FOREWORD

[DRAFT IN PROGRESS]

Environmental indicators are essential tools for tracking environmental progress, supporting policy evaluation, and informing the public. Since the early 1990s, such indicators have gained in importance in many countries and in international fora.

The OECD pioneered the development of international environmental indicators and has long supported its member countries' efforts in this field. Its work has led to several sets of indicators each responding to a specific purpose. Central to the OECD work are core environmental indicators included in the OECD Core Set, to measure environmental progress, complemented with several sets of sectoral environmental indicators to help integrate environmental concerns in sectoral policies such as energy, transport and agriculture. Indicators are further derived from environmental accounting mainly from natural resource and environmental expenditure accounts, and work is done on indicators to measure the decoupling of environmental pressure from economic growth.

The present report is one of the products of the OECD programme on environmental indicators. It is updated at regular intervals and includes environmental indicators from the OECD Core Set, including selected socio-economic and sectoral indicators having an environmental significance, and selected key environmental indicators, endorsed by OECD Environment Ministers in May 2001 for public information and communication by OECD.

This report was prepared by the OECD Secretariat, but its successful completion depended on personal or official contributions by many individuals in Member countries, and on the work and support of the OECD Working Group on Environmental Information and Outlooks. This report is published on the responsibility of the Secretary General of the OECD.

Director
OECD Environment Directorate

The indicators in this report build on data published in "OECD Environmental Data - Compendium 2004", and on data from other OECD and international sources available to the OECD Secretariat before January 2005. Some were updated or revised on the basis of comments from national Delegates as received by March 2005.

These data come from the OECD SIREN* database, which is regularly updated with information provided by Member countries' authorities (through biennial data collection using the OECD/Eurostat questionnaire on the state of the environment), from internal OECD sources and from other international sources. The data are harmonised through the work of the OECD Working Group on Environmental Information and Outlooks (WGEIO) and benefit from continued data quality efforts in OECD member countries, the OECD itself and other international organisations.

In many countries, systematic collection of environmental data has a short history; sources are typically spread across a range of agencies and levels of government, and information is often collected for other purposes. When reading this report, one should keep in mind that definitions and measurement methods vary among countries, and that inter-country comparisons require careful interpretation. One should also note that indicators presented in this report refer to the national level and may conceal major sub-national differences.

* System of Information on Resources and the Environment

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INTRODUCTION

THE OECD WORK ON ENVIRONMENTAL INDICATORS

PURPOSES

The OECD programme on environmental indicators, initiated in 1989, contributes to three major purposes:

- Measure environmental progress and performance;
- Monitor and promote policy integration, and in particular ensure that environmental concerns are taken into account when policies are formulated and implemented for various sectors, such as transport, energy, agriculture;
- Ensure a similar integration of environmental concerns into economic policies.

APPROACH AND RESULTS[1]

Work of the OECD on environmental indicators, carried out in close co-operation with OECD member countries, has led to the development of several sets of indicators using harmonised concepts and definitions. It builds on the assumption that:

- there is no unique set of indicators; whether a given set is appropriate depends on its use;
- indicators are only one tool among others and have to be interpreted in context.

It builds on the agreement by OECD member countries to:

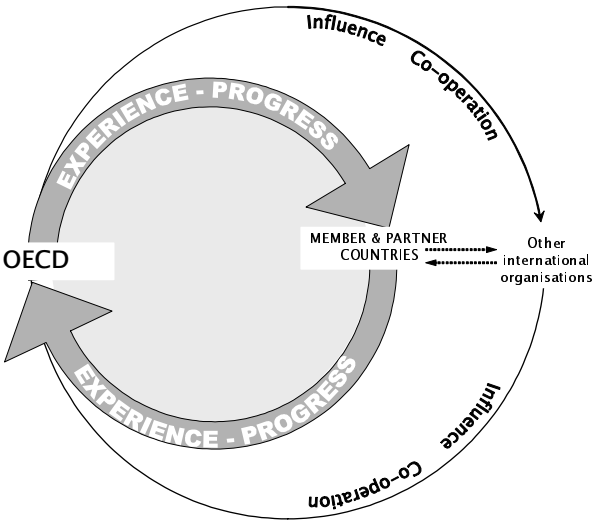
- use the pressure-state-response (PSR) model as a common reference framework;
- to identify indicators on the basis of their policy relevance, analytical soundness and measurability;
- to use the OECD approach at national level by adapting it to national circumstances

USE IN POLICY ANALYSIS

OECD environmental indicators are regularly published and used in the OECD's work. They are used in reviewing countries' environmental performance and in monitoring the implementation of the OECD Environmental Strategy. This is done by relating them to: explicit quantitative objectives (targets, standards, commitments), or to broad qualitative objectives linked to the efficiency of human activities or to the sustainability of natural resource use; and by complementing them with specific national indicators and data to ease interpretation.

