Data are for the % of drinking water samples exceeding standards for total coliforms, faecal coliforms, nitrate and fluoride.	
Units: % of exceedances.	
Geo coverage: The EEA/WHO questionnaire was sent to all European countries. Results were received and published for nine EU countries, Iceland, eight ACs (Bulgaria, Poland and Slovakia are for some unknown reason not covered), Croatia, Malta and Monaco.	
Time series: Data in the monograph are for 1995 only. The EC drinking water directive returns are available for 1993–95.	
Quality: The EC drinking water directive returns used in the monograph have been checked and analysed.	
Next update: The EC drinking water directive returns are submitted every three years. The ETC/Water and WHO monograph was a one-off publication.	
Previous use: Drinking water quality has not previously been covered in EEA indicator or 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water will request EU-15 data for 1996–98 from the Environment DG. The ETC/Water will issue a drinking water quality questionnaire to the NRCs of other European countries to improve geographical and temporal coverage of the existing data held.	Comments:

Data set: N and P inputs to sea

8.12

Used for indicator: Nutrient inputs to sea.	
Data retrieval	
Holding body: The five marine conventions and action programmes (OSPAR, Helcom, AMAP, MAP and BSEP) regularly carry out assessments of nutrient loadings to sea and produce data and reports.	
Contact name: OSPAR Secretariat For Helcom: Finnish Institute for the Environment For MAP: UNEP/MAP Secretariat	Contact details: OSPAR: Tel. (44-20) 72 42 99 27 Fax (44-20) 78 31 74 27 E-mail: secretariat@ospar.org Helcom: Tel. (358-9) 62 20 22 20 Fax (358-9) 62 20 22 39 E-mail: helcom@helcom.fi
Reference: Helcom: http://www.helcom.fi . OSPAR: http://www.osparcom.org .	
Accessibility: Permission is required to use the data collected under the marine conventions. At present, permission has only been granted to use OSPAR data.	
Format:	
Reason for choosing data holder/Procedure for collecting data: The best source of this information is the marine conventions; however, it is a complicated process to obtain permission to use these data. Permission has so far been granted to use the OSPAR data only but work is under way to extend this and use data from further conventions as and when the data become available.	
Data description	
Definitions: Data are for direct, riverine and atmospheric inputs of N and P to marine waters.	
Units: ktonnes. N or P.	
Geo coverage: The marine areas to be covered in the Kiev report are the Mediterranean, north Atlantic, Black Sea and Sea of Azov, Caspian Sea, White Sea, Barents Sea, Norwegian Sea, Baltic Sea and the North Sea. The OSPAR Convention covers the Arctic waters, Greater North Sea, Celtic Seas, Bay of Biscay and Iberian coast, and the wider Atlantic.	
Time series: Data are generally available up to 1999 although coverage varies.	
Quality: Data collected under the marine conventions have guaranteed quality assurance.	
Next update: OSPAR collects data on an annual basis.	
Previous use: Nutrient input to sea data from OSPAR have previously been used in EEA 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water will obtain the latest available data that it has permission to use from the marine conventions. Work will also continue by the ETC/Water to extend the coverage of the data currently held and the flow of information from the marine conventions.	Comments:

8.13 Data set: N and P concentrations in coastal waters

Used for indicator: Nutrient concentrations in coastal waters.	
Data retrieval	
Holding body: Marinebase: the database for data on the marine and coastal environment held by the ETC/Water.	
Contact name: ETC/Water: Mr Justin Miles (Data Manager)	Contact details: Tel. (44-1491) 63 66 47 E-mail: miles_j@wrcplc.co.uk
Reference: ETC/Water, Marinebase.	
Accessibility: Marinebase is a database with no Internet access maintained by the ETC/Water. It is planned that a reference version of Marinebase will be available through the Internet shortly.	
Format: Marinebase is an Access 97 database.	
Reason for choosing data holder/Procedure for collecting data: Marinebase contains information resulting from a comprehensive data collection exercise carried out by the ETC/MC. Data in Marinebase were collected using a questionnaire sent to the NRCs of the EEA-18 Member States and from the marine conventions and action plans. The majority of the data was provided by the marine conventions, which provide harmonised and comparable data. Currently, Helcom and OSPAR data are included covering the Baltic Sea, Greater North Sea, Celtic Seas, Iceland and a few data from the Bay of Biscay and Iberian coast. No data from AMAP, Medpol or the BSEP are present yet.	
Data description	
Definitions: Data are available for the median winter concentrations of phosphate and nitrate from individual monitoring values aggregated within squares (100 km ²).	
Units: µmol/l of phosphate or nitrate.	
Geo coverage: Marinebase currently covers the Mediterranean Sea, eastern Atlantic, North Sea, Skagerrak, Kattegat and Baltic Sea and has data for EEA-18 only.	
Time series: Varies but generally available from 1985 to 1997/98.	
Quality: Data from the marine conventions are quality assured and comparable as they are collected using harmonised methods. Data from NRCs are less comparable as they use the countries' own monitoring methods.	
Next update: Marinebase will be updated by requests to ICES or questionnaires sent directly to countries as part of the ETC/Water work programme for 2001.	
Previous use: These data have previously been used in EEA 'State of the environment' and 'Environmental signals' reports.	
Additional information	
Actions: The ETC/Water will use data currently in Marinebase and increase the coverage to all European UNECE countries by requests to the relevant conventions or by questionnaires to countries themselves.	Comments:

Data set: Bathing water quality

8.14

Used for indicator: Bathing water quality.	
Data retrieval	
Holding body: The European Commission collects annual bathing water directive returns from EU-15 countries.	
Contact name: ETC/Water: Mr Stephen Nixon	Contact details: Tel. (44-1491) 63 66 08 E-mail: nixon@wrcplc.co.uk
Reference: European Commission, May 2000, <i>Quality of bathing water (1999 bathing season)</i> .	
Accessibility: EU-15 data are readily available from the Environment DG.	
Format: The publication is currently only available in paper format.	
Reason for choosing data holder/Procedure for collecting data: There is no international data holder for this data set and no internationally harmonised collecting procedure for this information. The Environment DG is a good source for EU-15 as data are collected using consistent definitions and are freely available.	
Data description	
Definitions: Data are available for the number of samples which comply with mandatory values and guideline values as listed in the bathing water directive. Data are also available for the number of points where bathing was prohibited and the number of areas insufficiently sampled.	
Units: % compliance.	
Geo coverage: The Environment DG collects data for EU-15 only.	
Time series: Annual data are available from 1992. Data are generally one or two years behind.	
Quality: There are some quality problems as not all Member States monitor for all the parameters. Quality status is therefore not always calculated using the same parameters.	
Next update: Results are generally published in May. Results for 2000 should be available in May 2001.	
Previous use: Bathing water quality has not previously been included in EEA reports.	
Additional information	
Actions: The ETC/Water will collect the most recent EU-15 data from the Environment DG. A separate data collection exercise will be undertaken to collect data from the NRCs of the remaining European countries using a questionnaire.	Comments:

8.15 Data set: Input of hazardous substances in marine waters

Used for indicator: Input and concentrations of hazardous substances in marine waters.	
Data retrieval	
Holding body: The five marine conventions and action programmes (OSPAR, Helcom, AMAP, MAP and BSEP) carry out assessments of hazardous substance inputs to sea. ICES is also a holder of data from the OSPAR and Helcom programmes.	
Contact name: OSPAR Secretariat For Helcom: Finnish Institute for the Environment For MAP: UNEP/MAP Secretariat	Contact details: OSPAR: Tel. (44-20) 72 42 99 27 Fax (44-20) 78 31 74 27 E-mail: secretariat@ospar.org Helcom: Tel. (358-9) 62 20 22 20 Fax (358-9) 62 20 22 39 E-mail: helcom@helcom.fi
Reference: Helcom: http://www.helcom.fi . OSPAR: http://www.osparcom.org .	
Accessibility: Permission must be granted to access the marine conventions' databanks. Currently, only access to OSPAR data has been granted.	
Format:	
Reason for choosing data holder/Procedure for collecting data: The best source of information on inputs to seas is the marine conventions; however, it is a complicated process to obtain permission to use these data. Permission has so far been granted to use the OSPAR data only, but work is under way to extend this and use data from further conventions as and when the data become available.	
Data description	
Definitions: Data are for direct, riverine and atmospheric inputs of hazardous substances to marine waters.	
Units: ktonnes.	
Geo coverage: The marine areas to be covered in the Kiev report are the Mediterranean, north Atlantic, Black Sea and Sea of Azov, Caspian Sea, White Sea, Barents Sea, Norwegian Sea, Baltic Sea and the North Sea. The OSPAR Convention covers the Arctic waters, Greater North Sea, Celtic Seas, Bay of Biscay and Iberian coast, and the wider Atlantic.	
Time series: The data sets are fairly incomplete but temporal trends can be developed for 1990–99.	
Quality: Data on input of hazardous substances to marine waters are not always comparable and reliable due to the complex monitoring and calculations required to produce these data. The best data are available for direct and riverine input loads of cadmium, mercury, lead, zinc, lindane and PCB ₇ .	
Next update: Data are in theory submitted to OSPAR on an annual basis although there are often gaps in the data provided.	
Previous use: Data for input of hazardous substances to sea from OSPAR have previously been used in EEA 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water will obtain the latest available data that it has permission to use from the marine conventions. Work will also continue by the ETC/Water to extend the coverage of the data currently held and the flow of information from the marine conventions.	Comments:

Data set: Concentrations of hazardous substances in marine waters

8.16

Used for indicator: Input and concentrations of hazardous substances in marine waters.	
Data retrieval	
Holding body: Marinebase (ETC/Water database) has data for concentrations of hazardous substances in marine waters, but mainly for sediment and biota.	
Contact name: ETC/Water: Mr Justin Miles (Data Manager)	Contact details: Tel. (44-1491) 63 66 47 E-mail: miles_j@wrcplc.co.uk
Reference: ETC/Water, Marinebase.	
Accessibility: Marinebase is a database with no Internet access maintained by the ETC/Water. It is planned that a reference version of Marinebase will be available through the Internet shortly.	
Format: Marinebase is an Access 97 database.	
Reason for choosing data holder/Procedure for collecting data: Marinebase contains information resulting from a comprehensive data collection exercise carried out by the ETC/MC. Data in Marinebase were collected from a questionnaire sent to the NRCs of the EEA-18 Member States and the marine conventions and action plans. The majority of the data was provided by marine conventions, which provide harmonised and comparable data.	
Data description	
Definitions: Values of hazardous substances are from sediments and biota as these tend to accumulate harmful substances. PCBs and PAHs covered following the monitoring variables of the JMP of the OSPAR programme. Heavy metals included are based on the lists of priority metals to be monitored according to the international conventions.	
Units: mmol/l.	
Geo coverage: Marinebase currently covers the Mediterranean Sea, eastern Atlantic, North Sea, Skagerrak, Kattegat and the Baltic Sea and has data for the countries bordering these seas.	
Time series: Coverage varies greatly between countries but data are available from the mid-1980s until the mid-1990s.	
Quality: Data from the marine conventions are quality assured and comparable as they are collected using harmonised methods. Data from NRCs are less comparable as they use the countries' own monitoring methods.	
Next update: Marinebase will be updated by requests to ICES or sent directly to countries as part of the ETC/Water work programme for 2001.	
Previous use: Data have previously been presented in map form in EEA 'State of the environment' reports.	
Additional information	
Actions: The ETC/Water will use data currently in Marinebase and increase the coverage to all European UNECE countries by requests to ICES or by questionnaires to countries themselves.	Comments:

8.17 Data set: Oil spills

Used for indicators: Oil pollution from maritime transport and offshore activities; tanker oil spills.	
Data retrieval	
Holding body: International Tanker Owners Pollution Federation (ITOPF).	
Contact name: ITOPF: Ms Fionn Molloy	Contact details: ITOPF Ltd, Staple Hall, 87–90 Stone House Court, Houndsditch, London EC3A 7AX, United Kingdom Tel. (44-20) 76 21 12 55 Fax (44-20) 76 21 17 83 E-mail: fionnmolloy@itopf.com
Reference: http://www.itopf.com/stats.html .	
Accessibility: Global data are available free of charge from the ITOPF web site. The agreement to use individual data in order to compute them by country is still being finalised. ITOPF is in the process of setting up a data-sharing system between European organisations to avoid duplication in data information requests.	
Format: Aggregated data on the web site are available in HTML format.	
Reason for choosing data holder/Procedure for collecting data: ITOPF has a large number of data sets with excellent temporal and geographical coverage. Data are collected according to well-established practices.	
Data description	
Definitions: Data are for the amount of oil spilt in an incident and include all oil lost to the environment, including that which is burnt or remains in a sunken vessel. Incidents include all accidental spills excluding those resulting from acts of war. Information is categorised by size (< 7 tonnes, 7–700 tonnes and > 700 tonnes of oil spilt).	
Units: Tonnes.	
Geo coverage: ITOPF collects data from all over the world.	
Time series: Data are available from 1970 to 1999.	
Quality: Data on spills over 7 tonnes are reliable as they are derived from published sources and specialist literature. Data on smaller spills are less reliable as they are less widely reported.	
Next update: Data are updated when spills occur.	
Previous use: ITOPF data have been used previously in EEA 'State of the environment' reports.	
Additional information	
Actions: The EEA will finalise the agreement to use original ITOPF data. The ETC/Water will contact ITOPF to collect the most recent data for Europe.	Comments: Could be presented as a map.

