

STATISTICAL COMMISSION and
ECONOMIC COMMISSION FOR EUROPE

COMMISSION OF THE EUROPEAN
COMMUNITIES

CONFERENCE OF EUROPEAN STATISTICIANS

EUROSTAT

Joint ECE/Eurostat Work Session on
Methodological Issues of Environment
Statistics

(Jerusalem, Israel, 11-14 October 1999)

Working paper No.7

INDICATORS FOR THE INTEGRATION OF ENVIRONMENT INTO SECTORAL POLICIES

Paper submitted by EUROSTAT¹

¹ Prepared by Rosemary Montgomery.

I. Background

1. Since ratification of the Maastricht Treaty, there has been a legal obligation on the European Union to take account of environmental protection requirements when drawing up and implementing Community policies, an obligation which was reinforced by the entry into force of the Treaty of Amsterdam² on 1 May 1999.

2. It has to be said that the different sectors have not always taken this as seriously as some would prefer. Therefore there has been a growing feeling that it ought to be possible to measure in some way the progress in integrating the environmental aspect into other policy areas. It is no longer enough to show that vast sums of money have been spent on so-called environmental programmes within the different sectors. There is now a requirement to show whether these have had some effect.

3. This requirement comes directly from the European Council (a summit of all the heads of state of the 15 European Union countries who meet every six months in different cities) which has asked, among others, the Transport, Energy, Agriculture and Industry Councils (i.e. the Ministers responsible for these areas in the EU Member States) to report to the Helsinki European Council (Dec. 99) on their progress in integrating environmental concerns into their policy areas, and to produce indicators to measure such progress. Other Councils, including Fisheries, have been asked to do the same during 2000.

4. The different General Directorates (DG) of the Commission responsible for helping the Councils to produce these indicators have reacted in different ways to this request.

II. Energy

5. The Energy DG is perhaps in the best position. Climate change has been a major pre-occupation of the EU for some years now, and because of the dominant role of energy in CO₂ emissions, an environmental aspect has long been integrated into EU energy policy. The energy policies needed to reduce CO₂ emissions (energy efficiency, fuel switching, renewable fuels) will also have a positive impact on other environmental problems, e.g. air pollution, urban problems.

6. The relevant energy-environment indicators pre-date even this. In the 1970s and early 1980s, the era of oil crises, energy statistics focused on monitoring energy supply, energy savings, fuel switching, energy prices, energy efficiency, etc. So in 1999 all that was necessary was to take them off the shelf, where they have been hibernating ever since the world became awash with oil, dust them down, and give them an environmental spin. Eurostat and the Energy DG, together with the EEA and the Environment DG, took on this job and after the inevitable discussion on whether the Energy indicators should cover only the Energy sector proper, or the whole of the economy and its dependence on energy, (both were included in the end) a list of relevant indicators was drawn up, see Annex 1.

² The Treaty of Amsterdam revised the Treaties on which the European Union is founded. It makes the achievement of sustainable development one of the explicit objectives of the Union. It highlights the need to integrate environmental protection requirements into the definition and implementation of all Community policies.

7. Certain subjects are not included in this first list, as they were considered as of lesser importance or very localised and therefore not suitable for EU indicators, e.g. waste and land use connected with energy production and transformation.

8. The results for EU-15 have been compiled into a first draft publication. It is planned to produce a similar publication annually, jointly with the Energy DG, covering all 15 countries, from 2000 onwards.

9. The main problem identified with the Energy indicators is the decline in the quality and timeliness of the energy data. The main causes of this are:

- liberalisation of the energy industry, which means data has to be collected from more suppliers and results in more confidential data
- lack of priority in Member States and cut-backs in MS statistical services.

10. However it is hoped that this new imperative to produce energy-environment indicators will help to revive flagging energy statistics, in particular because of their importance in the calculation of CO₂ emissions, where mechanisms to allow trading in emissions are currently being debated within the UNFCCC framework. Without reliable and timely energy statistics, the uncertainties in the calculated CO₂ emissions would render such mechanisms useless.

III. Transport

11. Transport is also in a good position. Even before the mandate from the European Council, the development of a Transport and Environment Reporting Mechanism (TERM) was well underway. The work undertaken by the DGs for Transport and Environment, Eurostat and EEA led to the identification of the relevant indicators, data sources where existing, and data collection priorities. This list, in Annex 2, was endorsed through preliminary consultations with Member States.