This systematic use in analytical work provides valuable feedback on the indicators' actual policy relevance and analytical soundness.

LINKS WITH NATIONAL AND OTHER INTERNATIONAL INITIATIVES



The development of environmental indicators has built on OECD experience in environmental information and reporting and has benefited from strong support from Member countries, and their representatives in the OECD Working Group on Environmental Information and Outlooks (formerly Working Group on the State of the Environment).

Results of OECD work, and in particular its conceptual framework, have in turn influenced similar activities by a number of countries and international organisations. Continued co-operation is taking place in particular with: UNSD, UNCSD and UN regional offices; UNEP, and the World Bank, the European Union (Commission of the European Communities, Eurostat, EEA) and with a number of international institutes. Co-operation is also taking place with non OECD countries, and in particular with China, Chile and Russia.

[1].For further details on the OECD work for environmental indicators, see:
📖 "OECD Environmental Indicators – Development, Measurement and Use", Reference Paper (http://www.oecd.org/env/)

THE OECD SETS OF ENVIRONMENTAL INDICATORS

Work carried out includes several categories of indicators, each corresponding to a specific purpose and framework:

TRACKING ENVIRONMENTAL PROGRESS AND PERFORMANCE

CORE ENVIRONMENTAL INDICATORS (CEI) are designed to help track environmental progress and the factors involved in it, and analyse environmental policies. They are included in the OECD Core Set of environmental indicators, commonly agreed upon by OECD countries for OECD use, and published regularly. The Core Set, of about 50 indicators, covers issues that reflect the main environmental concerns in OECD countries. It incorporates core indicators derived from sectoral sets and from environmental accounting. Indicators are classified following the PSR model: indicators of environmental pressures, both direct and indirect; indicators of environmental conditions; indicators of society's responses.

INFORMING THE PUBLIC

KEY ENVIRONMENTAL INDICATORS (KEI), endorsed by OECD Environment Ministers, are a reduced set of core indicators, selected from the OECD Core Set, that serve communication purposes. They inform the general public and provide key signals to policy-makers.