**Data set: Programmes of measures and monitoring programmes
for the protection of shared waters**

8.18

Used for indicators: Implementation of programmes of measures for shared waters; implementation of monitoring programmes for shared waters.	
Data retrieval	
Holding body: UNECE and the International Water Assessment Centre (IWCA) are the organisations involved in the implementation of the UNECE Convention on the Protection and Use of Transboundary Watercourses and Lakes. However, a discussion with the secretary of the UNECE Convention highlighted that the parties to the water convention have not yet decided on the design of indicators for reporting the convention's implementation. It is due to be discussed at their Working Group on Water Management meeting in September 2001 and, although they see the need for providing reliable inputs to EEA work, official information is not yet available and cannot be provided until the parties to the convention have reached agreement. The same applies to information on monitoring programmes; however, here information on the joint programmes of measures for relevant transboundary catchment areas will be considered by the parties to the convention at their meeting in 2003.	
Contact name: Dr Rainer Enderlein (Secretary of the Meeting of the Parties to the UNECE Convention on the Protection and Use of Transboundary Watercourses and Lakes)	Contact details: UNECE, Palais des Nations, Office 313, 8-14 avenue de la Prie, CH-12111 Geneva 10 Tel. (41-22) 917 23 73 Fax (41-22) 907 01 07 E-mail: rainer.enderlein@unece.org
Reference:	
Accessibility:	
Format:	
Reason for choosing data holder/Procedure for collecting data:	
Data description	
Definitions:	
Units:	
Geo coverage:	
Time series:	
Quality:	
Next update:	
Previous use:	
Additional information	
Actions: No action can be taken and no information will be available until the parties to the UNECE Convention have reached an agreement on the indicators for reporting the convention's implementation at a meeting in September 2001.	Comments:

Soil degradation

9.1	Data set: Soil lost from agricultural land	
Used for indicator: Volume of soil lost annually from agricultural land.		
Data retrieval		
Holding body: Eurostat holds data expressing amount of soil lost through total erosion from land for a few countries/years.		
Contact name:		Contact details:
Reference: Eurostat: Theme8/milieu/land/luq3 (select 'Total amount of soil lost through total erosion (t/ha/year) — agriculture' from the pull-down menu).		
Accessibility: Eurostat data can be downloaded free of charge.		
Format: Eurostat: HTML or CSV tables. EEA data warehouse: ASCII tab-delimited, D-Base IV, Access or Excel tables.		
Reason for choosing data holder/Procedure for collecting data: Eurostat data have previously been used and are easily accessible from the New Cronos database. Eurostat/OECD data collection techniques are well established.		
Data description		
Definitions: Eurostat: amount of soil lost, by total erosion, from agricultural land, by year and country.		
Units: Amount of soil lost: tonnes/ha/year.		
Geo coverage: Spain and Slovakia.		
Time series: Spain: 1980–85, 1985–90, 1990–95; Slovakia: 1990–95.		
Quality: The comparability of the data is limited due to inconsistencies with regard to definitions of soil erosion, measuring techniques, etc.		
Next update:		
Previous use: The two data sets appearing in the EEA data warehouse have previously been used in the EEA publication <i>Environment in the European Union at the turn of the century</i> . The EEA data warehouse contains data expressing the area of land affected by soil erosion and amount of soil lost from agricultural land for various countries between 1990 and 1995.		
Additional information		
Actions: The ETC/Terrestrial Environment will use available data from Eurostat and country SoE reports to develop this data set.		Comments: The European Commission Joint Research Centre (Ispra) project is under way to estimate soil loss from agricultural soils. However, results are not expected to be available in time for inclusion in the Kiev report.

Data set: Area and severity of salinisation

9.2

Used for indicator: Salinisation in the southern Russian Federation and the central Asian States.	
Data retrieval	
Holding body: The Aral state of the environment report, held by Grid Arendal (Norway), contains information indirectly reflecting land problems associated with salt deposition for central Asian States. The IIASA holds a report detailing causes of soil degradation in Russia.	
Contact name: Supporting data for Aral SoE report: Scientific and Information Centre (SIC) 'Aral'. IIASA report: Mr Vladimir Stolbovoi (Primary Author)	Contact details: SIC: 44 Kievskaya Str., Bishkek, 720000, Kyrgyzstan, Kyrgyz-Russian Slavic University Tel. (996-31) 228 29 09 Fax (996-31) 228 27 76 E-mail: krsu@krsu.edu.kg IIASA: E-mail: info@iiasa.ac.at or stolbov@iiasa.ac.at
Reference: Grid Arendal web site: http://www.grida.no/ara/aralsea/english/aralsea/aralsea.htm (go to table 'Development of ecological crisis in the basin of the Aral Sea (1966-96)'). IIASA report: http://www.iiasa.ac.at/Publications/Documents/IR-97-084.pdf ('A new digital geo-referenced database of soil degradation in Russia').	
Accessibility: Reports can be downloaded free of charge.	
Format: Aral SoE report: HTML table. IIASA document: PDF (Adobe Acrobat).	
Reason for choosing data holder/Procedure for collecting data: The Aral SoE report is a readily accessible source of compiled land data for central Asian States. The IIASA report summarises the extent of land management problems for the Russian Federation. The geo-referenced database referred to in the IIASA report comprises the latest (as of 1997) data concerning the status of soil degradation in Russia and includes data referring to non-agricultural regions.	
Data description	
Definitions: Degradation of land in the Aral Sea area is expressed through the following time series: territory of 'new' salty desert appearing as a result of sea evaporation; physical mass of salt, dust and wastes within the salty desert; territory of salt and dust spread; and growth of withdrawal and fall-out of salt and dust. The IIASA database contains soil degradation attributes describing type and extent of degradation types, including 'secondary salinisation'.	
Units: IIASA report: extent of degradation: million ha; % of soil area.	
Geo coverage: Aral Sea basin and Russian Federation.	
Time series: Aral SoE report : 1966, 1976, 1996, 2000; IIASA study: 1997.	
Quality: Aral SoE: no details of data collection methods are given. There are known quality problems with this type of data due to different definitions used by different countries. IIASA geo-referenced database: spatial information represented by mapping units of updated FAO map of Russia.	
Next update: Not known.	
Previous use: Land salinisation data for the central Asian States or southern Russian Federation have not previously been included in EEA indicator or 'State of the environment' reports.	
Additional information	
Actions: UNEP will provide a contribution on the central Asian States for the Kiev report, based on existing studies and contacts in the region. A possible source of salinisation data is national SoE reports. UNEP could compile such data.	Comments: None of the above data sets are a direct measure of salinisation (caused primarily by irrigation with slightly saline waters in a dry climate).

9.3 Data set: Soil restoration projects — in place and proposed

Used for indicator: Restoration projects undertaken/planned — Southern Russian Federation and central Asian republics (table).	
Data retrieval	
Holding body: The UNCCD (United Nations Secretariat of the Convention to Combat Desertification) holds reports outlining national action programmes for Kyrgyzstan, Turkmenistan and Uzbekistan (in Russian only), describing methods taken to counter soil erosion (as a function of the larger process of desertification).	
Contact name:	Contact details:
Reference: UNCCD site: http://www.unccd.int/actionprogrammes/asia/asia.php (select national reports by clicking on country names).	
Accessibility: Reports can be downloaded free of charge.	
Format: PDF (Adobe Acrobat).	
Reason for choosing data holder/Procedure for collecting data: This source has coverage for central Asian States, although only for one year (unidentified in the case of the Aral SoE data). The reports contain information regarding both existing and proposed projects. This is the only known source for this information.	
Data description	
Definitions: Projects are described in the text of the national action programmes. No specific table listing the number of existing and proposed soil restoration projects is available.	
Units: Number of projects.	
Geo coverage: Kyrgyzstan, Turkmenistan and Uzbekistan.	
Time series: Reports submitted in 2000.	
Quality: There are some definition problems as many projects may directly help in the restoration of soil whilst others contribute to this process indirectly. The assessment of projects, with respect to their soil restoration potential, is largely subjective and open to interpretation.	
Next update:	
Previous use: Data, regarding soil restoration projects in the southern Russian Federation and central Asian Republics, have not previously been included in EEA publications.	
Additional information	
Actions: UNEP will provide a contribution on the central Asian States for the Kiev report, based on existing studies and contacts in the region. Work to include a search by UNEP for similar data regarding salinised soils (and in other countries).	Comments: A potential source could be the International Fund for Saving the Aral Sea (IFAS) as it holds information regarding ongoing and proposed programmes and subprogrammes aimed at reversing the trend of environmental degradation in the Aral Sea region.

Data set: Water balance in central Asian States, 1980–99

9.4

Used for indicator: Change in the water balance in central Asian States.	
Data retrieval	
Holding body: The Land and Water Development Division of the FAO holds information that would feed into a calculation of water balance for central Asian States for the year 1996 only. Grid Arendal in Norway holds the Aral Sea state of the environment report, which contains water resources information for unidentified year(s).	
Contact name: Supporting data for Aral SoE report: Scientific and Information Centre (SIC) 'Aral' No contact name for the FAO	Contact details: SIC: 44 Kievskaya Str., Bishkek, 720000, Kyrgyzstan, Kyrgyz-Russian Slavic University Tel. (996-31) 228 29 09 Fax (996-31) 228 27 76 E-mail: krsu@krsu.edu.kg FAO: E-mail: Land-and-water@fao.org
Reference: FAO water resource data for the central Asian States: http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGL/AGLW/aquastat/tablfsv.htm (data for 'central Asia' appear in Tables 1 to 8 and Table 9 contains renewable surface water resource data for the countries/zones of the Aral Sea basin). Aral SoE (grid) data: http://www.grida.no/aral/aralsea/english/water/waterf.htm (table 'Dynamics of water resources use in CAR (million m ³)').	
Accessibility: FAO and Aral SoE tables can be accessed free of charge.	
Format: HTML tables.	
Reason for choosing data holder/Procedure for collecting data: This source has good coverage for the central Asian States and Aral Sea area, although data are only available for one year (unidentified in the case of the Aral SoE data). FAO data collection procedures are well established.	
Data description	
Definitions: FAO: water inflow and outflow (e.g. precipitation, abstraction, flow to sea) during 1996 and associated pressures (e.g. irrigation farming, population) for central Asian region. In addition, renewable surface water resource data are presented for individual countries/zones of the Aral Sea basin, and the basin as a whole (based on a reconstructed time series). Aral SoE report: total water resources expressed as total from surface, total from ground and reused water, divided into usage sectors (e.g. irrigation, drinking).	
Units: FAO: distribution of drainage and irrigation methods: ha; water withdrawal volumes in m ³ ; regional distribution of crops: ha; renewable surface water resources of the Aral Sea region: km ³ per year. Aral SoE report: million m ³ .	
Geo coverage: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.	
Time series: FAO: 1996; Aral SoE report: unidentified year.	
Quality: Data are available for one year only and are not — in either case — presented as water balance data. Calculation of a water balance from the water supply/demand may present problems, leading to inaccuracies in a final water balance figure.	
Next update:	
Previous use: Water balance of central Asian States has not previously been included in EEA 'Environmental signals' or 'State of the environment' reports.	
Additional information	
Actions: UNEP will provide a contribution on the central Asian States for the Kiev report, based on existing studies and contacts in the region.	Comments:

9.5 Data set: Aral Sea: Area with wind erosion/salt deposition problems

Used for indicator: Area with problems due to wind erosion and salt deposition — the Aral Sea area.	
Data retrieval	
Holding body: The Aral state of the environment report, held by Grid Arendal (Norway), contains information regarding the change of land affected by salt deposition over the years.	
Contact name: Supporting data for Aral SoE report: Scientific and Information Centre (SIC) 'Aral'	Contact details: SIC: 44 Kievskaya Str., Bishkek, 720000, Kyrgyzstan, Kyrgyz-Russian Slavic University Tel. (996-31) 228 29 09 Fax (996-31) 228 27 76 E-mail: krsu@krsu.edu.kg
Reference: Grid Arendal web site: http://www.grida.no/ara/aralsea/english/arsea/arsea.htm (go to table 'Development of ecological crisis in the basin of the Aral Sea (1966–96)').	
Accessibility: Data can be accessed free of charge.	
Format: HTML table.	
Reason for choosing data holder/Procedure for collecting data: The Aral SoE report is a readily accessible source of compiled Aral Sea land data.	
Data description	
Definitions: Degradation of land in the Aral Sea area is expressed through the following time series: territory of 'new' salty desert appearing as a result of sea evaporation; physical mass of salt, dust and wastes within the salty desert; territory of salt and dust spread; and growth of withdrawal and fall-out of salt and dust.	
Units: Territory of 'new' salty desert appearing as a result of sea evaporation: km ² ; physical mass of salt, dust and wastes within the salty desert: million tonnes; territory of salt and dust spread: 1 000 km ² ; growth of withdrawal and fall-out of salt and dust: kg/ha.	
Geo coverage: Aral Sea basin.	
Time series: 1966, 1976, 1996, 2000.	
Quality: No details of data collection methods are given. There are known quality problems with this type of data due to different definitions used by different countries.	
Next update: Not known.	
Previous use: Land degradation data for the Aral Sea basin has not previously been covered in EEA indicator or 'State of the environment' reports.	
Additional information	
Actions: UNEP will provide a contribution on the central Asian States for the Kiev report, based on existing studies and contacts in the region.	Comments:

Data set: Wind erosion prevention projects in the Aral Sea area

9.6

Used for indicator: Number and type of wind erosion prevention projects in the Aral Sea area (table).	
Data retrieval	
Holding body: The International Fund for Saving the Aral Sea (IFAS) holds information regarding ongoing and proposed programmes and subprogrammes aimed at reversing the trend of environmental degradation of the Aral Sea area.	
Contact name: Webmaster at the IFAS web site	Contact details: E-mail: nick@aral.uznet.net
Reference: Qualitative information regarding the projects is available at the IFAS web site: http://www.aral-sea.org/ifas/aral/pbam.html (select individual subprogrammes to be given descriptive information concerning progress in implementation).	
Accessibility: Qualitative information can be accessed free of charge at the IFAS web site.	
Format: Text.	
Reason for choosing data holder/Procedure for collecting data: IFAS is the coordinating body for environmental remediation projects in the Aral Sea area. It is a potential source for this data with good coverage.	
Data description	
Definitions: Number and type of environmental regeneration subprogrammes — ongoing and proposed — for the Aral Sea area. Projects range widely, from water resource management schemes to wetland restoration and local capacity building. The aim, content and current status of individual projects are given.	
Units: Number of projects.	
Geo coverage: Aral Sea region.	
Time series: 1994–98 (last update).	
Quality: The subprogrammes described in the report may help the prevention of wind erosion indirectly (e.g. via optimisation of water resources and therefore reduction in soil desiccation) or directly (e.g. a soil stabilisation project). The degree to which individual projects contribute to the reduction of wind erosion is not described explicitly and therefore open to interpretation.	
Next update: Not known.	
Previous use: Wind erosion prevention projects have not previously been covered in EEA 'Environmental signals' or 'State of the environment' reports.	
Additional information	
Actions: UNEP will provide a contribution on the central Asian States for the Kiev report, based on existing studies and contacts in the region.	Comments:

9.7 Data set: Contaminated sites

Used for indicator: Estimated number of potentially contaminated sites.	
Data retrieval	
Holding body: Data are available in the EEA data warehouse for some countries. The source of these data is the ETC/Soil (now the ETC/Terrestrial Environment) and the UBA (Federal Environment Agency Austria — study contract with the EEA 2000/01).	
Contact name: ETC/Terrestrial Environment: Mr Eric Evrard and Mr Martin Schamann	Contact details: Tel. (32-2) 514 55 34 Fax (32-2) 514 01 97 E-mail: e.evrard@prospect-cs.be Tel. (43-1) 313 04 33 70 Fax (43-1) 313 04 32 11 E-mail: schamann@ubavie.gv.at
Reference: <i>Yearly indicator report 2001. Report on data needs and data availability for the development of indicators for local and diffuse soil contamination, draft report, UBA to EEA.</i> EEA, 2000, <i>Management of contaminated sites in western Europe</i> , Topic report No 13/1999, European Environment Agency. EEA, 1999, <i>Environment in the European Union at the turn of the century</i> , European Environment Agency. EEA-ETC/Soil, 1999, <i>Proceedings and results of the second Contaminated Sites Workshop held in Dublin, November 1999</i> , forthcoming. EEA-UNEP, 2000, <i>Down to earth: Soil degradation and sustainable development in Europe</i> , Environmental issues No 16, European Environment Agency. MST, Dancee, 2000, Ministry of Environment and Energy, Danish Environment Protection Agency — Danish Cooperation for Environment in Eastern Europe, <i>Management of contaminated sites and land in central and eastern Europe</i> , Ad Hoc International Working Group on Contaminated Land, Jens Nonboe Andersern (ed.), Copenhagen, 2000.	
Accessibility: Reports are available from the EEA.	
Format: Tables and figures within these reports.	
Reason for choosing data holder/Procedure for collecting data: Alternatives to this data set are scarce.	
Data description	
Definitions: Data express the estimated and observed number of contaminated and potentially contaminated sites.	
Units: Number of sites.	
Geo coverage: Albania, Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Italy, Ireland, Liechtenstein, Lithuania, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland and UK.	
Time series: Data from different years.	
Quality: There are known inconsistencies in definitions of contaminated land leading to a reduced comparability of the data.	
Next update: The Federal Environment Agency Austria has updated the data with figures gained through the questionnaires elaborated in context with the contract study 2000/01. The ETC/Terrestrial Environment will be compiling the results of these questionnaires.	
Previous use: Existing data have previously been used in EEA publications.	
Additional information	
Actions: Updating of the data which were gained through the questionnaires from the contract study has been completed and the report on data needs and data availability is under revision at the EEA. The ETC/Terrestrial Environment will update the existing data set in the data warehouse.	Comments:

Data set: Clean-up cost of contaminated sites

9.8

Used for indicator: Clean-up projects/costs.	
Data retrieval	
Holding body: Data are available in the EEA data warehouse for some countries/years. The source of these data is the ETC/Soil (now the ETC/Terrestrial Environment) and the UBA (Federal Environment Agency Austria — study contract with the EEA 2000/01). Further data will soon be available from Clarinet (the contaminated land rehabilitation network for environmental technologies in Europe) and Nicole (the network for industrially contaminated land in Europe) — two concerted actions established within the 'Environment and climate' RTD programme of the European Commission.	
Contact name: ETC/Terrestrial Environment: Mr Eric Evrard Clarinet: Mr Martin Schamann	Contact details: EEA/TE: Tel. (32-2) 514 55 34 Fax (32-2) 514 01 97 E-mail: e.evrard@prospect-cs.be Clarinet: Tel (49-1) 313 04 33 70 Fax (49-1) 313 04 32 11 E-mail: schamann@ubavie.gv.at
Reference: See 9.7. Clarinet web site: http://www.clarinet.at/ .	
Accessibility: Reports are available from the EEA.	
Format: Tables and figures within the reports.	
Reason for choosing data holder/Procedure for collecting data: Alternatives to this data set are scarce.	
Data description	
Definitions: Data are an approximation of annual spending on clean-up activities and contaminated site management. Definitions vary between countries as follows: Austria: public remediation fund plus overheads; Belgium (Flemish Region): public remediation budget; Denmark and Finland: public expenditures for investigations and remediations; Hungary: includes only remediation activities included in the national remediation programme; Sweden: first public budget, along with a five-year action plan; Netherlands: total public expenditures.	
Units: Million euro/year.	
Geo coverage: Austria, Belgium (Flemish Region), Denmark, Finland, France, Germany, Hungary, Liechtenstein, Netherlands, Spain, Sweden and UK.	
Time series: Mostly 2000; UK and Liechtenstein 1999; Denmark 1997; Hungary 1996.	
Quality: Data are for one year only and inconsistencies regarding definitions of contaminated land remediation expenditure (see above) reduce the comparability of the data.	
Next update: The Federal Environment Agency Austria is currently updating the data which were gained through the questionnaires elaborated in context with the contract study 2000/01. The ETC/Terrestrial Environment will be compiling the results of these questionnaires and a questionnaire by Clarinet, a concerted action within the 'Environment and climate' RTD programme of the European Commission Research DG, coordinated by the Austrian Environment Agency and covering 16 European countries.	
Previous use: Existing data have previously been used in EEA publications.	
Additional information	
Actions: Updating of the data which were gained through the questionnaires from the contract study has been completed and the report on data needs and data availability is under revision at the EEA. The ETC/Terrestrial Environment will update the existing data set in the data warehouse with results of the Clarinet study when available.	Comments:

Technological and natural hazards

10.1 Data set: Number of notified industrial accidents

Used for indicator: Industrial accidents.	
Data retrieval	
Holding body: The 'Major accidents reporting system' (MARS) database maintained by the European Commission JRC/ISIS Major Accidents Hazards Bureau (MAHB) containing information submitted to the European Commission in accordance with the provisions of the Seveso II directive.	
Contact name: Mr Christian Kirchsteiger or Dr Fesil Mushtaq	Contact details: European Commission, JRC, TP 670, I-21020 Ispra (VA) Tel. Mr Kirchsteiger: (39) 03 32 78 93 91 Dr Mushtaq: (39) 03 32 78 56 10 Fax (39) 03 32 78 90 07 E-mail: christian.kirchsteiger@jrc.it fesil.mushtaq@jrc.it
Reference: http://mahbsrv.jrc.it/mars/Default.html .	
Accessibility: Data can be obtained on request from the JRC/ISIS.	
Format: Data will be provided in Excel spreadsheets.	
Reason for choosing data holder/Procedure for collecting data: This is a comprehensive source of data on major accidents. Data are collected according to Seveso II directive definitions and are quality checked and verified by MAHB staff before being entered into a database.	
Data description	
Definitions: <i>Major accident:</i> an occurrence such as a major emission, fire or explosion resulting from uncontrolled developments in the course of the operation of any establishment covered by the directive and leading to serious danger to human health and/or the environment, immediate or delayed, inside or outside the establishment, and involving one or more dangerous substances. Information is provided on both the number of accidents and the consequences of the accidents.	
Units: Number of reported accidents.	
Geo coverage: Currently, data are only available for EU-15. The database has been extended to all OECD countries and accession countries, but data from these countries have not yet been received.	
Time series: The earliest record is for 1980 and data have been reported up to 2000.	
Quality: Data are quality checked and verified before insertion into the database. Accuracy of country reports is good, but completeness varies.	
Next update: The database is updated on a continual basis as information is submitted.	
Previous use: MARS data have previously been used in EEA 'State of the environment' reports.	
Additional information	
Actions: The EEA data warehouse manager to contact the JRC/ISIS and obtain the most recent data available from MARS for as many countries as data are available.	Comments: A time series for the occurrence of accidents cannot be constructed due to variation in the completeness of the information provided by countries, and changes in the number of notifying countries throughout the period.

Data set: Number of natural disasters

10.2

Used for indicator: Number of natural disasters, excluding earthquakes and volcanic activity.	
Data retrieval	
Holding body: The OECD has data for the number of floods and major climatic and meteorological disasters in OECD countries. Additional available information on droughts will be taken from country SoE reports and the ETC/Water report <i>Sustainable water use in Europe — Part 3: Extreme hydrological events: Floods and droughts</i> . Munich Re (a German reinsurance company) produces an annual report, summarising global natural disasters, and has produced a CD-ROM which compiles data collected by its Geoscience Research Group over 25 years, detailing natural catastrophes.	
Contact name: OECD: Ms Miriam Linster (State of the Environment Division) ETC/Water: Mr Steve Nixon (Technical Director) Munich Re: Dr Gerhard Berz (Central Division: Research and Development/Geoscience Research Group)	Contact details: OECD: 2, rue André Pascal, F-75775 Paris Cedex 16 Tel. (33) 145 24 97 44 E-mail: miriam.linster@oecd.org ETC/Water: E-mail: nixon@wrcplc.co.uk Munich Re: Tel. (49-89) 38 91 52 91 Fax (49-89) 38 91 56 96
Reference: OECD: <i>OECD environmental data compendium 1999</i> , OECD, Paris, France: Tables 8.2A and 8.2C. ETC/Water report: <i>Sustainable water use in Europe</i> . Munich Re: <i>Natural catastrophes 2000</i> : http://www.munichre.com/pdf/topics_2000_a5_e.pdf . A CD-ROM containing data compiled from NatCatSERVICE event reports is available from Munich Re.	
Accessibility: Information is readily available from OECD and ETC/Water publications. The Munich Re report can be downloaded free of charge. The CD-ROM can be ordered at relatively low cost.	
Format: Information from the ETC/Water and OECD publications is available in paper format only. The CD-ROM contains information in various formats: maps, databases, graphs, etc.	
Reason for choosing data holder/Procedure for collecting data: OECD data are quality checked, but only cover OECD countries. There is no international data holder for data on droughts so the only source for this information will be country reports. The data collected by Munich Re are global and the same team has collected information for 25 years.	
Data description	
Definitions: <i>Major floods:</i> floods causing more than 12 deaths or involving indemnity of more than USD 18 million. <i>Major natural disasters of climatic or meteorological origin:</i> includes hurricanes, storms, snowstorms, tornadoes, hail, typhoons, cyclones and avalanches. Only disasters involving more than 20 deaths or involving indemnity of more than USD 8 million are included. <i>Droughts:</i> there is no clear definition of what constitutes a drought.	
Units: OECD: number of disasters, number of deaths, insured US dollar (for indemnity). Munich Re: number of persons affected (with details), economic and insured losses incurred, event severity/scope.	
Geo coverage: OECD: OECD countries. ETC/Water: currently EU, EFTA, AC-10. Munich Re: global.	
Time series: OECD: 1980–98. ETC/Water: currently 1985 only. Munich Re: 25 years up to 2000.	
Quality: Data are taken from the best available insurance records and are quality checked. The OECD states that the lists are only indicative, not exhaustive. Munich Re data on insured losses are generally reliable, whilst economic losses tend to be estimated (based on the insurance density in the affected country).	
Next update: The <i>OECD environmental data compendium</i> is produced every two years. Data for 1999 will be available in 2001. Munich Re updates its database annually.	
Previous use: OECD data were used in <i>Europe's environment — The second assessment</i> .	
Additional information	
Actions: The EEA data warehouse manager to obtain the most recent information from the OECD (to be grouped into categories) and Munich Re. The ETC/Water will review SoE reports of all UNECE countries and obtain the most recent available information on droughts.	Comments:

Biological and landscape diversity

11.1

Data set: Area of protected land by IUCN category

Used for indicator: Protected areas (IUCN categories).	
Data retrieval	
<p>Holding body: There are different holding bodies depending on the level of designation. Internationally designated: the database developed by the World Conservation Monitoring Centre (WCMC), the EEA and the Council of Europe contains information on internationally designated areas as reported to the secretariats of the Ramsar and Barcelona Conventions. EU designate: data are collected as part of EU Natura 2000 and sent to the European Commission. Nationally designated: The ETC/Nature Protection and Biodiversity, in agreement with the Council of Europe, collects data for EEA-18.</p>	
Contact name: ETC/Nature Protection and Biodiversity: Ms Ulla Pinborg	Contact details: E-mail: ulla.pinborg@eea.eu.int
<p>Reference: WCMC: http://www.wcmc.org.uk. The ETC/Nature Protection and Biodiversity holds nationally designated data.</p>	
<p>Accessibility: The ETC/Nature Protection and Biodiversity has access to the WCMC database. There are some restrictions on the EU-held data but access is generally granted to the EEA.</p>	
Format: HTML tables.	
<p>Reason for choosing data holder/Procedure for collecting data: These data sources, at each spatial level, are the best source of information on protected habitats and species.</p>	
Data description	
<p>Definitions: Data are available on the location, area and the year of designation of protected areas. Data are divided into the following categories: 'Landscape protected areas', 'National parks' and 'Conservation areas'.</p>	
Units: Number of sites, area (ha).	
<p>Geo coverage: The WCMC database has international coverage. EU Natura data are for EU-15 only. Nationally designated data are currently held by the ETC/Nature Protection and Biodiversity for EEA-18.</p>	
<p>Time series: The latest available information will be used. Data currently available have poor historical coverage and there are insufficient resources to collect historical data. The precise time series to be used has therefore not yet been determined.</p>	
Quality: WCMC data are accurate. EU and national data are more detailed but less accurate.	
Next update:	
<p>Previous use: Data from these sources have previously been used in EEA 'State of the environment' and 'Environmental signals' reports.</p>	
Additional information	
<p>Actions: The ETC/Nature Protection and Biodiversity will collect the data from the WCMC and the EU where required, and use national data already held to produce this indicator. If necessary and if funding is available, national data collection activities of the ETC/Nature Protection and Biodiversity will be extended to countries outside EEA-18.</p>	<p>Comments: Could be presented as a map (11M.1).</p>

Data set: Habitats and protected species

11.2

Used for indicator: Number of habitats and species protected under EU directives/Berne Convention with a better/worse status.	
Data retrieval	
Holding body: This indicator has not yet been defined (even at the conceptual level) by the ETC/Nature Protection and Biodiversity; therefore, the data requirements have not yet been identified.	
Contact name:	Contact details:
Reference:	
Accessibility:	
Format:	
Reason for choosing data holder/Procedure for collecting data:	
Data description	
Definitions:	
Units:	
Geo coverage:	
Time series:	
Quality:	
Next update:	
Previous use:	
Additional information	
Actions: The ETC/Nature Protection and Biodiversity will further elaborate this indicator and identify the analyses needed. This will be done within the ETC/Nature Protection and Biodiversity implementation plan (currently being drafted). However, there will be no high-profile data collection activities.	Comments: It is envisaged that this indicator will show the state of biodiversity for the three major habitat types — wetlands, forests and grasslands — in terms of the threats to these areas and our effectiveness in protecting these areas.

Progress in managing the environment and sustainable development

12.1/12.2		Data set: Integrated coastal zone management projects	
Used for indicators: Progress in integrated coastal zone management (ICZM); qualitative indicator on pressures on coastal zones.			
Data retrieval			
Holding body: The ETC/Marine and Coastal Environment has produced a report including data that reflect progress in ICZM for 14 countries (181 regions).			
Contact name: ETC/Terrestrial Environment: Mr Chris Steenmans		Contact details: Kongens Nytorv 6, DK-1050 Copenhagen Tel. (45) 33 36 71 16 Fax (45) 33 36 71 99 E-mail: chris.steenmans@eea.eu.int	
Reference: Existing information on the status of ICZM projects within the ETC/Marine and Coastal Environment report <i>Marine and coastal environment, Annual topic update 1999</i> can be found at: http://reports.eea.eu.int/Topic_report_No_112000/en/toprep11_2000.pdf .			
Accessibility: According to an EEA identification study of the potential core set of indicators for the marine and coastal environment, intermediate data regarding progress in national strategies for ICZM are expected to be available by 2003.			
Format: PDF (Adobe Acrobat) document.			
Reason for choosing data holder/Procedure for collecting data: Consistent questioning across 14 countries included in the study; best source of information prior to development of more comprehensive data, as expected by 2003.			
Data description			
Definitions: ICZM is a dynamic, continuous and iterative process of management with the aim of sustainable use of the coastal zone for all different interest groups. Responses to a country questionnaire describe the percentage of regions within each country with a certain status of ICZM implementation (four classifications: 'Fully established ICZM', 'Partially established ICZM', 'ICZM in progress' and 'Little or no progress'. 'Fully established' refers to regions where ICZM is operational for the whole coastal area, 'Partially established' refers to regions where ICZM is operational in specific areas of the coast, but not for the region's coast as a whole, 'In progress' refers to regions where ICZM has reached the stage of active preparation for whole or part of the coast, and 'Little or no progress' refers to regions where some environment and spatial planning tools exist, but key elements of ICZM are not occurring.			
Units: % of coastal regions per country with certain status of ICZM.			
Geo coverage: Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden and UK.			
Time series: 1999.			
Quality: The ETC/Marine and Coastal Environment report suggests that the indicator needs to be more quantitative and that the results of the questionnaire is considered to be a 'testing exercise'. Collaboration with regional experts and a more detailed checklist are therefore suggested for development, to improve understanding of the progress made and problems encountered.			
Next update: Intermediate data expressing progress in national strategies for ICZM are expected to be available by 2003.			
Previous use:			
Additional information			
Actions: The ETC/Terrestrial Environment to provide intermediate data expressing progress in national strategies for ICZM, when available.		Comments:	

3. Map sheets

Following the initial list of contents and analyses to be included in the Kiev report, the maps required for the analyses in each chapter were identified. Consequently, the data sets required for the map production needed for each of the analyses were identified. The list of chapters and the maps proposed for each indicator are shown in Table 3.1.

List of maps proposed for inclusion in the Kiev report

Table 3.1

Kiev chapter/Section name		Ref.	Map titles
Cover maps		M.1	Political map of the region
		M.2	Physiography of the region
A	Energy		
B	Industry		
C	Agriculture	CM.1	Consumption of fertilisers calculated by arable land
D	Forestry		
E	Fisheries and mariculture		
F	Transport	FM.1	Transport network
G	Tourism	GM.1	Change in tourist arrivals
3	Climate change	3M.1	Change in mean annual temperature, 1856–2000
4	Stratospheric ozone depletion	4M.1	Ozone depletion
5	Air pollution	5M.1	Emission deposition, critical loads map
6	Production, use and dispersion of hazardous chemicals	6M.1	Occurrence or deposition of hazardous substances over the European area
		6M.2	Concentrations of hazardous substances in the Mediterranean, Atlantic, Black Sea and Baltic Sea
		6M.3	Deposition of hazardous substances from air (focused on POPs)
8	Water stress (inland and marine)	8M.1	Catchment areas
		8M.2	Eutrophication in marine and coastal waters
		8M.3	Oil pollution by shipping accidents
9	Soil degradation	9M.1	Soil sealing by urbanisation and infrastructure in Europe
		9M.2	Soil compaction in Europe
		9M.3	Soil contamination hot spots in Europe
11	Biological and landscape diversity	11M.1	Internationally designated areas
		11M.2	Types of nature protection policy by country

For each of the maps identified on the list above, a map guideline sheet is included, outlining the main data sources, method of data collection, geographical and temporal coverage of the data sets, timing of the next updates, and any known quality or accessibility problems.

A note on projection and scale

The report will cover all European UNECE countries (i.e. excluding Canada, Israel and the United States).

In order to cover such a large spatial area on one map, a specific projection and adequate scale must be proposed.

The equal-area projection is proposed with the following parameters:

Lambert azimuthal
 Central meridian: 30 0 0 E
 Reference longitude: 50 0 0 N

Maps proposed for the Kiev report will be produced at three different levels of spatial resolution.

Largest	1:30 000 000	Landscape layout, will show more detailed information available for the whole region.
Simpler, smaller	1:45 000 000 1:60 000 000	For presenting statistical information at the country level, with administrative divisions.
Cover maps	1:20 000 000	Will cover two neighbouring A4 pages.

In addition, selected indicator maps showing specific phenomena in more detail, covering only part of the whole region area, are proposed.

In most cases, maps are stand-alone illustrations of an indicator, but, in some cases, they can be used as a spatial illustration of diagrams.

Cover maps

Political map of the region

M.1

Message	To show the location of each country covered by the report	
Projection	Lambert azimuthal	
Scale	1:45 000 000	
Geo map extent	45W — 90E	
Source data	Countries 2000: 'World countries 2000' represents 252 countries including those created from the former Soviet Union, Yugoslavia, and Czechoslovakia such as Russia and Slovenia and the new nations of Eritrea and East Timor.	
Background features	Capitals	
Administrative division	HOLDING BODY:	ESRI
	CONTACT NAME:	info@esri.com
	CONTACT DETAILS:	www.esri.com
	ACCESSIBILITY:	Distributed in a package with the newest version of ArcInfo software
	CONTENTS:	'ESRI Data&Maps 2000' is a set of six CD-ROMs. Data for the world and Europe are written on one CD-ROM. Data reflect the state for the year 2000.
	YEAR:	2000
	FORMAT:	Shapafiles for ArcView

Physiography of the region

M.2

Message	To show the physical regionalisation of the area	
Projection	Lambert azimuthal	
Scale	1:45 000 000	
Geo map extent	45W — 90E	
Source data	USGS data. GTOPO30 is a database created by the USGS. This is a global digital elevation model (DEM) with a horizontal grid spacing of 30 arc seconds (approximately 1 km). It has been divided into regular tiles. GRID-Warsaw has combined the required tiles to get one data set covering the whole region.	
Background features	Rivers, settlements, country borders, geographical network	
Digital elevation model	HOLDING BODY:	GRID-Warsaw
	CONTACT NAME:	Ms Maria Andrzejewska
	CONTACT DETAILS:	maria@gridw.pl
	ACCESSIBILITY:	On demand
	CONTENTS:	As described above
	YEAR:	1996
	FORMAT:	ArcInfo raster

Agriculture

CM.1 Consumption of fertilisers calculated by arable land

Message	To provide a proxy of intensity of agricultural land use	
Projection	Lambert azimuthal	
Scale	1:45 000 000	
Geo map extent	25W — 90E	
Source data	FAO	
Background features	National borders	
Fertiliser consumption	REFERENCE:	Data set C.2
Agricultural land	HOLDING BODY:	FAO
	CONTACT NAME:	Mr Narain Pratap (Senior Officer, Statistics Division)
	CONTACT DETAILS:	pratap.narain@fao.org
	ACCESSIBILITY:	As for data set C.2
	CONTENTS:	Data categories are: total area, permanent crop, permanent pasture, non-arable and non-permanent land area, agricultural area, arable and permanent crops arable land.
	YEAR:	Data for EU-15, EFTA-3, Albania, Bulgaria, Cyprus, Hungary, Malta, Poland, Romania and Turkey for 1960–98. Bosnia-Herzegovina, Estonia, FYROM, Latvia, Lithuania and Slovenia: 1992–98. Czech Republic and Slovakia: 1993–98. All other NIS countries: 1992–98.
	FORMAT:	CSV file