12. The result is a list of 27 indicators, predominantly driving forces, but also including pressures, state, impacts and responses. Of the 27, seven are considered priority indicators, although data is currently available for only five of them. For the other two (passenger journeys and specific emissions per passenger-kilometre and per tonne-kilometre) work is underway.

13. A joint meeting between the Working Group "Statistics of the Environment" and the Coordination Committee for Transport Statistics was held in May 1999, to discuss the way forward. Issues discussed included the question of how data sets which are not compatible over time or between countries, and which contain many gaps, can be used to prepare indicators for the EU. It was decided that estimates, and non-official sources would be used to supplement official sources, in consultation with Member States. Estimates and non-official data are to be indicated as such in publications.

IV. Agriculture

14. While the European Council was sending out instructions to produce indicators, the Agriculture DG had other pre-occupations: getting its Agenda 2000, the Agricultural policy for the year 2000 and beyond, approved. It was impossible to engage them in any discussion on establishing a list of indicators until that hurdle had been jumped. Since then a dialogue on indicators has begun, but progress has been slow. The Agriculture DG has given out a three year contract to define the agri-environmental indicators needed, and has been reluctant to even draw up a preliminary wish list of

indicators until that work is finalised. In the meantime, the OECD list of agri-environmental indicators is the 'de facto' list being used, also because work on developing these indicators started some time ago.

15. A general message has been 'Indicators should not be data driven, but rather developed according to needs, and consequently we should not focus only on the pressures from agriculture, because the data is there but should look also at positive indicators'.

16. 'Landscape' is still leading the field as the most important positive indicator. Over the past year, Eurostat's Agriculture statistics units have worked on developing the conceptual framework for landscape indicators and were main instigators of an OECD Expert group meeting in Paris on 10-12 May 1999 to look at Biodiversity, Wildlife habitats and Landscape indicators. However the landscape indicator is still in the conceptual stage.

17. In contrast to the message from the political side, the basic message from agriculture statisticians is that farmers are already required to fill in too many forms and any new data requests reduce response rates to all surveys. Therefore for the time being, we need to fully exploit existing data held at Eurostat and in the MS themselves, before even thinking of starting new data collection. However in the last few months there has been some sign that agricultural statisticians are beginning to accept that some changes to established surveys are needed to meet the needs of the future Common Agriculture Policy and that this will necessarily include an environmental component.

V. Industry

18. For the Industry sector discussions on indicators are still at an early stage. During the initial discussions, it became clear that the indicators would need to address all levels (company, sectors and nation), with special attention to the relevancy of indicators at company level. This extends the set of users of integration indicators in general and provides an efficient tool for the practical integration of environmental issues to developments in industries.

19. Eco-efficiency indicators were seen as perhaps the most important part of the integration indicators for industry, and Eurostat received a mandate to continue to work on sectoral eco-efficiency indicators, as well as the existing statistics and indicators on competitiveness and employment, which will be used as input to future work on integration indicators for industry.

20. At the end of April, the Industry Council asked the Commission to present elements of an integration strategy towards sustainability and to embark on the further development of tools and methodologies for assessing the impacts of policy proposals on the environment, competitiveness and on employment. This new work on tools and methodologies may well result in new data demands, and in new data collection.

VI. Conclusion

21. This integration of environmental concerns into sectoral policy is a fundamental part of the Amsterdam Treaty, so it cannot be treated as a one-off request, but rather as a continual part of our work. Therefore it will be necessary to plan this into long term work programmes, both within Eurostat and also in the statistical offices of the EU Member States. Because of the continual restrictions on resources for data collection, this is likely to involve a complete review and streamlining of existing data collection,

further harmonisation of classifications, definitions and methodologies, so as to enable data currently collected to be used for environmental purposes as well as their original purpose.

22. Moreover, the use of non-official sources of data, and non-harmonised data will have to be explored in order to be able to respond to some of the information needs. How far these unofficial sources can be endorsed by the official statistical system is one of the future major debating points.

