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COMMITTEE ON ENVIRONMENTAL POLICY

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**THE KIEV REPORT:
AN INDICATOR-BASED ASSESSMENT OF EUROPE'S ENVIRONMENT
DRAFT LIST OF CONTENTS**

Discussion paper by the European Environment Agency

Introduction

1. The European Environment Ministers at their Environment for Europe Conference in Århus, Denmark, 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 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.

2. The Agency regularly publishes 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 the yearly reporting on sustainable development to European Councils (meetings of EU heads of States) each spring. The production of the indicators for the Environmental signals
CEP/AC.10/2001/5

^{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 Århus Conference).

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.

3. The EEA is cooperating with the United Nations Environment Programme (UNEP) to maximize the efficiency of the production of the Kiev report on the one hand, and of the European part of the UNEP Global Environment Outlook report GEO3 and the UNECE 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.

4. The “Environment for Europe” policy process includes the development of UNECE conventions and is important for setting the agenda of other meetings and activities, including those of the international financing institutions. At the time of writing little is known yet 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 the run-up to the conference.

5. 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 was circulated for comments to all UNECE countries in Europe and Asia (either through the national focal points of EEA, or directly through the UNECE secretariat). EEA would like to thank all those who contributed with comments. After discussion by the Working Group on Environmental Monitoring and possible modifications, the list of contents will be used as a starting point for preparing the Kiev report.

Geographical Scope

6. The Kiev report will cover all UNECE countries in Europe and Asia, that means all UNECE members except Canada, Israel and the United States (see annex III).

Cooperation with other organizations

7. In the detailed list of contents, which is included below, reference is made to inputs from various international organizations and networks. With a number of organizations (e.g. World Health Organization (WHO), UNEP, Arctic Monitoring and Assessment Programme (AMAP)) discussions have started on their contribution to the reporting process. As soon as the list of contents is finalized as a working basis, a wider circle of organizations will be contacted to ensure a proper and efficient use of existing material (statistics, performance reviews, etc.) in the report.

Chapter overview

8. To meet the request made at the Århus Conference for an indicator-based report to follow progress in the “Environment for Europe” process, a few elements are important:

CEP/AC.10/2001/5

(a) 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;

(b) With the growing interest in the integration of environmental policies in sectoral and other policies, a number of sectoral chapters will be included. These should include the main information that is needed for a proper problem analysis in each of the sectors;

(c) The main political event that will influence the socio-economic 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;

(d) An evaluation of the use of policy tools in environment and sector policies, and of progress during the last decennium will serve to answer the question ‘what are commonly used tools and solutions’ and ‘where are the shortcomings’ to help Ministers coordinate future approaches.

(e) As the Kiev report will be issued a few months after the “Rio+10” Conference, the assessment of policy progress mentioned under subparagraph (d) above will have to be written in the perspective of implementing the Rio+10 conclusions.

9. Compared with Europe’s Environment the Second Assessment, the new 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.

10. Annex I lists in detail the analyses to be included in each of the chapters and the indicators that will accompany these. Annex II gives an outline of the planning.

Table. Chapter overview

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	Estimated total report length	Ca.180-200 p.

Annex I**DETAILED DRAFT LIST OF CONTENTS OF THE KIEV REPORT****1. Introduction**

The introduction describes the “Environment for Europe” process, and the role of indicator-based progress reporting. It includes a reading guide to the report, and details on country groupings. A text box summarizes the scenarios that have been used in the UNEP GEO3 outlook report and their environmental implications.

2. Developments in socio-economic sectors

The general model for the sectoral chapters will be:

1. An overview of the environmental pressures caused by the sector (either as a box text 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.

2a. The energy sector

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

Indicators:

Energy-related emissions of carbon dioxide, sulphur dioxide and nitrogen oxides;

- Nuclear waste generated.

Analysis 1: 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 2: Energy efficiency

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

Analysis 3: 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 vs. GDP (national energy efficiency);
- Power plant energy efficiency;
- Percentage of energy supply from renewable sources.

2b. Industry

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

Analysis: Restructuring of the industrial sector in east and western Europe has delivered environmental advantages. What are the elements of an industrial 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.

2c. Agriculture

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

Analysis 1: In what direction is European agriculture developing?

Pan-European, but split up in regions: effects of privatization (farm size, amounts and quality of animals); intensification (farm size, herd size). Possible effects of EU enlargement.