Transport

Transport network

FM.1

Message	To show the density of the transport network for the region	
Projection	Lambert azimuthal	
Scale	1:45 000 000	
Geo map extent	45W — 90E	
Source data	(1) E-Road Census, UNECE; (2) Transport network, GISCO; (3) Bartholomew. Each data set presents the transport network for a different part of Europe.	
Background features	Capitals, national borders	
E-Road Census GIS	HOLDING BODY:	UNECE
	CONTACT NAME:	Mr Andre Sceia
	CONTACT DETAILS:	andre.sceia@unece.org
	ACCESSIBILITY:	Distributed on CD-ROM
	CONTENTS:	The CD-ROM contains statistical data and maps from 30 countries, prepared by the UNECE Transport Division on the basis provided by governments on road traffic and infrastructure parameters along the AGR network.
	YEAR:	1995
	FORMAT:	Data in Excel; shapafiles for ArcView
Trans-European transport network (TEN)	HOLDING BODY:	EEA
	CONTACT NAME:	Ms Sheila Cryan
	CONTACT DETAILS:	sheila.cryan@eea.eu.int
	ACCESSIBILITY:	Distributed on CD-ROM
	CONTENTS:	The road layer of the GISCO Reference database contains three data sets: pan-Europe road infrastructure (without former USSR) version 2; pan-Europe road infrastructure (without former USSR) version 1 (still kept in the reference database because it is the source for the trans-European network programme (TEN) road networks); and the multi-modal (TEN) to applicant countries through the transport infrastructure needs assessment process (TINA).
	YEAR:	1998
Bartholomew digital map data; Roads, railways and ferry roads	FORMAT:	ArcInfo data
	HOLDING BODY:	Bartholomew Ltd (HarperCollinsPublishing)
	CONTACT NAME:	Mr Alastair Protheroe
	CONTACT DETAILS:	alastair.protheroe@harpercollins.co.uk
	ACCESSIBILITY:	Commercial CD-ROM (price about GBP 900)
	CONTENTS:	Bartholomew world 1:10 000 000 vector database. Layers: (ADM) administrative; (CON) contours, bathymetry; (DRA) drainage: permanent, temporary; (DES) deserts: includes lava flows; (HTS) heights, spot heights/depths, passes; (NPK) national parks; (PTS) road junctions and numbers, airports, places of interest; (LNS) escarpments, walls; (RDS) roads; (RFS) railways, ferry routes; (URB) major built-up-areas; (WAT) lakes, lagoons, marshes, glaciers, etc.; (TOWN) town stamps; (TEXT) point and lines of all non-town features; (Dratext) lines with river names; and (NUN) nunataks: land above the ice sheet in Antarctica. All features are uniquely coded. The graphic data are held in ArcInfo and all the non-graphic feature attribute data are held in Oracle (added and assigned a unique identifier as graphic feature is captured). All areas have international boundaries and some countries have first order administrative divisions.
FORMAT:	ArcInfo data	

Tourism

GM.1 Change in tourist arrivals

Message	To show the change in tourist arrivals in the last 10 years	
Projection	Lambert azimuthal	
Scale	1:45 000 000	
Geo map extent	25W — 90E	
Source data	World Trade Organisation (WTO)	
Description	Map should show the change in tourist arrivals calculated with the use of data available for two years: 1990 and 2000	
Background features	National borders	
Tourist arrivals	REFERENCE:	Data set G.2: Number of tourist arrivals

Climate change

3M.1 Change in mean annual temperature, 1856–2000

Message	To show the change in mean annual temperature between two 30-year time periods	
Projection	Lambert azimuthal	
Scale	1:60 000 000	
Geo map extent	60W — 90E	
Source data	Data from CRU/Hadley Centre (2001)	
Background features	National borders	
Change in mean annual temperature	HOLDING BODY:	Climate Research Unit, University of East Anglia, and Hadley Centre, UK
	CONTACT NAME:	Mr Mike Hulme (m.hulme@uea.ac.uk) or Mr Phil Jones (p.jones@uea.ac.uk) Contact at ETC/Air and Climate Change: Mr Tinus Pulles (to acquire data set from CRU)
	CONTACT DETAILS:	http://www.cru.uea.ac.uk/cru/info/warming/ http://www.cru.uea.ac.uk/cru/climon/data/tgrid/
	ACCESSIBILITY:	Free access by Internet
	CONTENTS:	Combined global land and marine surface annual mean temperature record from 1856 to 2000. The data are the variations (deviations) from the 30-year mean temperature (1961–90).
	YEAR:	Up to 2000 or possibly 2001
	FORMAT:	ArInfo coverage

Stratospheric ozone depletion

Monthly means of total ozone for one month, 1980–98

4M.1

Message	To present the change in monthly means of total stratospheric ozone depletion for selected months in six selected years	
Projection	Orthographic	
Scale		
Geo map extent	Northern hemisphere	
Source data	NASA Goddard Space Flight Centre	
Background features		
Monthly means of total ozone	HOLDING BODY:	NASA Goddard Space Flight Centre
	CONTACT NAME:	ETC/Air and Climate Change (Mr Guus Velders to acquire data set from NASA/TOMS)
	CONTACT DETAILS:	http://toms.gsfc.nasa.gov/ozone/ozoneother.html
	ACCESSIBILITY:	Available online
	CONTENTS:	Data from the Total Ozone Mapping Spectrometer (TOMS) instruments. Monthly averages are merely the daily ozone values for an entire month divided by the number of days TOMS recorded data in that month. At least 20 days' data must be present to create a monthly average. Selection by the month and year of interest can be done.
	YEAR:	1978 up to present
	FORMAT:	ASCII

Air pollution

5M.1 Emission/deposition maps, 1999–2010 (resulting from ancillary benefits study)

Message	To show the spatial distribution of the effects of the 'what if' scenario of ancillary benefits of reaching Kyoto targets or to show the effects of implementation of the Gothenburg CLRTAP protocol	
Projection	Lambert azimuthal	
Scale		
Geo map extent		
Source data	Norwegian Institute for Air Research (NILU)	
Background features	National borders	
	HOLDING BODY:	ETC/Air and Climate Change
	CONTACT NAME:	Mr Tinus Pulles
	CONTACT DETAILS:	
	ACCESSIBILITY:	Available online
	CONTENTS:	A 'what if' study, on the ancillary benefits for air pollutants and their abatement costs if Kyoto targets are fully implemented or a 'what if' study on the effects of the implementation of the Gothenburg CLRTAP protocol is expected to result in indicators on changes in emissions, population exposed to air pollutants, deposition of acidifying substances, and/or exceedance of critical loads for acidifying and eutrophying substances. Part of the data generated by the study will be suitable for presentation in map format. Data will be generated by the ETC/Air and Climate Change.
	YEAR:	1999 and the future year considered in the 'what if' study
	FORMAT:	

Production, use and dispersion of hazardous chemicals

Occurrence or deposition of hazardous substances over the European area

6M.1

Message	To show 'hot spots' of chemical pollution	
Projection	Lambert azimuthal	
Scale		
Geo map extent		
Source data	Meteorological Synthesising Centre-East (MSC-E), Moscow	
Background features	National borders	
Concentration, deposition and transboundary fluxes of hazardous substances <i>(NB: This is one possible data source for this map. Other possibilities will be investigated)</i>	HOLDING BODY:	MSC-E of EMEP
	CONTACT NAME:	Mr Alexey Ryaboshapko
	CONTACT DETAILS:	alexey.ryaboshapko@msceast.org
	ACCESSIBILITY:	Available online
	CONTENTS:	Data on concentrations, depositions and transboundary fluxes of cadmium, lead and mercury over Europe.
	YEAR:	1999 data — available September 2001
	FORMAT:	ASCII files

Concentrations of hazardous substances in the Mediterranean, Atlantic, Black Sea and Baltic Sea

6M.2

Message	To present the presence of hazardous substances — heavy metals and organics — in selected European seas	
Projection	Lambert azimuthal	
Scale	1:35 000 000	
Geo map extent	25W — 55E	
Background features	National borders	
Data on European marine environment	HOLDING BODY:	EEA
	CONTACT NAME:	Ms Anita Kuenitzer
	CONTACT DETAILS:	anita.kuenitzer@eea.eu.int
	CONTENTS:	On the basis of data collected within the framework of regional conventions/programmes such as the Oslo and Paris Conventions (OSPAR), the Convention on the Protection of the Marine Environment of the Baltic Sea Area represented by the Helsinki Commission (Helcom), and the Mediterranean action plan (MAP).
	YEAR:	2000
	FORMAT:	Excel spreadsheet

6M.3 Deposition of hazardous substances from air

Message	To present the results of modelling of selected persistent organic pollutants (POPs) by showing the concentrations and depositions	
Projection	Lambert azimuthal	
Scale		
Geo map extent		
Source data	Meteorological Synthesising Centre-East (MSC-E), Moscow	
Background features	National borders	
Persistent organic pollutants (POPs)	HOLDING BODY:	MSC-E of EMEP
	CONTACT NAME:	Mr Victor Shatalov
	CONTACT DETAILS:	victor.shatalov@msceast.org
	ACCESSIBILITY:	On request
	CONTENTS:	Results for selected pollutants (PCB, B(a)P and g - HCH). Calculations were carried out in the 150 x 150 km grid of the EMEP region for 1970–97 with preliminary model spin-up (1940–69). Emission estimates are adapted from the Popcycling-Baltic project (Pacyna et al., 1999). More detailed information is available in Shatalov et al. (2000). Maps of calculated air, soil, seawater and vegetation concentrations, as well as densities of total depositions, averaged over 1997.
	YEAR:	1997
FORMAT:	ASCII on request or maps in raster format	

Water stress (inland and marine)

Catchment areas

8M.1

Message	To show the catchment areas of rivers discussed in the report	
Projection	Lambert azimuthal	
Scale	1:45 000 000	
Geo map extent	45W — 90E	
Source data	Hydrography, GISCO	
Background features	National borders	
Watersheds (hydrography)	HOLDING BODY:	EEA
	CONTACT NAME:	Ms Sheila Cryan
	CONTACT DETAILS:	sheila.cryan@eea.eu.int
	ACCESSIBILITY:	Distributed on CD-ROM
	CONTENTS:	The 'watersheds' layer of the GISCO reference database contains two data sets: 1. The main European drainage basins on a 10 million scale: WSEU10M. 2. The main European drainage basins on a 3 million scale: WSEU3M.
	YEAR:	1998
FORMAT:	ArcInfo data	

Eutrophication in marine and coastal waters

8M.2

Message	To highlight hot spots in marine eutrophication	
Projection	Lambert azimuthal	
Scale	1:45 000 000	
Geo map extent	45W (depending on data available)	
Source data		
Background features	National borders	
	CONTENTS:	Map content has not been defined: can be concentrations of nitrate based on data set 8.13; or median chlorophyll concentrations (data to be collected in the same way as data set 8.13); or mean summer concentrations of chlorophyll based on satellite images, which need linking satellite measures with <i>in situ</i> measurements.
	CONTACT NAME:	ETC/Water

Oil pollution by shipping accidents

8M.3

Message	To show distribution of oil spills by shipping accidents	
Projection	Lambert azimuthal	
Scale	1:45 000 000	
Geo map extent	45W — 90E	
Source data	Data set 8.17	
Background features	National borders	
Oil spills	HOLDING BODY:	See data set 8.17
	YEAR:	1980–89, 1990–99
	FORMAT:	Excel spreadsheet

Soil degradation

9M.1 Soil sealing by urbanisation and infrastructure in Europe

Message	To show areas where soil sealing, due to urbanisation and construction of infrastructure, is high and where the greatest pressures are likely to occur	
Projection	Lambert azimuthal	
Scale	1:30 000 000	
Geo map extent	20W — 90E	
Source data	European Commission (Eurostat, Joint Research Centre); UN Population Division	
Background features	National borders	
Soil sealing	HOLDING BODY:	EEA
	CONTACT NAME:	Ms Anna Rita Gentile
	CONTACT DETAILS:	anna.rita.gentile@eea.eu.int
	ACCESSIBILITY:	
	CONTENTS:	Information presented in the report <i>Down to earth: Soil degradation and sustainable development in Europe</i> (EEA, 2000). Map presenting the probable problem areas of soil in Europe to be used as basic information.
	YEAR:	Change in years 1950–90
	FORMAT:	ArInfo data