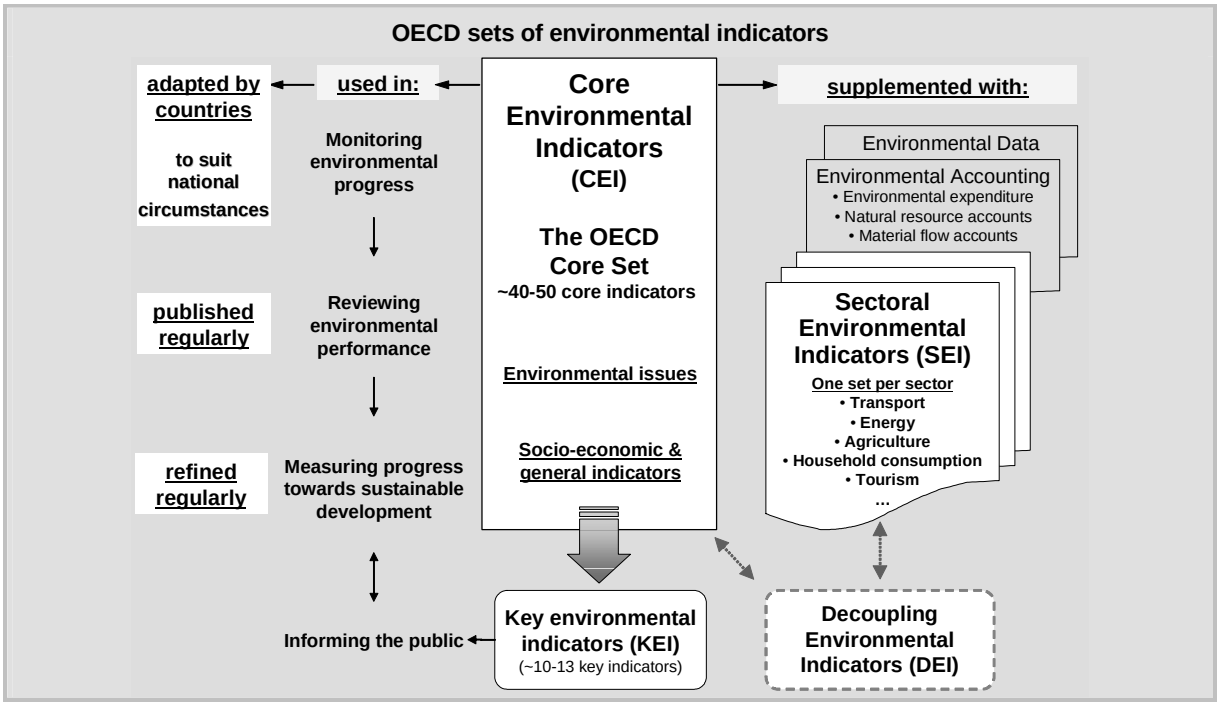
PROMOTING INTEGRATION

SECTORAL ENVIRONMENTAL INDICATORS (SEI) are designed to help integrate environmental concerns into sectoral policies. Each set focuses on a specific sector (transport, energy, household consumption, tourism, agriculture). Indicators are classified following an adjusted PSR model reflecting: sectoral trends of environmental significance; their interactions with the environment (including positive and negative effects); and related economic and policy considerations.

INDICATORS DERIVED FROM ENVIRONMENTAL ACCOUNTING are designed to help integrate environmental concerns into economic and resource management policies. Focus is on: environmental expenditure accounts; physical natural resource accounts related to sustainable management of natural resources; and physical material flow accounts, related to the efficiency and productivity of material resource use.

MONITORING PROGRESS TOWARDS SUSTAINABLE DEVELOPMENT

DECOUPLING ENVIRONMENTAL INDICATORS (DEI) measure the level of decoupling of environmental pressure from economic growth. In conjunction with other indicators used in OECD country reviews, they are valuable tools for determining whether countries are on track towards sustainable development. Most DEIs are derived from other indicator sets and further broken down to reflect underlying drivers and structural changes.



THE 2005 PUBLICATION

CONTENT

The present publication is an update of the 2001 publication "Towards sustainable development – Environmental indicators". It includes:

- the set of key environmental indicators endorsed by Environment Ministers of OECD countries as a tool for use in OECD work and for public information and communication by OECD (OECD meeting of Environment Ministers, Paris, 16 May 2001) (Part I).
- major environmental indicators from the OECD Core Set (Part II), including selected socio-economic and sectoral indicators with environmental significance (Part III).

Each section of indicators in Parts II and III includes:

- a brief statement on the issue referred to and its importance for environmental performance and sustainable development;
- an overview of related OECD work and references, including a schematic description of the conceptual framework in which the indicators are placed, i.e. the PSR model for OECD core environmental indicators (CEI) and the adjusted PSR model for OECD sectoral environmental indicators (SEI);
- a summary of major trends.

INTERPRETATION

The indicators in this publication are those that are regularly used in the OECD's analytical work and for which data are available for a majority of OECD countries.

It has to be noted that they are of varying relevance for different countries and have to be interpreted in context to acquire their full meaning.

No unique choice has been made as to the normalisation of the indicators; different denominators are used in parallel (e.g. GDP, number of inhabitants) to balance the message conveyed.

PROSPECTS AND FUTURE WORK

The OECD experience shows that environmental indicators are cost-effective and powerful tools for tracking environmental progress and measuring environmental performance. However, experience also shows significant lags between the demand for environmental indicators, the related conceptual work and the actual capacity for mobilising and validating underlying data. In the field of environmental statistics, differences among countries may be considerable and the establishment of reliable and internationally comparable data calls for continuous monitoring, analysis, treatment and checking.

Following the conceptual work that laid down the common framework and basic principles for developing sets of international environmental indicators in the OECD context, continued efforts are being done by the OECD to:

- Improve the quality and comparability of existing indicators.
- Develop concepts and data for medium term indicators.
- Link the indicators more closely to domestic goals and international commitments.
- Expand the indicator sets to cover social-environmental aspects.
- Further integrate environmental and sectoral indicator sets in the broader set of sustainable development indicators.

This necessitates greater policy relevance and increased quality and timeliness of basic data sets, as well as a closer link between environmental data and existing economic and social information systems. It also necessitates more work to complement the indicators with information reflecting sub-national differences.