Analysis 2: 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;
- Fertilizer consumption;
- Consumption of pesticides.

2d. Forestry

Analysis: Effects of transition on the forestry sector: Many of the central and east European countries and newly independent States have more forests 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 growing felling intensity.

Presented indicators:

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

2e. Fisheries and mariculture

Include a text box with the 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):

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

2f. Transport sector

Analysis: trends in western Europe show that the growing volume of transport is outweighing improvements in the sector’s environmental performance (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 growth in gross domestic product (GDP) raise 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 people's access to services, education, goods and work? Possibly include a text box on pan-European transport network (Trans-European Transport Network (TEN)+Transport Infrastructure Needs Assessment (TINA) and its role in shaping Europe in 10-20 years' time. Role of investment decisions by international financing institutes.

While at present transport systems have overall less adverse implications for the environment in these countries (relation private/public transport), the twofold issue of modernization 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 (UNECE Convention on Long-range Transboundary Air Pollution 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 at 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 with 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 converter, uptake of unleaded petrol, maybe (energy) efficiency indicator.

2g. 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, assessment of statistics from newly independent States and central and east European countries.

ENVIRONMENTAL ISSUES**3. Climate change****Analysis 1: signs of climate change**

What is the direction of the measurable signs of climate change? This question is relevant to policy because the appreciation of signs of climate change is reflected 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 finalized and ongoing research activities, including the European climate change assessment research project (a concerted action towards a comprehensive climate impact and adaptations assessment for the European Union (ACACIA), published 2000), the Arctic Climate Impact Assessment (ACIA, expected in 2002), the European Climate Assessment 2000 Network of European Meteorological Services (EUMETNET), publication mid-2001) and the most recent Intergovernmental Panel on Climate Change (IPCC) assessment by the IPCC of future climate change trends (up to 2100) in its Third Assessment Report (reports from working groups 1, 2 and 3 published early 2001, final full report expected mid-2001).

Indicators:

European average temperature 1860-2000 (+ projected 2100);

- European precipitation 1860-2000 (north-south/summer-winter);
- Sea level rise, past trend and projected to 2100;
- Ice cap and glaciers;
- Possibly. Regional indicators of signs of climate change (ecosystems);
- Possibly. Regional indicators of impacts of climate change (projected to 2100 - agriculture, water resources, etc. Link with the chapter on natural hazards).

Analysis 2: 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 come into effect in 2002), with better information available on common and coordinated policies and measures at EU level, the avoidance/abatement costs, making it possible to answer the question: How much will the individual sectors contribute to emission reductions? Detailed analysis of reduction measures taken per sector. What is the potential of future reduction measures and what will their costs be?

Related to this: how much could the trade in emissions of the EU and the individual countries possibly be, in particular with newly independent States countries (important issue of cap on trading and trading of “hot air” with newly independent States)?

Indicators (western Europe):

- Total emissions of greenhouse gases compared with target;
- Emissions of individual gases by sector projected with current and planned policies (outlook for 2010 and 2020, including estimates 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 greenhouse gases of both eastern and western Europe (how important is the “hot air” issue)?

Indicators (eastern Europe):

- Total emissions of greenhouse gases compared with target;
- Emission of individual greenhouse gases by sector, outlook for 2010 and 2020 for EU accession countries with current and planned 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 3: Greenhouse gas sinks?

If the decision is taken at the sixth session of the Conference of the Parties to take sinks (forests and possibly also soils) into account, a pan-European analysis could be envisaged on the use of clean development mechanisms 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 Third Assessment Report, ACACIA, ACIA, European Climate Assessment 2000/EUMETNET) on climate change indicators on the pan-European scale.

Exploitation of Commission (DG Environment) and European Climate Change Programme studies on cost of greenhouse-gas abatement.

Exploitation of existing outlook for greenhouse gas-emissions (European Topic Centre (ETC)/International Institute for Applied Systems Analysis (IIASA)/National Technical University Athens (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. Depletion of the ozone layer

Analysis: progress in the implementation of the Montreal Protocol

Are the eastern 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 the depletion of the ozone layer could be used to provide a policy summary update on developments and their 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 1: Progress in the implementation of the Protocols to the Convention on Long-range Transboundary Air Pollution (CLRTAP): Reduction of air pollutant emissions (acidification, tropospheric ozone, particulate matter (PM)).

