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ENVIRONMENT POLICY COMMITTEE**

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Working Group on Environmental Information and Outlooks

**Improving the information base for environmental performance reviews
INDICATORS FOR PERFORMANCE REVIEWS - PLAN OF ACTION FOR FUTURE REVIEWS**

Agenda item 6

**Paris, 24-26 November 2008
OECD Conference Centre**

This document is part of the OECD initiative on environmental data quality.

It includes proposals on how best to improve the information basis for environmental performance reviews and to respond to new information demands. The focus is on indicators to support policy analysis and evaluation.

The proposals follow on earlier discussions by the WGEIO and the WPEP. They consider recent developments in OECD policy work on the environment and ongoing preparations for future environmental performance reviews.

It is submitted for discussion under agenda item 6c.

Contact: Ms. Myriam Linster, Environmental Performance and Information Division
mailto: edi-contact@oecd.org - T. (33 1) 45 24 97 44

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NOTE BY THE SECRETARIAT

This document is part of the OECD initiative on environmental data quality.

It includes proposals on how to improve the information basis for environmental performance reviews, fill remaining gaps and respond to new information demands. The focus is on indicators to support policy analysis and evaluation. The document consider news demands and recent developments in OECD policy work on the environment arising from (i) the Meeting of the Environment Policy Committee (EPOC) at ministerial level in 2008, and (ii) ongoing preparations for future environmental performance reviews.

The proposals made here follow on earlier discussions within the WGEIO and the WPEP. They summarise and build on measures proposed in earlier documents on indicators and environmental performance reviews and in the document “OECD initiative on environmental data quality – A common strategy and plan of action for joint work”. [ENV/EPOC/GEP(2003)6, ENV/EPOC/GEP(2008)5, ENV/EPOC/SE(2002)1/REV1].

ACTION REQUIRED: FOR DISCUSSION

This document is submitted for discussion under agenda item 6c. Delegates are invited in particular to:

- Discuss the proposed plan of action (section IV).
- Make suggestions on how best to proceed to implement the proposed measures and on how work could best be shared between the countries reviewed, the Secretariat, the WPEP and the WGEIO.
- Indicate their interest in launching pilot work in their country to support future performance reviews.

Further written comments should be sent to the OECD Secretariat **before 18 December 2008**.

Improving the information base for Environmental Performance Reviews (EPRs)
INDICATORS FOR PERFORMANCE REVIEWS - PLAN OF ACTION FOR FUTURE REVIEWS

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Improving the information base for Environmental Performance Reviews (EPRs)

INDICATORS FOR PERFORMANCE REVIEWS - PLAN OF ACTION FOR FUTURE REVIEWS

I. BACKGROUND

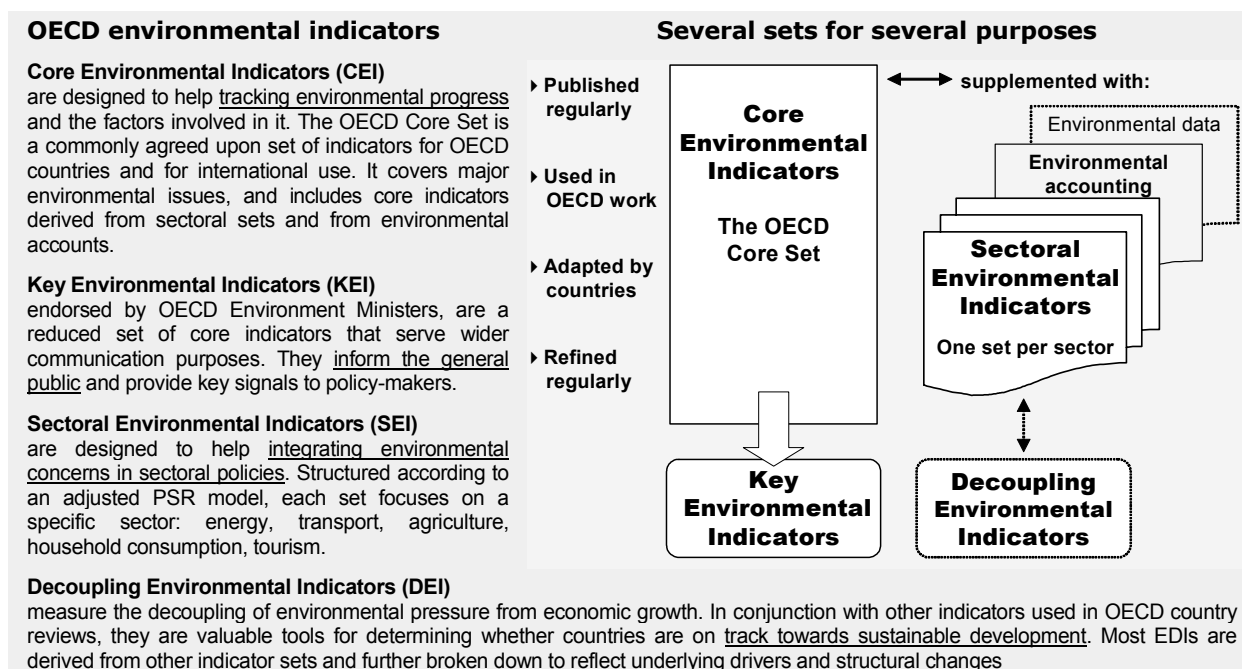
1. The OECD's work on environmental information and reporting has developed since the late 1970s. A major objective of this work steered by the Working Group on Environmental Information and Outlooks (WGEIO) has been to provide a strong factual knowledge base for the OECD's analytical and policy work. Outputs from this work, and particular the indicator sets developed as of the late 1980s, have been essential to support country environmental performance reviews (EPRs) since their inception in the early 1990s.

2. A specific OECD programme on environmental indicators using a harmonised approach¹ was initiated in the late 1980s-early 1990s, responding to the request of G7 meetings of heads of states and governments (Paris, Houston, and London) and of the OECD. The programme has several components, all supported by OECD work on environmental data and on environmental accounting. It led to:

- the agreement on a common conceptual framework based on the pressure-state-response (PSR) model and on a common understanding of concepts and definitions²;
- a commonly agreed upon set of core environmental indicators (the OECD Core Set);
- a commonly agreed upon set of key environmental indicators, endorsed by OECD Environment Ministers in 2001 for use by OECD and public release;
- the development of various sets of sectoral environmental indicators (e.g. transport-environment, energy-environment, agriculture-environment, sustainable household consumption);
- a set of decoupling environmental indicators building on other sets.

The OECD Core Set represents a minimum set of indicators common to OECD countries and common to different uses and purposes. (Box 1).

Box 1. OECD Environmental Indicators



¹ For further details, see "OECD Environmental Indicators – Development, measurement and use: Reference paper".

² Including the agreement by OECD countries to identify indicators on the basis of their policy relevance, analytical soundness and measurability, and to use the OECD approach at national level by adapting it to national circumstances.

II. ENVIRONMENTAL PERFORMANCE REVIEWS - EVIDENCE BASED POLICY ANALYSIS AND EVALUATION

Factual foundation

3. Policy analysis and evaluation carried out as part of the EPRs is supported by a factual knowledge base encompassing economic, environmental and sectoral information compiled by the Secretariat. The data are derived from various national and international sources.
4. The most important sources are member countries, through
 - answers by the reviewed country to the EPR questionnaire³,
 - national replies to the OECD questionnaire⁴ on the state of the environment (joint OECD/Eurostat questionnaires for European Union countries) and their subsequent treatment and quality assurance,
 - other national sources (reports, web sites, etc.).
5. Other sources include:
 - OECD sources: economic information, sectoral data and indicators (e.g. energy, industry, agriculture)
 - Other international sources, including: Secretariats from the main Conventions and Protocols related to the environment, other international bodies such as UNSD, UNEP, Eurostat.

The role of indicators

6. The OECD environmental indicators have been regularly used in the EPRs to support and illustrate the analysis made.

Indicators and performance analysis

7. Three broad categories of indicators have been used in the reviews:
 - Performance indicators linked to quantitative objectives (targets, commitments): e.g. air emission trends relating to national or international targets;
 - Performance indicators linked to qualitative objectives (aims, goals), generally addressing the concept of performance in two ways:
 - with respect to the “eco-efficiency” of human activities, linked to the notion of decoupling: e.g. emissions per unit of GDP, relative trends of waste generation and GDP growth; and
 - with respect to the sustainability of natural resource use: e.g. intensity of the use of forest resources, intensity of the use of water resources;
 - Descriptive indicators not linked to explicit national objectives, describing major conditions and trends, and close to the concept of SOE reporting: e.g. population connected to waste water treatment plants, river quality.
8. The indicators are however not used as a mechanical measure of performance; they provide only one tool for evaluation and are supplemented by other qualitative and scientific information. Such information is needed to explain drivers behind indicator changes, and to help in interpreting the indicators in the appropriate context. One should also note that some issues or topics do not lend themselves to evaluation by quantitative measures or indicators.

³ The EPR questionnaire (specific to individual countries at the time of their individual reviews) is to be distinguished from the SOE questionnaire (regularly sent to all member countries in association with Eurostat for European countries).

⁴ Much of this work is done in cooperation with other international organisations active in the field of environment and sustainable development statistics.

Presentation and layout of indicators in EPRs

9. The presentation of most key indicators is standardised over the reviews, though a certain amount of flexibility is allowed to adjust to the individual situation of the reviewed country and also to special chapters or topics. In line with the guiding principles defined for using indicators in performance assessment, international indicators from the OECD sets (CEI, KEI, SEI) are used in combination with specific national indicators and data, and complemented as appropriate by additional information (e.g. lists of laws and regulations, economic instruments, and conventions; organigrammes; maps). Whenever possible, both state and trend data are presented for the indicators. Trends are shown over a decade for most indicators, and over two decades for selected topics to keep track of early policy measures and monitor changes over long periods.

One can distinguish the following typology:

- indicators harmonised at OECD level and presented for the reviewed country together with a few selected OECD countries and OECD and/or OECD Europe averages to reflect the national and international picture. These indicators tend to be relevant for most OECD Member countries; they focus on key issues and often present state data;
- national indicators that show trends over longer periods, often associated with related targets or economic trends; or that provide a more detailed national picture through a greater sectoral and/or spatial breakdown and point at particular issues of concern for the reviewed country;
- indicators harmonised at OECD level and presented for the 30 member countries together with the OECD average to give an international overview of several key issues and background trends (References IA, IB, IC).

10. The indicators are presented in the form of summary tables to give a broad overview of selected environmental, economic and social issues for all OECD countries (References IA, IB, IC), or in the form of thematic pages, inserted in the individual chapters, associating international and national indicators (Annex I) and combining tables and graphics.

11. One should note that not all indicators used in the EPRs are also presented in the final report; the preparation of the reviews and the analysis made draw on a much broader information base than that published in the final report.

III. LESSONS LEARNED

12. Since 1993, environmental data and indicators have been used in OECD environmental performance reviews (EPRs) to support and illustrate the analysis made. This practical experience has provided useful feedback i) on the indicators' policy relevance and analytical soundness, and ii) on the availability and quality of underlying data sets in OECD countries.

13. As we are now almost through the second cycle of reviews, time is appropriate to assess the extent to which progress has been made in using indicators in EPRs, and to consider what can be done to further enhance the indicators' role in the analysis of countries' performance and to help further strengthen the performance review process.

Progress made so far

In the second cycle of EPRs, the following improvements have been made:

- the scope of data and indicators has been expanded to cover environmentally-related social data and, more recently, material flow data, and decoupling indicators are presented whenever available and appropriate;
- the systematic presentation of standardised key indicators has been pursued;

- an effort has been made to further develop the presentation of result-oriented performance indicators, including indicators that show the coupling/decoupling between environmental pressures and economic growth, indicators showing progress or lack of progress towards quantitative targets or commitments, and indicators showing progress since the first cycle review.

Remaining challenges and areas for progress

14. Experience so far however shows that, despite these improvements, a number of quality issues and gaps remain. Many of the difficulties encountered relate to insufficient progress with the quality and availability of underlying data sets.

Main quality issues

15. Among other quality issues that remain are:

- The timeliness of the indicators presented that very often lags behind that of economic indicators and that has generally not improved since the 1st cycle of EPRs.
- The coherence over longer periods that is needed to monitor the effects of earlier policies. Coherence over time and the completeness of time series vary greatly by issue and country and do not allow a systematic and standardised presentation of trends over longer periods.
- The coherence among data sources and information flows: the use of a mix of information sources to support performance reviews, building on already existing sources supplemented with country specific information, enables a broad coverage of topics without adding to the reporting burden. It however also raises problems of consistency among the various sources that limit the use of some data in policy analysis.
- The documentation of the data that is essential to ease interpretation in context and to point at relevant sub-national variations.

16. As a result, the number of indicators that are harmonised at international level and that can be used in a standard way in the EPRs has remained limited. Many indicators only describe the current state, changes over time being often not reliable. Also, many important topics, though included in OECD indicator sets and selected for special data quality efforts, are still covered by country specific indicators only and cannot be related to similar information from other OECD countries.

17. Also, the data collected through the OECD/Eurostat questionnaire and from other national and international sources, do not always lend themselves to being linked to the reviewed country's commitments nor to recommendations from previous reviews. This makes the presentation of result-oriented indicators more difficult. Monitoring the implementation of previous recommendations and countries' progress towards their own commitments, thus requires additional efforts to provide the right information for the purpose of performance evaluation (country-specific data and indicators, related goals or targets, etc.). Such information is generally requested in the EPR questionnaire that the reviewed country has to sent back to the OECD Secretariat in advance of the review mission, but does not benefit from a harmonised collection nor treatment.

Remaining gaps

18. When developing the OECD Core Set of environmental indicators to support environmental performance reviews, a distinction was made between short, medium and long term indicators. In 2008, almost 20 years later, most indicators classified as "medium term" in 1992 are still classified as "medium term" and major gaps remain. This points to a lag between the demand for environmental indicators, the related conceptual work and the capacity for mobilising underlying data.

19. The coverage by indicators remains best for issues that have traditionally been well reported. Little progress has been made as regards the availability of data permitting a sectoral breakdown of environmental indicators and establishing links with economic data. Important gaps remain in areas such as:

- The economic dimensions of environmental performance and management, including information on economic instruments, environmental expenditure (biodiversity, water supply, natural resource management), environmental damage, employment and trade considerations, costs and benefits of environmental policies.
- Natural and material resource use
- Waste prevention and recovery
- Biodiversity
- Environment related health issues with a particular interest in toxic contamination and in population exposure
- Environmental risks related to industrial activities or natural disasters.
- The territorial and sectoral dimensions of environmental performance

Future reviews and new information demands

20. In its discussions on the 3rd cycle of reviews (starting in 2009), the WPEP has stressed the importance of further improving policy advice by focusing on a few selected issues in each country review, while maintaining basic coverage and accountability for major environmental challenges (e.g. air, water, waste, biodiversity) and for monitoring the implementation of recommendations from previous reviews.

21. The issues for in-depth analysis and recommendations in each review would be selected based on critical issues identified by the OECD Environmental Outlook, the EPOC Strategic Vision, the OECD Environmental Strategy, conclusions and recommendations from the previous review, the discussion of mid-term reviews by the WPEP, trends based on OECD environmental data and indicators, the economic importance of specific environmental issues in the reviewed country, and on particularly important policy challenges identified by the reviewed country.

22. The WPEP also continues to stress the importance of the evidence-based features of the reviews, relying on sound national and international data and has highlighted the need:

- for increased use of indicators and benchmarking, taking into account the diversity of countries.
- for giving the indicators a more prominent role in monitoring the implementation of recommendations from previous reviews and in identifying areas for progress and issues for in-depth analysis.
- for developing proposals for new and improved indicators in areas that are not yet or insufficiently covered.

23. Indicators for future reviews will also need to consider priorities set in the OECD Environmental Strategy for the 2nd decade of the 21st Century and the request by Ministers (Paris, 28-29 April 2008) that OECD continue work on:

- promoting a low carbon society
- biodiversity loss
- resource efficiency and material flows⁵
- water scarcity
- health impacts of pollution
- costs, benefits and effects of policy options, including cost of inaction.

LOOKING AHEAD – PLAN OF ACTION FOR FUTURE REVIEWS

24. In the framework of the OECD initiative on environmental data quality, the WGEIO agreed in 2003 on a plan of action⁶ to structure and prioritise related work. A number of measures proposed in the Data Quality

⁵ In the context of the interest expressed in resource productivity and sustainable resource management at international level: G8 summits, the Recommendation of the OECD Council on Resource Productivity (C(2008)40) adopted in March 2008.

Action Plan relate to the EPR process and to the associated indicators. They take into account earlier proposals made to enhance the use of indicators in the 2nd cycle of reviews. Among these are measures concerning data comparability, timeliness, coherence over time and the cost-effectiveness of the processes underlying data quality efforts related to EPRs (Annex II).

25. If concrete progress is to be achieved, the implementation of these measures needs to be given much more attention than before. We are now almost through the 2nd cycle of reviews, but the proposals made during the preparation of this 2nd cycle are not yet fully implemented.

Proposed measures

26. The annual quality assurance of environmental reference series⁷ underlying Core and Key Environmental Indicators (CEI, KEI) used to monitor countries' environmental performance is an important first step. In line with the Data Quality Action Plan, it is further proposed to carefully review the existing indicators and data needs for EPRs, with a focus on core indicators, and to identify those gaps that are most significant and that hinder the monitoring of progress in the context of environmental performance reviews. This review needs to be closely co-ordinated with the review and restructuring of the OECD questionnaire on the state of the environment and the related data collection process⁷. It is also proposed to establish a closer collaboration between members of the WGEIO and members of the WPEP so as to better seize the benefits of the EPRs for the work steered by the WGEIO and to ensure greater coherence in information and data flows.

27. It is proposed in particular to:

A. Review data needs for EPRs and for the associated indicators

This would encompass the following:

- Review data needs for EPRs considering lessons from past experience and demands for future reviews, and distinguishing between different types of data (core international data to support the calculation of indicators, country specific data, information on goals and targets, information needed to monitor the implementation of recommendations from previous reviews, etc.)
- Review existing OECD indicators with respect to their adequacy for the purposes of EPRs with a focus on core and key indicators and on selected sectoral indicators (i.e. the OECD Core Set).
- Further develop the indicator set in areas of importance to EPRs, including through the development of targets and early warning indicators, and improvements in the quality of existing indicators.

B. Improve the relevance of indicators for EPRs

- Make greater use of result-oriented indicators by more systematically linking the indicators to established goals and targets and to recommendations in the previous cycle of reviews. Reviewed countries should provide information on relevant national goals and targets to which indicators could be related. The focus would be (i) on international key and core indicators, and (ii) on country-specific indicators needed to monitor the implementation of recommendations from previous reviews.
- Reviewed countries should provide proper information on relevant sub-national variations of relevance to the interpretation of international indicators. This should be co-ordinated with the annual quality assurance of environmental reference series.
- Make greater use of standardised indicators to describe trends on major environmental challenges and structural changes in the reviewed country and replace certain descriptive parts in the text. This could, for example, be done in the form of country profiles. Such country profiles could cover:
 - international key indicators and data presented in the statistical annexes, combined with additional country-specific indicators. This would usefully support those parts of the reviews that maintain a basic coverage of issues.
 - country-specific indicators and data focusing on issues selected for in-depth analysis. This would usefully support the thematic parts of the reviews. Reviewed countries could volunteer to carry out

⁶ See document ENV/EPOC/SE(2002)1/REV1 "OECD initiative on environmental data quality – A common strategy and plan of action for joint work".

⁷ See document ENV/EPOC/SE(2008)2.

pilot work to test new indicators of particular relevance for their national situation, including indicators to support in-depth analysis of selected issues. This would need to be done before the country reply to the EPR questionnaire and in advance of the review mission.

C. Improve the quality of environmental data for EPRs

- Reviewed countries should make a systematic effort to increase the timeliness of the data and indicators used in the EPR, and to improve the quality and documentation of their replies to the OECD/Eurostat questionnaires. This should be done by paying particular attention to the annual quality assurance of environmental reference series, and by responding to selected sections or tables of the questionnaire at the occasion of the review so as to ensure proper updating and documentation.
- Identify gaps and deficiencies in the reviewed country’s environmental information in advance of the review, taking into account information linked to core and key indicators, as well as to the performance review checklist (as reflected in the country-specific EPR questionnaire and in the recommendations from previous reviews).

C. Improve co-ordination between the EPR process and the WGEIO’s data and indicators work

To ensure coherence in information flows, there should be a greater involvement of WGEIO delegates and national questionnaire co-ordinators during the EPR process (country EPR questionnaire, specific effort to update replies to OECD/Eurostat questionnaire (selected sections or tables), to measure national indicators, etc.).

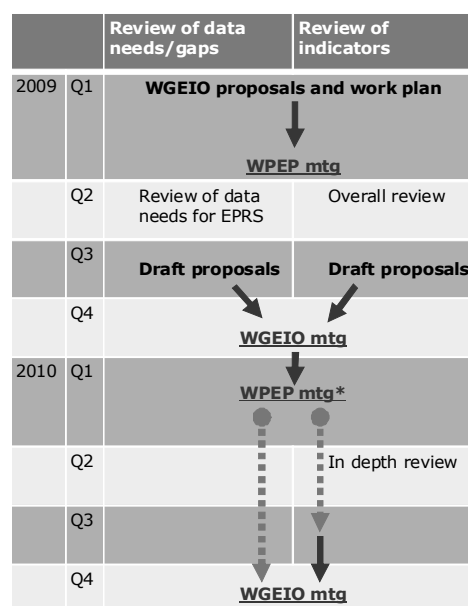
More specifically, reviewed countries should nominate a national co-ordinator for environmental data and indicators to support the EPR process and provide feedback comments on lessons drawn (to the Secretariat, the WPEP, the WGEIO). This national co-ordinator should be a member of the WGEIO and could be the same person as the national questionnaire co-ordinator.

Proposed timelines

28. It is suggested to launch the review of data needs/gaps and of existing indicator sets in 2009 parallel to the preparations for future environmental performance reviews and to the overall review of the questionnaire.

29. The review will be done in consultation with the Working Party on Environmental Performance (WPEP) with an in-depth discussion at the November 2009 meeting of the WGEIO. It will need to consider the practicality of further work in terms of data availability, time and resource constraints.

30. Concrete proposals for implementing the measures described above and a work plan for 2009-10 could be submitted to Delegates of the WPEP for discussion at their next meeting (Paris, 17-19 February 2009). The proposals would build on the present document, on the discussions by the WGEIO and on subsequent written comments sent to the Secretariat. They could benefit from inputs by the small data quality steering group established to review the questionnaire on the state of the environment and the associated data collection process⁷.



ANNEX I. INDICATORS IN OECD ENVIRONMENTAL PERFORMANCE REVIEWS: EXAMPLE

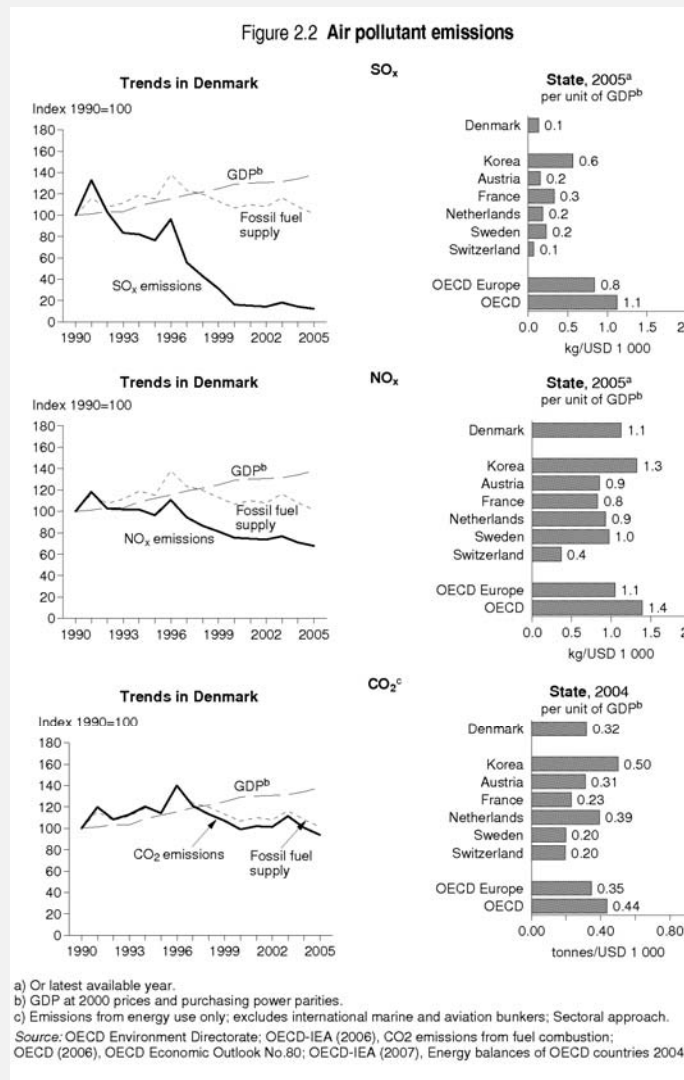
Denmark Air pollution

Context and supplementary information



Total SO₂ emissions were estimated at 22 000 tonnes in 2005, an 84% decrease from their level in 1995. SO₂ emission per unit of GDP, or SO₂ intensity, is now the lowest in the OECD. The large reduction is mainly due to installation of desulphurisation equipment and use of fuels with lower sulphur content in public power and district heating plants. The introduction of a sulphur tax on fuels and emissions since 1996 also contributed to the reduction in SO₂ emissions.

Emissions of CO₂ from energy use only were 51 million tonnes in 2004, having decreased by 11% between 1998 and 2004. CO₂ emissions per unit of GDP were 0.32 in 2004, which is below the OECD-Europe average of 0.35. However, CO₂ emissions per capita (9.4 tonnes/capita) were higher than the OECD-Europe average of 7.8.



Country specific indicators and data



International Core Set Indicators



Assessment



Denmark has continued to register progress in managing air pollution and meeting its national and international objectives. Emissions of SO_x, NO_x and VOCs were strongly decoupled from economic growth during the review period. SO₂ emission intensity (emissions per unit of GDP) is the lowest in the OECD area, partly due to the tax on SO₂ emission introduced in 1996. CO₂ emissions also were strongly decoupled from economic growth, and CO₂ emission intensity is below the OECD-Europe average. Ammonia emissions from the agricultural sector have also decreased. As a result, Denmark successfully reduced emissions of acid substances in recent years.

ANNEX II. MEASURES RELATED TO THE EPR PROCESS INCLUDED IN THE ACTION PLAN ON ENVIRONMENTAL DATA QUALITY

Comparability and harmonisation:

- Make greater use of the OECD performance review process to better understand specific national circumstances, compile contextual information about core data series and facilitate interpretation.

Timeliness and coherence over time:

- Make greater use of the OECD performance review process to get better and more timely information from the reviewed countries (e.g. through a specific effort to reply to the SOE and EPER questionnaires, to measure national sets of Core indicators).

Gaps and new demands:

- Review existing OECD indicator sets with respect to their adequacy for the purposes of joint international work in the OECD with a focus on core and key indicators. This should include the further development of the sets in areas such as biodiversity, toxic contamination, material use, economic environmental aspects, social environmental aspects; including through the development of targets and early warning indicators, and improvements in the quality of existing indicators.
- Make more use of the OECD environmental performance review process to detect new and emerging problems and related information gaps in the reviewed countries.

Cost-effectiveness of the processes underlying data quality efforts:

- Make efforts to better seize the benefits of the OECD environmental performance review process, including:
 - enhanced co-ordination between the various stages of the EPR process and the activities of the WGEIO;
 - greater involvement of WGEIO delegates and national questionnaire co-ordinators in the EPR preparatory stage (country questionnaire, specific effort to update replies to the OECD/Eurostat questionnaire, measurement of national core indicators, etc.).
- The Secretariat should identify gaps and deficiencies in the reviewed country's environmental information, taking into account information linked to core, key and sectoral indicators, as well as to the performance review checklist.
- The reviewed country should give more attention to data and indicators, and in particular:
 - make a systematic effort to increase the timeliness of the data and indicators used in the EPR, and to improve the quality and documentation of its reply to the OECD/Eurostat questionnaires.
 - provide information on relevant national goals and targets to which indicators could be related, and test new indicators of particular relevance for its national situation;
 - nominate a national co-ordinator for environmental data and indicators to support the EPR process and provide feedback comments on lessons drawn (to the Secretariat, the WPEP, the WGEIO).