9M.2 Soil compaction in Europe

No data yet identified for creation of this map

Soil contamination hot spots in Europe

9M.3

Message	To show location of zones with high probability of soil contamination (through heavy industry) and zones where actual soil contamination has been reported	
Projection	Lambert azimuthal	
Scale	1:30 000 000	
Geo map extent	20W — 90E	
Source data	For EU-15: Metal Bulletin Books (1994). For eastern Europe: ISRIC or Denisov et al., (1997); Mnatsakanian (1992).	
Background features	National borders	
Soil contamination	HOLDING BODY:	EEA
	CONTACT NAME:	Ms Anna Rita Gentile
	CONTACT DETAILS:	anna.rita.gentile@eea.eu.int
	ACCESSIBILITY:	The ISRIC database is distributed on CD-ROM (price: USD 40)
	CONTENTS:	Information collected and presented in the report <i>Down to earth: Soil degradation and sustainable development in Europe</i> (EEA, 2000). Due to the fact that there is no harmonised monitoring of local soil contamination in Europe and many countries do not yet have national inventories, data used for map production for the mentioned report should be used. Additional information from the Soveur project (ISRIC) should be used. The Soveur presents the soil degradation status and vulnerability assessment for central and eastern Europe (CEE). The CD-ROM contains information in the form of databases, maps and reports on soil, on the soil degradation status and gives a soil vulnerability assessment for 11 metals in 13 countries in CEE.
	YEAR:	
FORMAT:	ArcInfo data	

Biological and landscape diversity

11M.1 Internationally designated areas

Message	To show sites under protection within the framework of international nature and biodiversity conventions	
Projection	Lambert azimuthal	
Scale	1:35 000 000	
Geo map extent	25W — 55E	
Source data	ETC/NC	
Background features	National borders, major rivers	
Internationally designated areas	HOLDING BODY:	ETC/NC
	CONTACT NAME:	Ms Sophie Conde
	CONTACT DETAILS:	conde@cimrs1.mnhn.fr
	CONTENTS:	Types of designation included: 'Specially protected area' Barcelona Convention); 'European Nature Conservation Diploma area' (since 1999) (Council of Europe); 'European Nature Conservation Diploma area' (Category A) (Council of Europe); 'European Nature Conservation Diploma area' (Category B) (Council of Europe); 'European Nature Conservation Diploma area' (Category C) (Council of Europe); 'Biosphere reserve' (Unesco); 'Biogenetic reserve' (Council of Europe); 'World heritage site' (Unesco); 'Wetland of international importance' (Ramsar Convention); and 'Baltic Sea protected area' (BSPA) (Helsinki Convention).
	YEAR:	2000
	FORMAT:	Access database

11M.2 Types of nature protection policy by country

Message	To present the differences in environmental protection policy among countries	
Projection	Lambert azimuthal	
Scale	1:45 000 000	
Geo map extent	25W — 90E	
Source data	ETC/NC	
Background features	National borders	
Marinebase	HOLDING BODY:	EEA
	CONTACT NAME:	Ms Ulla Pinborg
	CONTACT DETAILS:	ulla.pinborg@eea.eu.int
	CONTENTS:	Methodology under discussion with the ETC/NC
	YEAR:	2000
	FORMAT:	

Annex 1 — Draft list of contents for the Kiev report

Introduction

The European environment ministers at their ‘Environment for Europe’ conference in Aarhus in 1998 asked the European Environment Agency (EEA) to produce, together with existing national and international networks, a report based on indicators for the next ministerial meeting in Kiev, in order to support decision-making. This will be the third pan-European report published by the EEA under this process ⁽¹⁾ and the Agency has accepted this task under its overall reporting strategy. The working title of the report is ‘The Kiev report’.

The European Environment Agency publishes regularly an indicator-based assessment for the EEA member countries, called ‘Environmental signals’. It is expected that this report series will play a major role in contributing to the yearly reporting on sustainable development to European Councils (meetings of the Heads of State or Government of EU countries) each spring. The production of the indicators for the ‘Environmental signals’ report will form the backbone of the indicator production for the Kiev report. Many of the existing indicators will thus be produced with an extended geographical coverage for the Kiev report, according to the available extra financing. Linking the Kiev report with the ‘Environmental signals’ production is expected to introduce some consistency in indicator reporting across Europe.

The EEA is cooperating with UNEP to maximise the efficiency of the production of the Kiev report on the one hand, and of the European part of UNEP’s GEO3 outlook report and UNECE’s input for the RIO+10 conference on the other. These reports differ, however, because they address different policy processes. The Kiev report is made specifically to support the ‘Environment for Europe’ process.

The ‘Environment for Europe’ process includes the development of UNECE conventions and is important for agenda setting for other meetings and activities, including those of the international financing institutions. At the time of writing, little is known about the agenda for the Kiev Conference (scheduled for spring 2003). Nevertheless, preparations for producing the Kiev report have had to be started already so as to be able to present it by the end of 2002 in time to play a role in the preparation of and lead-up to the conference.

The present document presents a proposal for the possible contents of the *Environmental signals 2002/Kiev* report. It is based on an earlier draft, which has been circulated for comments to all European UNECE countries (either through the national focal points of the EEA or directly through the UNECE Secretariat). The EEA would like to thank all those who contributed with comments. After discussion by the WGEM ⁽²⁾ and eventual modifications, the list of contents will be used as a starting point for preparing the Kiev report.

Geographical scope

The Kiev report will cover all European UNECE countries. That means all UNECE members excluding Canada, Israel and the United States.

Cooperation with other organisations

In the detailed list of contents, which is included below, reference is made to inputs of various international organisations and networks. Discussions have started with a number of organisations (e.g. WHO, UNEP, AMAP) on their contribution to the reporting process. As soon as the list of contents is finalised as a working basis, a wider circle of organisations will be

(1) Previous reports were: *Europe’s environment — The Dobris assessment* (1995, for the Sofia Conference) and *Europe’s environment — The second assessment* (1998, for the Aarhus Conference).

(2) The UNECE Working Group on Environmental Monitoring.

contacted to ensure a proper and efficient use of existing material (statistics, performance reviews, etc.) in the report.

Chapter overview

To answer the request of the Aarhus Conference for an indicator-based report to follow progress in the 'Environment for Europe' process, a few elements are important.

1. The chapters dealing with environmental issues will focus on the assessment of the implementation of international conventions, or (in the absence of international agreements) on the identification of progress in environmental management for each of the topics. These chapters will answer the general question on progress since the 1991 Dobris Castle Ministerial Conference on the European and national level. Where appropriate, comparisons will be made with the Dobris and second assessment reports.
2. With the growing interest in integration of environmental policies into sectoral and other policies, a number of sector chapters will be included. These should include the main information that is needed for a proper problem analysis in each of the sectors.
3. The main political event that will influence the socioeconomic sectors and the environment in the coming period will be the accession of a number of countries to the European Union. One of the recurring themes throughout all chapters will be this accession process and its effects on all countries in Europe.
4. An evaluation of the use of policy tools in environment and sector policies, and of progress during the last decade will serve to answer the questions 'what are commonly used tools and solutions' and 'where are the shortcomings' to help ministers coordinate future approaches.
5. As the Kiev report will be issued a few months after the RIO+10 conference, the assessment of policy progress mentioned under 4 will have to be written in the perspective of implementing the RIO+10 conclusions.

Compared with *Europe's environment — The second assessment*, the report will contain less text and more diagrams, thus giving it more the character of an indicator-based report. Although some background information cannot be fully avoided in a pan-European report, the number of diagrams/indicators giving background information will be limited: the focus will be on showing developments over time or identifying places/regions for possible priority action.

Draft list of contents for the Kiev report in detail

1. Introduction

Describes the 'Environment for Europe' process, and the role of indicator-based progress reporting. Includes a reading guide to the report, and details on country groupings. It contains a text box summarising the scenarios that have been used in UNEP's GEO3 outlook report and their environmental implications.

2. Developments in socioeconomic sectors

The general model for the sectoral chapters will be:

1. an overview of the environmental pressures caused by the sector (either as a text box or illustrated with one or two indicators);
2. the development of the sector (changes in size and structure);
3. the use of specific policy tools to change in a more sustainable direction.

A. Energy

Includes a text box with environmental impacts of the energy sector.

Indicators:

- Energy-related emissions of carbon dioxide, sulphur dioxide and nitrogen oxides
- Nuclear waste generation

Analysis, first paragraph: *How is the energy sector developing?*

- a) Energy consumption: Do we consume more energy? Why? Of what type? (Sector analysis).
- b) Choice of fuels: How is the dependence on fossil fuels developing? What is the role of local (poorer quality coal, peat) fuels in relation to increased energy prices? What is the role of nuclear energy? What is the state of affairs in closing and upgrading nuclear power plants?

Analysis, second paragraph: *Energy efficiency*

How has the energy efficiency of final energy users/sectors and of electricity generation and other energy transformation industry developed? Give attention to combined heat and power generation. What has been the progress since Aarhus? What is the potential for energy-saving measures per country?

Analysis, third paragraph: *Renewables*

Western Europe: What is the distance to target for renewables? What is the speed of uptake of 'high-profile' renewable energy (mainly wind and solar) in the various countries? (Success story box).

Eastern Europe: What has been the progress in increasing the share of renewable energy? What are the (economic) potentials?

(Price signals in Chapter 12)

Presented indicators:

- Total primary energy supply by fuel (needed for analysis: total primary energy supply by sector)
- Total primary energy supply versus GDP (national energy efficiency)
- Power plant energy efficiency
- Percentage of energy supply from renewable sources

B. Industry

Includes a text box with environmental impacts of the industry sector.

Analysis: Restructuring of the industry sector in eastern and western Europe has delivered environmental advantages. What are the elements of an industry policy that builds on and extends these achievements? What have been successful instruments so far?

Presented indicators:

- Index of industrial production
- Emissions of major air pollutants by industry

C. Agriculture

Includes a text box with environmental impacts of the agricultural sector.

Analysis, first paragraph: *In what direction is European agriculture developing?*

Pan-European, but split up in regions

Effects of privatisation (farm size, amounts and quality of animals); intensification (farm size, herd size). Possible effects of enlargement of the EU.

Analysis, second paragraph: *Relations with the environment:*

Pan-European, but split up into regions

Developments in:

- environmental pollution (nutrients, pesticides, ammonia and greenhouse gas emissions);
 - use of resources (water use);
 - maintenance of the landscape: agricultural habitats;
- all linked with the possible effects of EU enlargement.

Presented indicators:

- Number of livestock
- Fertiliser consumption
- Consumption of pesticides

D. Forestry

Analysis: *Effects of transition on the forestry sector*

Many of the CEECs and NIS have more forest than required for domestic demand. Export of timber and timber products can be important support to the foreign trade balance. The development of private forestry might lead to a growing felling intensity.

Presented indicators:

- Total felling (and if possible as % of annual increment)

E. Fisheries and mariculture

Includes a text box with environmental impacts of the fisheries and aquaculture/mariculture sector.

Analysis: *Overfishing*

In *Europe's environment — The second assessment*, overfishing of several species in several seas was reported. Progress in taking measures and the current status with regard to overfishing will need to be reported. Box on mariculture and link with fisheries through feedstock. Also give attention to the situation in large inland water bodies (box).

Presented indicators (to be defined further):

- Fishing effort: tonnage of the fishing fleet (by main target stock?)
- Spawning stock and landings or catches

F. Transport

Analysis: Trends in western Europe show that the growing amount of transport is outweighing improvements in environmental performance of the sector (engine efficiency, etc.). Greater policy impetus is required to reduce the coupling between transport demand and economic growth.

In central and eastern Europe, the increased transport demand following the accession process, together with increased trade movements and GDP growth, raises concern (explosion of the volume of transport, infrastructure building and modal shift towards road transport). Do the countries have the capacity to manage mobility in an environment-friendly way and, at the same time, improve access for people to services, education, goods and work? Possibly include a text box on the pan-European transport network (TEN + TINA) and its role in shaping Europe in 10 to 20 years time. Role of investment decisions by international financing institutes.

While at present transportation systems have overall less adverse implications for the environment in these countries (relation private/public transport), the twofold issue of modernisation of public transport systems and rapid development of private transport (cars) and goods transport is at stake. Such an analysis is relevant, in particular, with regard to CO₂ emissions (Kyoto target), air pollutant emissions and human health (CLRTAP and EU targets) and nature (fragmentation and other impacts).

A regional comparison (western/central (accession)/eastern) will be run on the following basis.

1. Is the environmental performance of the transport sector improving?

Indicators: text box and air and greenhouse gas emissions from transport

2. Are we getting better at managing transport demand and improving the modal split?

Indicators:

- Passenger transport by mode
 - Freight transport by mode
3. Are spatial and transport planning becoming better coordinated so as to match transport demand to the needs of access?

Indicator:

- Number of passenger cars (and box on accessibility)
4. Are we moving towards a better-balanced intermodal transport system?

Indicator:

- Investment in infrastructure
5. Are we moving towards a fairer and more efficient pricing system which ensures that external costs are recovered? (See also Chapter 14)

Indicator:

- Transport fuel prices (only scattered data available in eastern Europe)
6. How rapidly are improved technologies being implemented?

Indicator:

- Share of cars with catalytic converters, uptake of unleaded petrol, maybe (energy) efficiency indicator

G. Tourism

Identification of areas with a high growth in tourism, and initiatives towards more sustainable tourism (including their success). Link with the transport chapter regarding tourism-related transport

Presented indicator:

- International tourist arrivals, by means of transport

REQUIRED for the sectoral chapter: Data collection, state-of-action and assessment NIS and CEE statistics.