Are the current national policies sufficient to reach the UNECE/CLRTAP and (proposed) EU targets or even go beyond them? What were the costs of past abatement measures 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 climate change).

Indicators:

- Emissions of SO₂, NO_x, NH₃, NMVOC, PM₁₀, total and by sector, 1990-2010-2020, compared with the 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 climate change).

Analysis 2: 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 transport/environment/health brought forward from the London Conference.

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

Indicators:

Exceedances/reduction air quality exceedances (precise indicators to be selected; 1990-2010-2020).

REQUIRED for the air pollution chapter:

- exploitation of existing outlook (European Topic Centre report: ShAIR scenario and UNECE/CLRTAP and EU/Clean Air for Europe (CAFÉ) studies, specially on particulates, expected in 2001/2002)
- study by IIASA (in UNECE/CLRTAP and CAFÉ) comparing past and future costs made and expected
- study together with the World Health Organization (WHO) to develop exposure indicators and to make an impact analysis.
- study on successful management on local, national and international level to combat 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 chemicals 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 countries and the EU.

Analysis 1: “chemicalization” of societies

Gives the development in production, use and import of hazardous chemicals, analysis of 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 the use of which is to be banned or thoroughly controlled.

Analysis 2: pathways

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

Indicators:

- Production and import of hazardous chemicals (maybe focused on POPs);
- Maps of 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, 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. Extend 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 CLRTAP/EMEP-Meteorological Synthesizing Centre-East. The European Topic Centre on Waters will use marine data. Arctic Monitoring and Assessment Programme (AMAP) data on pathways. Although several overviews exist of (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 1: 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 dematerialization 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 2: Waste generation

Western Europe: Is decoupling 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 an effect?

Indicators:

- Municipal waste generation vs. household expenditure;
- Industrial waste generation vs. industrial production. Selected country graphs on waste development split up in according to origin;
- 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;

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

Indicators:

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

Analysis 3: Hazardous waste management

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

Indicators:

- Generation of hazardous waste.

Analysis 4: Progress in establishing 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, mechanisms to implement and adjust the plan.

REQUIRED for the waste chapter: extension of the European Topic Centre/Waste collection of best available data to central and eastern Europe and newly independent States, study of trends in treatment and capacity problems.

8. Water stress

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 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, Dnieper, Severnaya Northern Dvina, Pechora, Rhine, Oder, Tagus, Po, Mesta, Ebro, Denmark (as 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 1: trends in water stress on a regional basis

Approaches to water issues in 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 (incl. southern newly independent States), 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 newly independent States.

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 waters;
- Nitrate in groundwater;
- Radionuclides in groundwater;
- Urban waste water treatment capacity
- Drinking water quality

Analysis 2: the 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 into the sea;
- Nutrient concentrations in coastal waters;
- Eutrophication maps.

Analysis 3: hot spots in marine water quality

Activities following the regional sea 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; 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 6. chemicals, the focus here might be more on temporal development);
- Oil pollution from maritime transport and offshore activities (Accidental oil spills in chapter on technical hazards).

Analysis 4: progress in the implementation of the UNECE Convention on the Protection and the Use of Transboundary Watercourses and International Lakes

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, soil sealing, disappearance of peat bogs, 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 urbanization, infrastructure).

Analysis 1: Salinization in the southern Russian Federation, Central Asia and the Southern Caucasus

Salinization of arable land has occurred in large areas (e.g. in Azarbaijan, Kazakhstan, Turkmenistan, Uzbekistan). Recovery is underway, and the analysis could focus on the possibilities for building drainage systems for salinized land, comparing the salinized area with the area for which recovery projects are ongoing and the area that could be recovered. It might be possible to come up with an estimation of recovery costs.

Indicators:

- Area of land affected by salinization;
- Table: restoration projects undertaken/planned-

Analysis 2: 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;
- Areas with problems due to wind erosion and salt deposition;
- Table: wind erosion prevention projects.

Analysis 3: Soil compaction

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

Indicator:

- Map showing extent of problem.

Analysis 4: Soil contamination

The paragraph should give the progress in 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;
- Update of estimated/number of (potentially) contaminated sites;
- Update of clean-up projects/costs.

REQUIRED for the soil chapter:

Specific studies; inventory by the European Topic Centre for the Terrestrial Environment (soil specialists) in central and eastern Europe and newly independent States.