Annex 1: Reporting mechanism on energy and environment: Indicators

Group	Indicator	Unit	Breakdown	
			First stage	Second stage
Energy Supply/Demand	<ul style="list-style-type: none"> Gross inland consumption 	Mtoe		All fuels Crude, oil, feedstocks & petroleum products Nuclear Energy Hard Coal&equiv. Lignite & equiv. Renewables
	<ul style="list-style-type: none"> Final energy consumption by sector and fuel, including energy (own use) 	Mtoe	Total Industry Transport Households, commerce, etc . Energy branch	All fuels Hard coal&equivalents Lignite&equivalents Petroleum products Natural gas Electricity Renewables
	<ul style="list-style-type: none"> Energy dependence (Net imports/gross consumption) 	%		Overall Oil Natural gas
	<ul style="list-style-type: none"> Consumption in public thermal power stations by fuel 	Mtoe		All fuels Hard coal&equivalents Lignite&equivalents Petroleum products Natural gas Renewables
Electricity and heat production	<ul style="list-style-type: none"> Combined Heating/power Production (CHP) share of gross installed capacity 	%		
Energy efficiency	<ul style="list-style-type: none"> Gross inland consumption per GDP (at 1990 prices) Efficiency of electricity plants (electricity output/fuel input to power station) 	Kgoe/ 1000 EURO Kwh/to e		
Environmental impact of energy	<ul style="list-style-type: none"> CO₂emissions by sector and fuel CO ₂ emissions indicators <ul style="list-style-type: none"> CO₂ emissions per GDP CO₂emissions per capita CO₂emissions from electricity generation per unit of output 	Mtonne t/1000 Euro t/pers on t/kwh	Industry Transport Households, commerce public authorities	All fuels Solid fuels Crude oil & petroleum products Natural gas
	<ul style="list-style-type: none"> Traditional emissions from energy: SO₂, NO_x, CH₄ 	Mtonne		
Energy prices	Consumer prices(1990 index) <ul style="list-style-type: none"> With Taxes Without taxes 	%	Industry Transport Households	Residual fuel oil Natural gas Electricity Premium leaded gasoline Unleaded gasoline Diesel fuel Natural gas Electricity Heating gasoil

Annex 2:

TERM indicators

Group	Indicators
ENVIRONMENTAL PERFORMANCE OF TRANSPORT	
<i>Environmental consequences of transport</i>	Transport final energy consumption and primary energy consumption, and share in total (fossil, nuclear, renewable) by mode
	Transport emissions and share in total emissions for CO₂, NO_x, NMVOCs, PM₁₀, SO_x by mode
	Excedances of air quality values
	Exposure of population to traffic noise
	Infrastructure influence on ecosystems and habitats ('fragmentation') and proximity of transport infrastructure to designated sites
	Land take for transport by mode
	Number of transport accidents, fatalities, injured, polluting accidents (land, air and maritime)
DETERMINANTS OF THE TRANSPORT SYSTEM	
<i>Land use and access to basic services</i>	Average passenger journey time and length per mode, purpose (commuting, shopping, leisure) and territory (urban/rural)
	Access to transport services, e.g: <ul style="list-style-type: none"> • Number of motor vehicles per household • % of persons in a territory having in e.g. 500m distance access to a public transport station
<i>Transport demand and intensity</i>	Passenger transport (by mode and purpose): <ul style="list-style-type: none"> • Total passengers • Total pkm • Pkm per capita • Pkm per GDP
	Freight transport (by mode and group of goods): <ul style="list-style-type: none"> • Total tonnes • Total tkm • Tkm per capita • Tkm per GDP
<i>Transport supply</i>	Length of transport infrastructure by mode and by type of infrastructure (e.g. motorway, national road, municipal road, etc.)
	Investments in transport infrastructure/capita and by mode
<i>Price signals</i>	Real passenger and freight transport price by mode
	Fuel prices
	Taxes
	Subsidies
	Expenditure for personal mobility per person by income group
	% of infrastructure and environmental costs (including congestion costs) covered by price
<i>Efficient use of transport</i>	Overall energy efficiency for passenger and freight transport per km travelled (by vehicle type)
	Emissions per pkm and emissions per tkm for CO₂, NO_x, NMVOCs, PM₁₀, SO_x by mode
	Vehicle occupancy
	Uptake of cleaner fuels (unleaded petrol, electric, alternative fuels) and numbers of alternative fuelled vehicles
	Load factors for road freight transport (LDV, HDV)
	Average age of the vehicle fleet
	Proportion of vehicle fleet meeting certain air and noise emission standards (by mode)
Public awareness	
NB: Indicators marked in bold are considered a 'priority'.	