*Environmental issues***3. Climate change**

Analysis, first paragraph: *Signs of climate change*

What is the direction of the measurable signs of climate change? The policy relevance of this question is because the appreciation of signs of climate change reflects in the perceived urgency of preparing and implementing adaptation measures, ratification of the Kyoto Protocol, agreement on reduction targets beyond the Kyoto Protocol (after 2012) and taking greenhouse gas emission reduction measures.

The analysis will be based upon finalised and ongoing research activities including the European climate change assessment research project (Acacia, published in 2000), the Arctic climate impact assessment (ACIA, expected in 2002), the European climate assessment (Eumetnet, publication in mid-2001) and the most recent IPCC assessment of future climate change trends (up to 2100) in its third assessment report (reports from Working Groups 1, 2 and 3 published in early 2001, final full report expected mid-2001).

Indicators:

- European average temperature, 1860–2000 (+ projected 2100)
- European precipitation, 1860–2000 (north–south/summer–winter)
- Rise in sea level past trend and projected to 2100
- Sea ice and glaciers
- evt. Regional indicators for signs of climate change (ecosystems)
- evt. Regional indicators for impacts of climate change (projected to 2100 — agriculture, water resources, etc. Link with the chapter on natural hazards)

Analysis, second paragraph: *Progress in the implementation of the Kyoto targets and mechanisms*

Western Europe: Are the current national policies sufficient to reach the Kyoto targets or even go beyond them? By 2001, the EU climate change programme will be well under way (and the Kyoto Protocol is still expected to be ratified in 2002), with better information available on common and coordinated policies and measures at EU level, the avoidance/abatement costs, enabling the following question to be answered: How much will the individual sectors contribute to emission reductions — detailed analysis of reduction measures taken per sector — and what is the potential of future reduction measures and what will be their costs?

And related to this: How much could the trade in emissions of the EU and the individual countries possibly be, in particular with NIS countries (important issue of CAP on trading and trading of NIS ‘hot air’)?

Indicators (western Europe):

- Emissions of greenhouse gases with respect to Kyoto targets
- Emissions of individual greenhouse gases by sector projected with current and pipeline policies (outlook to 2010 and 2020, including estimation of EU Member State use of the Kyoto mechanisms)
- Cost estimates for policies and measures for the EU for the baseline outlook (no additional measures) and cost-effective reduction potential of additional measures

Eastern Europe: What has been and what will be the effect of economic development on greenhouse gas emissions? What has been the effect and what is the scope for abatement measures? What is the scope for the use of Kyoto mechanisms, and what will this mean for the total emissions of GHGs of both eastern and western Europe (how important is the ‘hot air issue’)?

Indicators (eastern Europe):

- Total emissions of greenhouse gases compared with target
- Emissions of individual greenhouse gases by sector, outlook to 2010 and 2020 for EU accession countries with current and pipeline policies
- Cost estimates for policies and measures for the baseline outlook (no additional measures) and cost-effective reduction potential of additional measures

Pan-European ‘what if’ study: What would implementation of the Kyoto Protocol targets mean for the emissions of other air pollutants and their abatement costs (‘ancillary benefits’ study).

Analysis, third paragraph: *Greenhouse gas sinks*

If the decision is taken at the extension of COP6 to take sinks (forests and possibly also soils) into account, a pan-European analysis could be envisaged on the use of CDM and/or joint implementation for sink enhancement activities (forestry, soil measures), taking into account the 2000 IPCC special report on sinks (land-use change and forestry), ensuring that biodiversity aspects are properly addressed.

Indicators: Not yet defined

REQUIRED for the climate change chapter:

- Analysis of existing information (IPPC TAR, Acacia, ACIA, ECA/Eumetnet) on climate change indicators on the pan-European scale. Exploitation of European Commission (Environment DG) and ECCP (European climate change programme) studies on costs of GHG abatement.
- Exploitation of existing outlooks for greenhouse gas emissions (ETC/IIASA/NTUA report; ShAIR scenario).
- Additional ‘what if’ study: What would implementation of the Kyoto Protocol targets mean for the emissions and abatement costs of other air pollutants?
- Additional study on sustainable carbon sinks potential in Europe, ensuring that biodiversity aspects are properly addressed.

4. Stratospheric ozone depletion

Analysis: *Progress in the implementation of the Montreal Protocol*

Are the east European countries still following the same reduction path as the western countries? Is special action needed?

The next UNEP assessment (ready in 2002) on the effects of depletion of the ozone layer could be used to provide a policy summary update on developments in the ozone layer and its impacts.

Indicators:

- Consumption of key ozone-depleting substances, 1990–2000
- Selection of effect/impact indicators taken from the UNEP assessment

REQUIRED for the ozone-depletion chapter: Data collection and assessment.

5. Air pollution

Analysis, first paragraph: *Progress in the implementation of the CLRTAP protocols: reduction of air pollutant emissions (acidification, tropospheric ozone, PM)*

Are the current national policies sufficient to reach the UNECE/CLRTAP and (proposed) EU targets or even go beyond them? What costs of abatement measures have been made in the past years and what are the expected costs of reaching the 2010 CLRTAP targets? Can the cost efficiency be improved by joint implementation or emission trading of sulphur dioxide and nitrogen oxides? See also the proposed pan-European ‘what if’ ancillary benefits study (under Chapter 3 ‘Climate change’).

Indicators:

- Emissions of SO₂, NO_x, NH₃, NMVOCs, PM10 in total, by sector, 1990–2010–2020, compared with 2010 targets, per country
- Cost ranges of abatement measures (per country, group of countries)
- Outcome indicators of the ‘what if’ ancillary benefits study (see under Chapter 3 ‘Climate change’)

Analysis, second paragraph: *Urban air quality*

What are the impacts of poor urban air quality on the European population, and how is it developing? Link with the topic traffic/environment/health brought forward from the London Conference.

What have been successful measures in the reduction of standard exceedances in European cities? A number of studies for respectively sulphur dioxide, nitrogen oxides, ozone, particulate matter.

Indicator:

- Exceedances/reductions in air quality exceedances (precise indicators to be selected; 1990–2010–2020)

REQUIRED for the air pollution chapter:

- Exploitation of existing outlook (ETC report: ShAIR scenario and UNECE/CLRTAP and EU/CAFÉ studies, especially on particulates, expected in 2001–02).
- Study by the IIASA (in UNECE/CLRTAP and CAFÉ) comparing costs made and expected.
- Study together with the WHO to develop exposure indicators and to make an impact analysis.
- Study on successful management on local, national and international level in combating urban air pollution.

6. Production, use and dispersion of hazardous chemicals

With the limited availability of pan-European data on chemicals, this chapter can only illustrate the scale of chemical use in Europe, give an overview of recent findings on pathways and the effects of chemicals in the environment on human health and provide an overview of recent policy initiatives in the EU and the other countries.

Analysis, first paragraph: *'Chemicalisation' of society*

Gives the development in production, use and import of hazardous chemicals, and analysis of the development of its components. Includes an update of information on chemicals in the environment and human health. Discusses the use in policies of 'maximum permissible levels'. Gives an overview of policy initiatives to arrive at lists of chemicals of which use is to be abolished or thoroughly controlled.

Analysis, second paragraph: *Pathways*

Contains identification of major problem areas in Europe with accumulation or high concentrations of hazardous chemicals (heavy metals, POPs, maybe pesticides in general). Gives special attention to the CLRTAP 1998 Aarhus POPs Protocol and the POPs Convention: reports on the status in reduction of emissions of dioxins, furans, PAHs and HCBs below the 1990 level.

Indicators:

- Production and import of hazardous chemicals (maybe focused on POPs)
- Maps on the occurrence in the environment or in organisms, or deposition from the air of hazardous substances (maybe focused on POPs). Maps of marine areas (Mediterranean, Atlantic, Baltic Sea, Black Sea) with concentrations of hazardous substances in marine organisms or marine and coastal waters

REQUIRED for the chemicals chapter:

- Improvement of the data for the chemicals production indicator. Extension of data collection to more countries. This part is highly dependent on improved data collection and cooperation with the chemical industry. It is expected that the work on the EU headline indicator will have progressed somewhat by the end of 2001.
- Specific study and data collection on concentrations of hazardous chemicals. (Some pan-European information on emissions to air and transboundary air pollution and deposition pathways can be obtained from the CLRTAP/EMEP/MSCE-East.) The ETC/Water will explore using marine data. AMAP data on pathways. Although several overviews exist on (local and national) monitoring programmes of chemicals in environmental media or organisms, data have not been put together and made comparable.
- WHO input on chemicals and health.

7. Waste generation and management

Analysis, first paragraph: *Decrease in the direct material inputs of economies*

As a growing number of countries will have calculated a time series of their direct material input (DMI) by 2001 a first analysis of progress in overall dematerialisation can be tried as an entry into the waste assessment. The analysis should shed some light on the development of material inputs as influenced by structural changes in the economy (moving heavy industries to developing countries?), and maybe even by efficiency improvements in the countries concerned. A first analysis should be given on the link between material flow indicators like DMI and waste generation.

Indicator:

- DMI for selected countries

Analysis, second paragraph: *Waste generation*

Western Europe: Is de-linking of waste generation from economic activity occurring and what is causing it to happen? Special focus can be given to recycling performance of countries. Is the extended producer responsibility as applied in the EU (end-of-life vehicles, electronic waste) starting to have effect?

Indicators:

- Municipal waste generation versus household expenditure

- Industrial waste generation versus industrial production. Selected country graphs on waste development split up into various causal factors
- Overview of total waste managed/total waste recovered–recycled or percentage of recycled waste as a share of total consumption of glass/paper/construction waste/tires/plastic

Eastern Europe: How much waste is generated and what happens to it?

Indicators:

- Generation and treatment of municipal, industrial (mining), and agricultural waste
- Disposal facilities and their capacities

Analysis, third paragraph: *Hazardous waste management*

What is happening with hazardous waste? Include an update based on best available data regarding generation, import/export and treatment. Give attention to management options in small countries. Include nuclear waste.

Indicators:

- Generation of hazardous waste

Analysis, fourth paragraph: *Progress in the establishment of waste management plans*

An overview can be given of the existence of waste management planning and the available waste management plans can be assessed using simple quality criteria, such as: target setting, monitoring requirements, and mechanisms to implement and adjust the plan.

REQUIRED for the waste chapter: Extension of ETC/W collection of best available data to CEE and NIS. Study of trends in treatment and capacity problems.

8. Water stress (inland and marine)

Whereas previous reports dealt with inland waters and seas in separate chapters, we seem to be better able now to provide an integrated picture of developments in catchment areas, linked with the seas as the final destination of many pollutants.

The chapter will start with a general overview of the state and pressures in large (sometimes transboundary) catchment areas. The aim is to clarify the magnitude of problems in each of these and thereby identify areas for specific attention. A preliminary selection of catchment areas that will be taken into account is: Volga, Danube, Dniepr, Severneya Dwina, Pechora, Rhine, Oder, Tajo, Po, Nestos, Ebro, Denmark (as an example of a 'river basin district' in terms of EU regulations). The links between developments in river basins and the seas are illustrated by a study on eutrophication. The chapter continues with an overview of problems and problem areas where the state of the marine environment is taken as the starting point.

Analysis, first paragraph: *Trends in water stress on a regional basis*

Approaches to water issues in the EU show that the level of catchment areas is more appropriate for dealing with monitoring, analysis and management activities and actions. It is therefore proposed to develop this chapter around a comparative assessment of water-related environmental problems by major pan-European catchment areas/drainage basins of regional seas, i.e. to analyse quantity and quality issues of freshwater and coastal/marine waters under a common framework of interactions.

The magnitude of problems and their causes over the catchment areas will steer the scope of the assessment, e.g. water availability in southern Europe (including southern NIS), eutrophication/acidification in northern and central seas/catchments, pollution in industrial catchment areas, etc. Attention needs to be given to the effect of water sector reforms and other recent policy measures in the NIS.

Indicators (might vary per catchment area or group of catchment areas):

- Exploitation index/consumption index of water quantity
- Nitrogen, phosphorus and organic matter in rivers (by catchment size and type)
- Nitrogen and phosphorus in lakes (by catchment size and type)

- Overall river water quality index: biological and physico-chemical classification of river lengths less than 'good' in national classifications
- Pesticides in groundwater and surface water
- Nitrate in groundwater
- Radionuclides in groundwater
- Urban wastewater treatment capacity
- Drinking water quality

Analysis, second paragraph: *Link between eutrophication on land and sea*

Although improvements have been achieved, nutrient loads to the sea are locally still too high. The combination of data (maps) of the eutrophication situation in inland waters and in the sea will highlight the areas for urgent action, linking the need for catchment-based action with expected improvements in marine quality.