UNEP input on specific problems in Central Asia and the Caucasian States, including the influence of environmental degradation on poverty and human health.

Contribution from the Joint Research Centre (EC-JRC) on soil loss by erosion.

10. Technical and natural hazards

Analysis 1: technological incidents

What has been the effect of prevention programmes and measures on technological hazards? Where are there still problems?

- Industrial accidents;
- Nuclear incidents (link with 2nd analysis 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 2: radionuclides

Regarding radionuclides, the greatest threats to human health and the environment are associated with the potential for accidents in the civilian and military 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 protecting the population in the event of an accident. The report should also give an overview of places with a direct risk to ecosystems and human health (large polluted areas, uncontained sources) as a basis for focusing remedial action. The assessment will build 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) example of doses to members of the public;
- Map of polluted areas/uncontained sources.

Analysis 3: natural extreme events

Storms, and droughts are the most common natural disasters in Europe. An increase of these events has been noticed, possibly linked to 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 in newly independent States and central and eastern Europe on industrial accidents.

Summary of the Balkans Task Force/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.: (a) improving the protection of 'high-quality' natural areas; (b) safeguarding 'ordinary' biodiversity by integrating biodiversity concerns into agriculture, transport and physical planning policies.

Analysis 1: state and protection of "high-quality" habitat types

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. Gives attention to differences in pace between countries and the question of how far we are establishing a European ecological network with these protected areas. It should identify neglected

Indicators:

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

Analysis 2: safeguarding “ordinary nature”

The paragraph mainly contains a list 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 may include a text box on the introduction of alien species. It ends with a list of measures that could be part of sectoral strategies for 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 pressures.

REQUIRED for the biodiversity chapter: Exploitation of the EEA biodiversity report. Possible cooperation with the Council of Europe, 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 1: Integration of environmental considerations in the other policies

Drawing on among other things 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 in non-EU countries. Some specific instruments will be highlighted in the following paragraphs.

Indicator:

- Progress in policy integration (qualitative table).

Analysis 2: Price signals (economic integration)

To what extent do prices reflect prices 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 3: Environmental impact assessment (management integration)

One of the tools to take 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 summarize progress in the application of the tool and above all give some best practice/best experience conclusions based on existing evaluations.

Indicator:

- Application of EIA and strategic environmental assessment (SEA) in Europe,

Analysis 4: 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 summarize experiences in integrated urban planning, addressing planning tools, partnerships (e.g.. Agenda 21 initiatives), management issues. It should aim to bring out the conclusions of the various 'sustainable towns' activities for national authorities.

Indicator: to be defined, could be an overview of successful/ unsuccessful planning tools.

Analysis 5: 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 for instance in mountainous areas or 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 or have reached their limit. 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 of pressures on coastal zones;
- Progress in Integrated Coastal Zone Management.

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

Note: Although information and public participation are important policy tools, it is proposed that the Kiev report should not deal with the follow-up to the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters 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/SEA.
Study on urban planning.
Study gathering dispersed information on coastal zones.

13. Information needs.

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

Annex 1: country comparison

In an annex, country comparisons will be given for major 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

Etc.....

Annex: International agreements

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

Annex II**PLANNING THE KIEV REPORT**

	<i>Period or deadline</i>
First proposal for the table of contents discussed at the ECE preparatory meeting on environmental monitoring	25 September 2000
Consultation with stakeholders on the contents including the Obninsk consultation	January - April 2001
Processing of comments and final table of contents	March - April 2001
Produce draft guideline for data collection	March – June 2001
Establish data warehouse for central storage of data	May - September 2001
Consultations on the data required for the report	May-July 2001
Review of the revised table of contents and the guideline for data collection by the Working Group on Environmental Monitoring	27-29 June 2001
Data collection	June – November 2001
Perform the analysis and produce indicator fact sheets	October 2001 – January/February 2002
Review of the first analyses by the Working Group on Environmental Monitoring	27 February-1 March 2002
Write draft report	February – June 2002
Review of the draft report by the Working Group on Environmental Monitoring	28-30 August 2002
Produce final report	September-October 2002
Printed report available	December 2002
Kiev Ministerial Conference	21-23 May 2003

Annex III

COUNTRIES TO BE COVERED BY THE KIEV REPORT

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