

The 2013 Framework for the Development of Environment Statistics (FDES)*

A Framework for the Development of Environment Statistics (FDES) was first published in 1984 by the United Nations Statistics Division (UNSD). The 1984 FDES has been a useful framework for guiding countries in the development of their environment statistics programmes. It relates the components of the environment (Flora, Fauna, Atmosphere, Water Land and Soil, Mineral and Energy Resources and Human Settlements) to four information categories namely: (1) Social and economic activities and natural events; (2) Environmental impacts of activities and events; (3) Responses to environmental impacts; and, (4) Stocks and inventories.

During the time since its publication there have been many scientific, political, technological, statistical, experience-based developments and more particularly environmental concerns which suggested that the FDES was ready for revision.

As a consequence, the United Nations Statistical Commission, at its 41st session (23-26 February 2010), endorsed a work programme and the establishment of an Expert Group for the revision of the FDES and the development of a Core Set of Environment Statistics. In its forty fourth (44th) session, the United Nations Statistical Commission endorsed the revised FDES as a useful tool to adequately respond to the increasing demand for information in the follow-up to Rio+20 and the post 2015 development agenda (including Sustainable Development Goals).

The FDES is based on a conceptual foundation that considers people and their demographic, social and economic activities (the human sub-system) as integral parts of, and interacting with, the environment.

FDES 2013 is a flexible, multi-purpose conceptual and statistical framework that is comprehensive and integrative in nature and marks out the scope of environment statistics. It provides an organizing structure to guide the collection and compilation of environment statistics at the national level, bringing together data from the various relevant subject areas and sources. It is broad, comprehensive and integrative. It covers the issues and aspects of the environment that are relevant for policy analysis and decision making, which can further be applied to inform about cross-cutting issues such as climate change.

It is expected to contribute significantly to improved monitoring and measurement of the environmental dimension of sustainable development and to the post-2015 development agenda. The use of the FDES 2013 in national statistical systems will enhance developments in this field of statistics, as it is both a multi-purpose and flexible tool that can be tailored to specific environmental policy concerns and priorities of the countries, as well as accommodate their different levels of statistical development.

The FDES 2013 covers issues and aspects of the environment that are relevant for analysis, policy and decision making. It is designed to assist countries in the formulation of environment statistics programmes by: (i) delineating the scope of environment statistics and identifying its constituents; (ii) contributing to the assessment of data requirements, sources, availability and gaps; (iii) guiding the development of multipurpose data collection processes and databases; and (iv) assisting in the co-ordination and organization of environment statistics, given the inter-institutional nature of the domain.

*Lifted from United Nations 2013 Framework for the Development of Environment Statistics (FDES)

It organizes environment statistics into a structure of six components (see Figure 1). The first component brings together statistics related to the conditions and quality of the environment and their change. The second component group together statistics related to environmental resources and their use (ecosystem provisioning services, land and subsoil resources). The third component includes statistics related to the use of regulating services of the environment for the discharge of residuals from production and consumption processes. Statistics related to extreme events and disasters (both natural and technological) and their impact are covered by the fourth component. The fifth component brings together statistics related to human settlements and environmental health. The sixth component group statistics relevant to societal responses and economic measures aimed at protecting the environment and managing environmental resources. Environmental conditions and quality (Component 1) is at the center of the FDES. The other five components have been set up based on their relationship with the central Component 1.

Each of the components is broken down into subcomponents that in turn contain relevant statistical topics. The statistical topics represent the measurable aspects of the components of the FDES taking into account the types and sources of the data needed for their description. The final level contains the actual individual environment statistics.

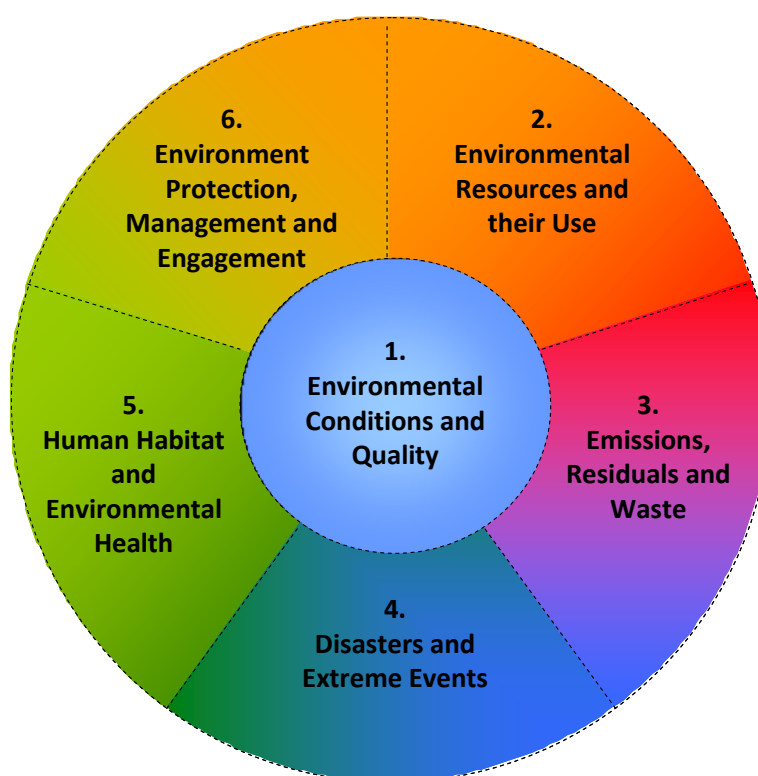


Figure 1. Structure of FDES 2013

The FDES lists the most important environment statistics to describe the statistical topics thus providing guidance to countries developing national environment statistics programs. The statistics included in the Basic Set are comprehensive but neither exhaustive nor the only possible ones for assessment of the statistical topics. They should be considered a set of statistics which can assist in making decisions on priorities for statistical development. In order to do so, the Basic Set of Environment Statistics has been set up following a progression of three tiers, based on the level of relevance, availability and methodological development of the statistics.

Tier 1 is the Core Set of Environment Statistics which represents a broad consensus of opinion on the pertinence and feasibility of these statistics; as such, it is intended to foster collection, coordination and harmonization of environment statistics at the national, regional and international levels. The objective of the Core Set is to serve as an agreed, limited set of environment statistics that are of high priority and relevance to most countries.

Tier 2 includes environment statistics which are of priority and relevance to most countries but need more significant investment in time, resources or methodological development, so countries are recommended to consider producing them in the medium-term.

Tier 3 includes environment statistics which are either of less priority or require significant methodological development, so countries are recommended to consider producing them in the long-term.

The statistical topics in the FDES, and the underlying environment statistics in the Core Set of Environment Statistics and the Basic Set of Environment Statistics, can be combined and reorganized in different ways according to specific analytical needs and policy requirements e.g., climate change, energy and the environment, agriculture and environment, sustainable management of natural resources or environmental impacts of specific activities, i.e., tourism, poverty, manufacturing, etc. This is an inherent aspect of the design of the FDES as a flexible multi-purpose framework.

Compilation of environment statistics focused on a particular cross-cutting issue should commence with the understanding of the scientific background, underlying processes and cause-effect relationships. Furthermore, it is necessary to analyze and understand its relevance to the country and to particular sub-national areas, productive sectors and social groups, its national policy implications and commitments, as well as the institutional aspects and the international context. The statistics for describing the selected cross-cutting issues should be organized based on a logical sequence of events that illustrate the relevant related processes. These sequences resemble the occurrence of events, according to the nature of the issue itself. In each case, the correspondence of these sequences with the FDES structure is described.