Indicators:

- Nutrient inputs to sea
- Nutrient concentrations in sea and coastal waters
- Eutrophication maps

Analysis, third paragraph: *Hot spots in marine water quality*

Activities following the marine conventions have brought improvements to marine water quality in many European seas. This chapter will identify the remaining problems/hot spots: eutrophication, oil exploration/exploitation and tanker transport, and hazardous substances, including radionuclides. A matrix might be presented showing the development of various problems in various seas. Note that overfishing is dealt with in the chapter on fisheries.

Indicators:

- Bathing water quality
- Input and concentrations of hazardous substances in marine waters (see also under Chapter 6 'Production, use and dispersion of hazardous chemicals', the focus here might be more on temporal development)
- Oil pollution from maritime transport and offshore activities (see also accidental oil spills in Chapter 10 'Technological and natural hazards')

Analysis, fourth paragraph: *Progress in the implementation of the UNECE Water Convention*

What has been the progress in the establishment of targets and action plans? Will it be sufficient to reach the aims of the convention? What are the problems of countries not conforming with the requirements of the convention?

Indicators:

- Table: Implementation of programmes of measures for shared waters
- Table: Implementation of monitoring requirements for shared waters

REQUIRED for the water chapter: Additional data collection and updates. Study and map analysis on eutrophication.

9. Soil degradation

In the introduction, various aspects of soil degradation will be mentioned: soil erosion problems, soil sealing, disappearance of peatbogs, desertification, soil quality under agricultural land, etc. This overview should show the multiple dimensions of the problem and should also give an overview of recent international policy actions taken in each of the areas.

Indicators:

- Estimate of soil loss per year by erosion from agricultural land for relevant countries
- Map of soil sealing (in the sense of covering of soil by urbanisation, infrastructure)

Analysis, first paragraph: *Salinisation in the southern Russian Federation, central Asia and the southern Caucasus*

Salinisation of arable land has occurred in large areas (e.g. in Azerbaijan, Kazakhstan,

Turkmenistan and Uzbekistan). Recovery is being undertaken, and the analysis could focus on the possibilities to build drainage systems for salinised land, comparing the area salinised, with the possible area for which recovery projects are ongoing and the area that could be recovered. It might be possible to determine an estimation of recovery costs.

Indicators:

- Area of land affected by salinisation
- Table: Restoration projects undertaken/planned

Analysis, second paragraph: *Aral Sea follow-up problems*

One of the consequences of the drying-out of the Aral Sea is wind erosion of the former sea bottom, which endangers surrounding agricultural land, as the deposit contains salt. The analysis should focus on the actions necessary to prevent wind erosion. Other problems (desertification, biodiversity changes) will be listed. Comparable situations in other catchment areas (e.g. Lake Sevan in Armenia) should be identified.

Indicators:

- Change in water balance of the Aral Sea region
- Area with problems due to wind erosion and salt deposition
- Table: Wind erosion prevention projects

Analysis, third paragraph: *Soil compaction*

Intensive heavily mechanised agricultural practices have resulted in compaction of soil top layers in large areas of eastern Europe. An inventory of 'sealed' surface based on existing studies carried out by national and international organisations should provide information on the present state, impact on soil quality and hydrological conditions. An overview might be given on the state of rehabilitation plans.

Indicator:

- Map showing extension of problem

Analysis, fourth paragraph: *Soil contamination*

The paragraph should give the progress in the clean-up of contaminated sites and an estimate of remaining clean-up costs. A rough comparison of the situation in major industrial/urban areas can be made to identify the main areas of concern. It could include a box on diffuse contamination by heavy industries, or on problems of large derelict industrial areas.

Indicators:

- Map of soil contamination hot spots
- Estimated/number of (potentially) contaminated sites
- Clean-up projects/costs

REQUIRED for the soil chapter:

- Specific studies; inventory ETC/Terrestrial Environment (soil specialists) in CEE and NIS.
- UNEP input on specific problems in central Asia and the Caucasian States, including the influence of environmental degradation on poverty and human health.
- EC-JRC contribution for soil loss by erosion.

10. Technological and natural hazards

Analysis, first paragraph: *Technological hazards*

What has been the effect of prevention programmes and measures on technological hazards?

Where are main the problems?

- Industrial accidents.
- Nuclear incidents (link with second paragraph below, link with energy).
- Oil spills and other transport accidents.

Indicators:

- Number of industrial accidents
- Number of nuclear incidents
- Tanker oil spills

Include somewhere in this chapter a box on environmental consequences of recent armed conflicts in Europe.

Analysis, second paragraph: *Radionuclides*

Regarding radionuclides, the greatest threats to human health and the environment are associated with the potential for accidents in the civilian and nuclear sectors. Hence, the assessment will need to give an overview of the distribution of nuclear power stations and fuel-processing plants, storage of nuclear weapons, places for decommissioning nuclear submarines and spent nuclear fuel dumping sites and their relative risk. Since Chernobyl, emergency preparedness has increased; an overview of recent outcomes of pathway studies should give some recommendations for population protection actions in case of an accident. The report should also give an overview of places with a direct risk to ecosystems and human health (large-scale polluted areas, uncontained sources) as a basis for focusing remediation actions.

The assessment will be built on the 2002 nuclear assessment by AMAP, using indicators from that assessment.

Indicators (to be further defined):

- Map of nuclear installations, storage of nuclear weapons, places for decommissioning nuclear submarines, storage/dumps for spent nuclear fuel
- (Arctic) examples of doses to members of population
- Map of polluted areas/uncontained sources

Analysis, third paragraph: *Natural extreme events*

Storms, floods and droughts are the most common natural disasters in Europe. An increase in these events has been noticed which possibly is linked with human activities. Links with the various chapters can be made.

Indicator:

- Number of natural disasters, excluding earthquakes and volcanic activity

REQUIRED for the technological hazards part: Data collection: NIS and CEE industrial accidents. Summary of the BTF/UNEP report on Yugoslavia to be completed with other information on recent conflicts. REQUIRED for the radionuclides part: Extension of the AMAP assessment to cover the whole of Europe.

11. Biological and landscape diversity

There are two main policy issues in nature and biodiversity conservation on the pan-European level: (1) enhancing the protection of 'high-quality' natural areas; (2) safeguarding 'ordinary' biodiversity by integrating biodiversity concerns into agriculture, transport and physical planning policies.

Analysis, first paragraph: *State and protection of 'high-quality' habitats*

The paragraph includes an assessment of the success of protection policies, using as a main indicator the development of areas protected under Natura 2000, Emerald and other initiatives. It gives attention to differences in speed between countries and the question of how far we are establishing a European ecological network with these protected areas. It should include an identification of neglected areas/habitats.

Indicators:

- Protected area (IUCN categories)
- Number of habitats and species protected under EU directives/Berne Convention with a better/worse status (in terms of population and distribution), and causes for these changes in status

Analysis, second paragraph: *Safeguarding 'ordinary' nature*

The paragraph mainly contains a listing of developments mentioned in the sectoral chapters that threaten 'ordinary' nature, or biodiversity as such, and landscape features. It gives special attention to land use. It will possibly include a text box with attention being paid to the

invasion of alien species. It ends with a list of measures that could be part of sector strategies aiming at environmental integration.

Both analyses might be supported by information on wetlands, permanent grasslands, and forests (focus on natural and old forests), covering: remaining area, distribution, protection status and the pressures upon these.

REQUIRED for the biodiversity chapter: Exploitation of the EEA biodiversity report. Possible cooperation with the Council of Europe and UNEP. Additional data collection and updates.

12. Progress in managing the environment and sustainable development

The 1995 environmental programme for Europe stated as recommendations: ‘to ensure the integration of environmental considerations into all decision-making processes, taking into account environmental costs, benefits and risks; to apply the precautionary and “polluter pays” principles; to promote partnerships between government, parliaments, business and NGOs’.

This final chapter aims to give an assessment of the progress made in using policy tools to achieve more environmentally sustainable development.

Analysis, first paragraph: *Integration of environmental considerations into other policies*

Drawing, among others, on the lessons of the so-called ‘Cardiff’ process in the EU, a general assessment will be given of progress in the integration of environment into other policies, including also non-EU countries. Some specific instruments will be highlighted in the following paragraphs.

Indicator:

- Qualitative table: Progress in policy integration

Analysis, second paragraph: *Price signals (economic integration)*

How far do prices reflect total costs, including external costs? What is the role of subsidies and other State aid in energy supply and energy management? Are there still conflicts between subsidy and other policies?

Indicators:

- Environmentally unfavourable subsidies/State aid
- Prices and externalities (examples from agriculture and transport)

Analysis, third paragraph: *Environmental impact assessment (management integration)*

One of the tools which takes the environment into account is environmental impact assessment (EIA) for projects and policies. Many countries have acquired a wealth of experience in EIA. This section will summarise progress in the application of the tool and, above all, give some best-practice/best-experience conclusions based on existing evaluations.

Indicator:

- Appliance of EIA/SIA in Europe

Analysis, fourth paragraph: *Urban planning (institutional integration/management integration)*

Contrary to previous reports, no attempt will be made to give an overview of the state of the environment in European cities. (A link can be given to relevant web resources.) The main policy issue on the national level is the use of institutional and planning mechanisms to achieve an integrated and sustainable development of cities. This section will need to summarise experiences in integrated urban planning addressing planning tools, partnerships (*inter alia* Agenda 21 initiatives), and management issues. It should aim to bring out the conclusion of the various ‘sustainable towns’ activities for national authorities.

Indicator: To be defined; could be an overview of successful/not successful planning tools

Analysis, fifth paragraph: *Coastal zone management (spatial planning/institutional integration)*
Coastal zone management is taken as an example for solving problems in specific areas with conflicting interests and high environmental values. Similar problems are encountered in, *inter alia*, mountainous areas and zones with traditional agricultural landscapes. A comparative regional assessment of coastal zones is foreseen. Maybe a box on temporal development can be included. The comparison should identify the major pressures on coastal ecosystems and areas where carrying capacities to sustain the economic activities are reaching their limit or are already overused. A first evaluation of the development of integrated coastal zone management will be explored to highlight the role of physical planning, institutional integration and other tools.

Indicators:

- Qualitative indicator on pressures on coastal zones
- Progress in integrated coastal zone management (ICZM)

Additionally, a box might be included on business environmental reporting.

NB: Although information and public participation are important policy tools as well, it is proposed that the Kiev report will not deal with the follow-up to the Aarhus Convention on Information, Public Participation and Access to Justice as it is expected that a progress report on this convention will be prepared separately.

REQUIRED for the integration chapter:

- Update of subsidies information.
- Literature study best experiences in EIA/SIA.
- Study on urban planning.
- Study gathering dispersed information on coastal zones.

Information needs

The chapter provides a short overview of the information that would be needed for improving the assessments in the Kiev report.

Annex —Country comparison tables

In an annex, country comparisons will be given for main variables, such as:

- Carbon dioxide emissions per capita, % change, 1990–2000
- Nitrogen oxide emissions per capita, % change, 1990–2000
- Sulphur dioxide emissions per capita, % change, 1990–2000

Annex — International agreements

A table will be included showing the status of ratification for the main international agreements.

Planning the Kiev report

	Period or deadline
First proposal for the table of contents	September 2000 (discussed in the WGEM)
Consultation with stakeholders on the contents	January–April 2001
Processing of comments and draft table of contents	March/April 2001
Produce draft guideline for data collection	March–June 2001
Establish data warehouse for central storage of data	June–October 2001
Expert consultation on the data required for the report	May–July 2001
First UNECE WGEM meeting	20 and 21 September 2001
Data collection	July 2001–March 2002
Perform the analysis and produce indicator fact sheets	February 2001–April 2002
Review of the first analyses	May 2002
Planned second UNECE WGEM meeting	27 February–1 March 2002
Write draft report	June 2002–July 2002
Review of the draft report	August 2002–September 2002
DG planned third UNECE WGEM meeting	28–30 August 2002
Produce final report	October 2002–November 2002
Printed report available	January 2003
KIEV Conference	21–23 May 2003

List of abbreviations and acronyms

AC	Accession country
CD-ROM	Compact disk with read-only memory
CEECs	Central and east European countries
CLRTAP	Convention on Long-Range Transboundary Air Pollution
ECMT	European Conference of Ministers for Transport
Ecu	European currency unit, now replaced by the euro
EEA	European Economic Area
EEA	European Environment Agency
EFTA	European Free Trade Association
ETC/ACC	European Topic Centre on Air and Climate Change
ETC/TE	European Topic Centre on Terrestrial Environment
ETC/W	European Topic Centre on Water
ETC/WMF	European Topic Centre on Waste and Material Flows
ESA	European system of integrated economic accounts
EU	European Union
Eurostat	Statistical Office of the European Communities
GISCO	Geographic information system for the Commission
IEA	International Energy Agency
IMF	International Monetary Fund
NACE	General industrial classification of economic activities within the European Communities (Eurostat)
New Cronos	General statistical database at Eurostat
NUTS	Nomenclature of territorial units for statistics
Phare	Community programme for assistance for economic restructuring in the countries of central Europe
PPPs	Purchasing power parities
SoE(R)	State of the environment (report)
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme