

## Environment statistics

Environment statistics describe the state and changes of the environment, covering the media of the natural environment (air and climate, water, land, soil and subsoil), the biota within the media, and human settlements. Environment statistics are integrative in nature, measuring human activities and natural events that affect the environment, the impacts of these activities and events, social responses to environmental impacts, and the quality and availability of natural resources.

### Background

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The United Nations Conference on the Human Environment (Stockholm, June 1972) was the first global conference to signal that environmental concerns had increasingly become the subject of mainstream socioeconomic policies. The Conference gave the impetus, both at the national and international levels, to the development of environment statistics as a new field of official statistics. The first initiatives pertaining to the development of environment statistics at the international level stemmed from two meetings of the Economic Commission for Europe (ECE) in 1973. The need for developing international recommendations or guidelines for a system of environment statistics as a long-term objective was recognized.

The second major global conference in the environmental field was the United Nations Conference on Environment and Development (UNCED) (Rio de Janeiro, June 1992) where a groundbreaking consensus was achieved that strategies of sustainable development should integrate environmental issues, supported by environmental and socioeconomic data, into development plans and policies. Specific recommendations by UNCED's Agenda 21 to the United Nations Statistical Division referred to the development and implementation of integrated environmental and economic accounting and indicators of sustainable development.

Ten years later the World Summit on Sustainable Development (WSSD) (Johannesburg, August 2002) put the emphasis on reaching specific targets in specific time frames and monitoring progress, thus reaffirming the need for bridging the gap in mechanisms and instruments such as data, statistics, indicators and

integrated information systems, that measure and track progress.

Given the global environmental concerns, a draft programme of international work in environment statistics was first submitted to the Statistical Commission at its eighteenth session in 1974.

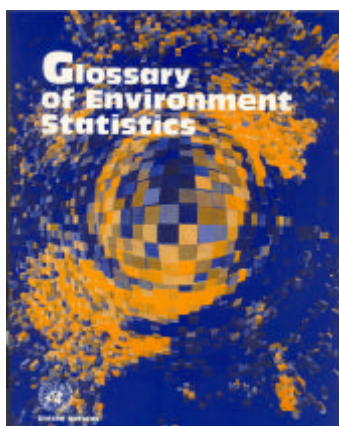
### Methodological Work

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Various national and international efforts were made during the 1970s toward developing a system or framework for environment statistics. These efforts were surveyed by the United Nations Statistics Division and showed that countries differed widely in developing and organizing environment statistics. Four basic approaches emerged which were the media approach, the stress-response approach, the resource accounting approach and the ecological approach. The results were published in the *Survey of Environment Statistics: Frameworks, Approaches and Statistical Publications* in 1982.

Based on national and international work as described in the Survey, UNSD developed a *Framework for the Development of Environment Statistics (FDES)*, published in 1984, which presented a systematic approach to the organization and development of environment statistics. The FDES is a combination of the media and stress-response approaches. It was accompanied by two reports which described detailed sets of statistical variables within the FDES entitled *Concepts and Methods of Environment Statistics: Human Settlements Statistics* published in 1988 and *Concepts and Methods of Environment Statistics: Statistics of the Natural Environment* published in 1991. The *Glossary of Environment Statistics*, a quick reference tool for terms and definitions relevant to environmental data production and use, was published by UNSD in 1997.

While work at UNSD concentrated on conceptual frameworks, the ECE Statistics Division pioneered work on standard statistical classifications in different areas of environment statistics and their implementation in pilot data collections for the ECE region. Classifications were developed for land use, water use, ambient air quality, surface freshwater and marine water quality, wastes, fauna, flora and habitat statistics, and environmental protection activities. Environment statistics programmes also started at OECD and later at Eurostat, focusing on data collection and indicator development.



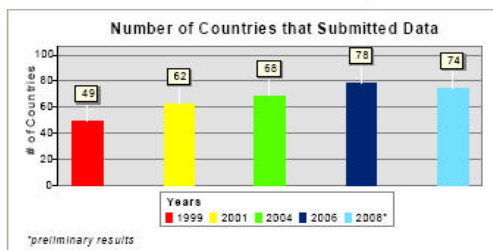
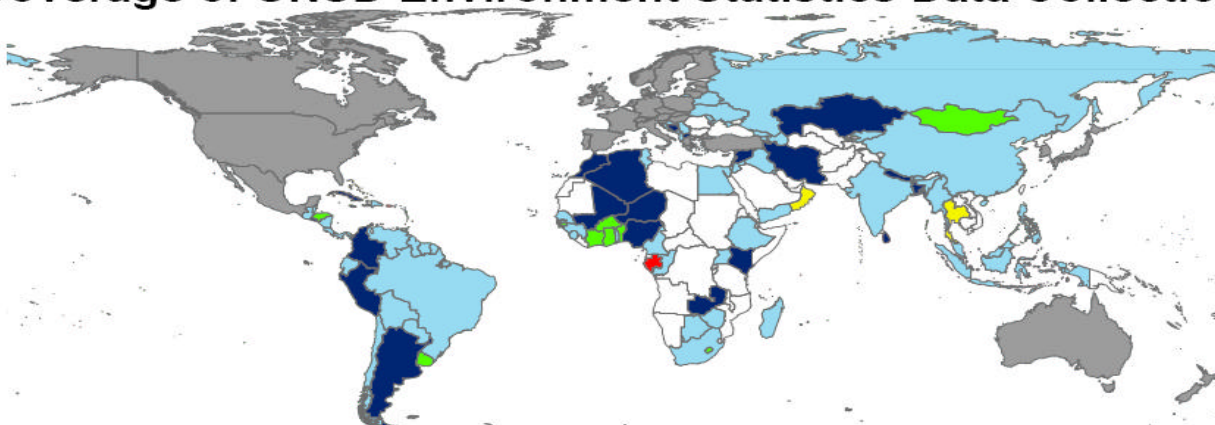
Current methodological work includes the development of the International Recommendations for Water Statistics that will provide an agreed list of variables, concepts, definitions, classifications and tabulations for water statistics.

A new and important component of the methodological work is the development of a framework and agenda for climate change statistics. As a first step, a high level international Conference on Climate Change and Official Statistics was held in Oslo from 14 to 16 April 2008. A second Conference on Climate Change, Development and Official Statistics in the Asia-Pacific Region was convened in Seoul from 11 to 12 December 2008 and discussed the regional relevance of the recommendations of the Oslo Conference. It also contributed to the shaping and refining of a roadmap for the development of official climate change statistics at the national, regional and the international level. The roadmap will be submitted to the 40<sup>th</sup> session of the UN Statistical Commission in February 2009 for further deliberation.

### Data Collection and Dissemination

The Statistical Commission in 1995 approved the proposal by the Intergovernmental Working Group on the Advancement of Environment Statistics that UNSD carry out a global compilation of environmental indicators from national statistical services, based on a core set of indicators. UNSD embarked on the collection of environment statistics from national statistical offices in 1999, covering all non-OECD countries. The data collection has since been established on a biennial basis as part of UNSD's data collection programme. UNEP joined the data collection in 2004. The most recent round of data collection took place in May 2008. Preliminary results indicate that 74 countries have submitted data.

## Coverage of UNSD Environment Statistics Data Collection



#### Most Recent Response by Year



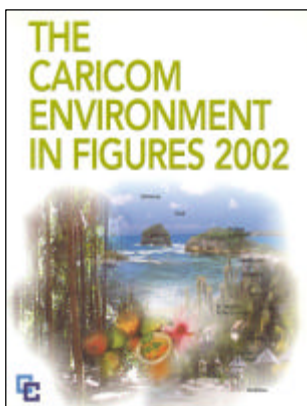
The UNSD/UNEP Questionnaire on Environment Statistics covers the areas of water, air, land and waste. The last two data collections focused on water and waste. Following a thorough validation process selected data sets, together with data from OECD, Eurostat and other sources, are published on the UNSD Environment Statistics website.

Response rates vary strongly by region. The best response rates are from Latin America and the Caribbean and Eastern Europe. Africa, Western Asia, Asia and the Pacific show low response rates.

While the number of countries responding with data to the Questionnaire has increased since 1999, many countries still have only scattered data and are able to reply only on a limited number of variables. Continuous efforts in training and capacity building are needed to improve the situation in countries.

## Technical Cooperation

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UNSD has organized and/or facilitated several international, regional, sub-regional and national training workshops, meetings and seminars in the field of environmental statistics and indicators. In addition, technical assistance in environment statistics through statistical capacity building

projects was provided in the CARICOM, ESCWA and ECOWAS regions. Within these projects, several activities were undertaken including workshops, inter-country study tours, and direct technical assistance to selected countries. A major output of the CARICOM project was a regional publication entitled *The CARICOM Environment in Figures 2002*. The ESCWA and ECOWAS projects resulted in the publication of detailed assessments of the situation of environment statistics in the countries of these two regions. As part of the ECOWAS project, a strategic *Framework for Strengthening Capacity in the Development and Institutionalisation of Environment Statistics in the ECOWAS Region* was also developed and was endorsed by the ECOWAS Technical Commission on Statistics.

UNSD is currently developing a long-term training programme to assist countries in establishing

environment statistics as part of their official statistics system. Another ongoing activity that covers a series of training workshops has been focusing on the development of an agreed core set of environmental indicators for Africa. Further workshops will be conducted in other sub-regions in Africa and in other parts of the world.

## Coordination

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The Statistical Commission at its thirty-fourth session empowered UNSD to convene an Intersecretariat Working Group on Environment Statistics to coordinate and harmonize the development of standards, methods, data collection, dissemination, training and capacity building programmes in environment statistics and thus firmly anchor environment statistics as part of official statistics both at the national and international levels. The permanent members of the Working Group are those organisations that have well-established international programmes on environment statistics (current members are UNSD, UN-ECE, UNEP, OECD, Eurostat and FAO). The Working Group also works through thematic sub-groups such as the Subgroup on Water Statistics which was established to foster closer collaboration between the parties involved in the collection and compilation of statistics on the quantitative and qualitative aspects of freshwater resources and their use. Another subgroup on land use and land cover statistics will be set up in 2009 to work on the harmonization of classifications used in these subject areas. The Working Group organized the International Work Session on Water Statistics in 2005 and pooled resources for several training and capacity building activities.

## Information on the Web

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Information on environment statistics can be found at <http://unstats.un.org/unsd/environment/default.htm>

## Contact address

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