

Assessments and Reviews of environmental information systems

Main outcome and recommendations

9th SPECA PROJECT WORKING GROUP ON STATISTICS (PWGS)

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Statistics and Decision-Making

- Coherent, reliable and internationally comparable statistics are essential tools in modern societies
- Effective economic, social and environmental decision-making relies on regular supply of timely and accurate statistical information and indicators
- Satisfying these needs involves constant interaction between users and statisticians
- New policies drive improvements in statistical production, both in terms of improving existing indicators and creating new ones
- High quality and internationally comparable environmental statistics and indicators should contribute to tracking and evaluating progress toward the sustainable development goals: Rio +20 and Post-2015 Agenda

Challenges for Environment Statistics

- The demand for environment statistics is increasing rapidly with new requirements on the state of the environment and natural resources
- Environment statistics cover a wide range of information and are interdisciplinary (cross-cutting)
- Primary data sources for environment statistics are dispersed over a variety of data producers and different methodologies are used in their compilation
- Specific statistical and environmental expertise, scientific knowledge, institutional development capacities, and adequate resources are necessary
- Environmental information systems are cross-cutting statistics that would benefit from more integrated and streamlined statistical production processes: Modernisation of statistical production

Data Sources for Environment Statistics

Data originate from a wide range of sources and are collected by many different institutions:

- **Statistical surveys**
- **Administrative records** of ministries and agencies
- **Remote sensing and monitoring systems** (big data)
- **Scientific research**
- **Official statistics** (e.g. national accounts, household statistics...)



Environmental Information System

- **Environmental data** are large amounts of unprocessed observations and measurements about the environment and related processes
- **Environment statistics** describe, aggregate and structure environmental data according to statistical methods, standards and procedures
- **Environmental indicators** are used to synthesize and present complex statistics with the objective to summarise, simplify and communicate information (dashboard)
- **Environment accounting** reorganise and “monetarise” relevant environment statistics according to stocks, flows and assets facilitating the analysis of relationships between the economy and the environment based on national accounting principles (2008 SNA)

Assessment of National Capacities

Three main assessment frameworks to review capacities of SPECA countries to produce environment statistics, indicators and accounting systems:

➤ **Assessment of Environmental Statistics and SEEA**

Conducted in 2007 under the UNSD Framework for the Development of Environment Statistics (FDES)

➤ **Environmental Monitoring and Assessment**

Based on UNECE Guidelines for the application of environmental indicators in EECCA countries: Environment for Europe (EfE) Initiative

➤ **Adapted Global Assessments of National Statistical Systems**

Conducted recently in most EECCA countries jointly by EFTA/Eurostat/UNECE and in Mongolia (EFTA/UNESCAP/UNECE)

FDES /1

The UNSD Framework for the Development of Environment Statistics (FDES) was published in 1984 and revised for the last time in 2013:

- FDES is a flexible, multi-purpose tool that adapts to the needs and priorities of countries
- FDES helps to identify gaps in the compilation of environment statistics
- FDES is coherent with other existing statistical frameworks and classification
- To some extent, FDES supports the collection of data necessary for the compilation of SEEA

FDES ^{1/2}

FDES is organised into various components and sub-components:

1. Environmental conditions and quality
2. Environmental resources and use
3. Residuals
4. Extreme events and disasters
5. Human settlements and environmental health
6. Environment protection, management and engagement

FDES organises environment statistics for all components into three sets:

- Core Set: high priority and relevance for most countries
- Second Set: high priority and relevance, but are not available in many countries or need some further investment to be compiled
- Third Set: statistics and indicators with less priority



Environmental Monitoring and Assessment /1

UNECE Guidelines for the application of environmental indicators in EECCA countries was published in 2007 and revised in 2013 with the objective to:

- Improve systems of environmental monitoring and reporting for the purpose of environmental decision-making and public awareness
- Make national environment assessments comparable with those of other UN member states
- Facilitate data gathering for future environmental assessment reports conducted regularly by the UNECE in EECCA countries
- Cooperation with the European Environment Agency (EEA), Eurostat, UNEP, International Energy Agency (IEA) and other international stakeholders

Environmental Monitoring and Assessment ^{1/2}

Selected indicators for the UNECE guidelines had to be already proposed by other major international organisations:

- Sustainable development indicators of the United Nations Commission on Sustainable Development
- Indicators from the UNSD/UNEP Questionnaire on Environment Statistics (FDES)
- Indicators for the second environmental performance reviews (EPR) under the UNECE review programme
- The Kiev assessment indicators and the EEA core set of indicators
- World Health Organization (WHO)/Europe proposal for a core set of European environmental health indicators

Environmental Monitoring and Assessment ^{/3}

The 49 Indicators are organised into the following components:

- A. Air pollution and ozone depletion
- B. Climate change
- C. Water
- D. Biodiversity
- E. Land and soil
- F. Agriculture
- G. Energy
- H. Transport
- I. Waste
- J. Environmental financing

Adapted Global Assessment (AGA) /1

The main objectives of AGAs conducted in EECCA countries were to:

- Provide a clear picture of the state of development of official statistics in a country
- Set objectives for the development of official statistics according to international standards, including the Fundamental Principles of Official Statistics
- Monitor the progress of countries in the development of their national statistical capacities

AGAs cover not only the State Statistics Committee but activities and deliveries of the entire National Statistical System (NSS)

Adapted Global Assessment (AGA) ^{1/2}

AGAs covered the following elements:

- Legal and institutional framework of the NSS
- Technical and organisational capacity to produce and disseminate official statistics:
- Compliance of statistical output with international standards, norms and recommendations

Final AGA reports provided recommendations for the sustainable development of each NSS that ideally should be incorporated into capacity building programmes and strategies

Outcome of Assessment and Reviews /1

Assessment and reviews conducted under the FDES, EfE and AGAs provided rather similar conclusions and recommendations:

- Enhance cooperation and collaboration among all stakeholders, and in particular, with other producers and providers of environmental data and statistics
- Promote among users (advocacy) the development of high quality and internationally comparable environmental indicators and statistics
- Incorporate activities and objectives related to environment statistics into strategic and operational work programmes
- Give higher priority and invest more human and financial resources within environmental statistics

Outcome of Assessment and Reviews ¹²

- Set-up an organisational unit within the Statistics Committee in charge of environmental statistics and indicators
- Adopt the latest internationally agreed methodologies, standards, recommendations, measurement units and nomenclatures for the compilation of environment statistics
- Start to gradually compile experimental SEEA that would not only allow to assess remaining gaps in terms of available information, but also to review the quality of existing environmental data and statistics ... and thus
- Compile national accounts, including Input-Output tables, according to the 2008 SNA methodology

Outcome of Assessment and Reviews ¹³

- Proceed with an exhaustive inventory of all existing primary data and official statistics that could be further processed for the compilation of environmental indicators and statistics
- Provide full access to producers of official statistics to environmental administrative information
- Put in place mechanisms to systematically control the quality of primary environmental data and in particular of administrative data
- Disseminate environment statistics through an integrated dissemination platform
- If needed request the support of the international community (technical cooperation and assistance)



Thank you for attention

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