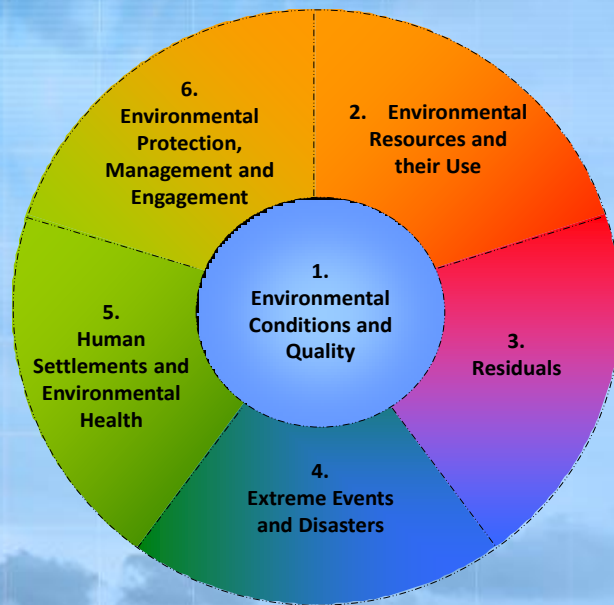
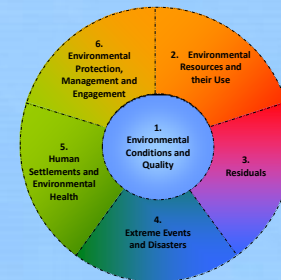


Components, sub-components and statistical topics of the FDES 2013

Component 6: Environmental Protection, Management and Engagement



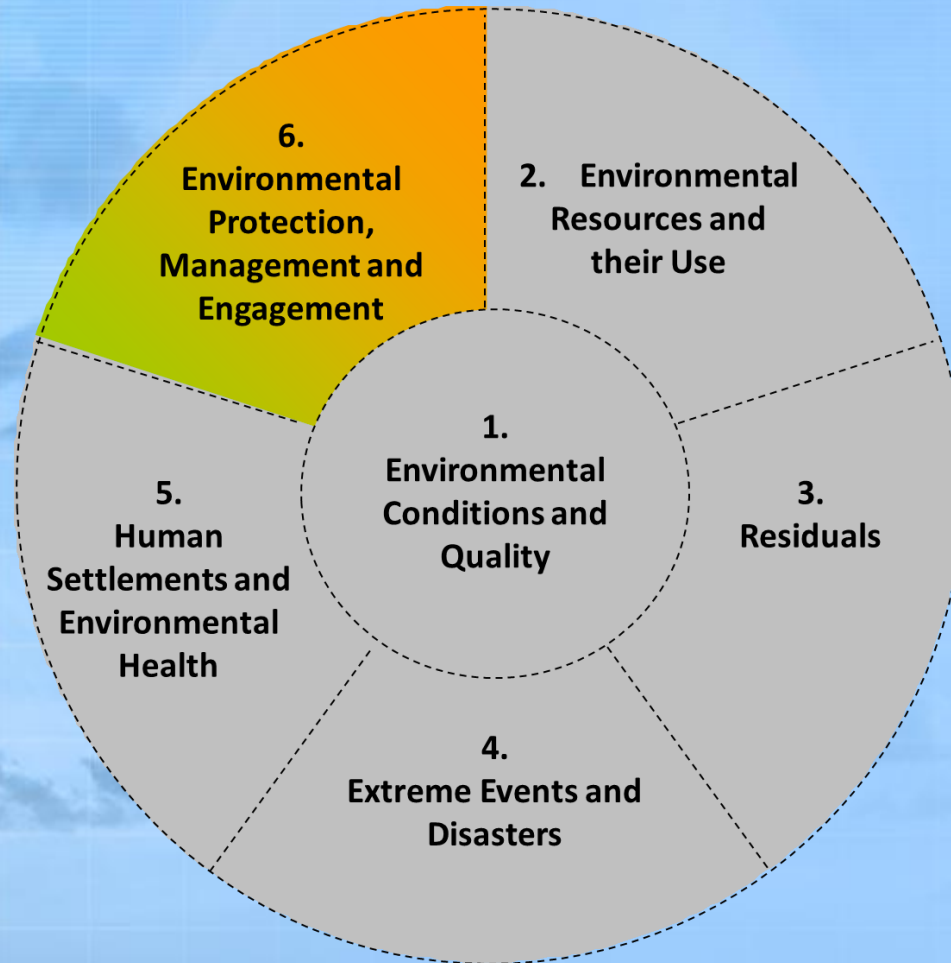
Workshop on Environment Statistics in support of the implementation of the Framework for the Development of Environment Statistics (FDES 2013) (Lomé, Togo, 19-23 October 2015)



- This presentation has been elaborated by the Environment Statistics Section of the United Nations Statistics Division.
- It is based on Chapter 3 of the Framework for the Development of Environment Statistics (FDES 2013).



Component 6: Environmental Protection, Management and Engagement





Component 6: Environmental Protection, Management and Engagement

- ❖ This component organizes information on environmental protection and resource management expenditure to improve the environment and maintain ecosystem health.
- ❖ Statistics on environmental governance, institutional strength, enforcement of regulations and extreme event preparedness are also considered.
- ❖ This component also includes information on a wide variety of programmes and actions to increase awareness, including environmental information and education, as well as private and community activities aimed at diminishing environmental impacts and improving the quality of local environments.





Component 6: Overview

Component 6 Environmental Protection, Management and Engagement	Sub-Component 6.1 Environmental Protection and Resource Management Expenditure <i>(2 topics, 8 statistics)</i>	Topic 6.1.1: Government environmental protection and resource management expenditure Topic 6.1.2: Corporate, non-profit institution and household environmental protection and resource management expenditure
	Sub-Component 6.2 Environmental Governance and Regulation <i>(3 topics, 19 statistics)</i>	Topic 6.2.1: Institutional strength Topic 6.2.2: Environmental regulation and instruments Topic 6.2.3: Participation in MEAs and environmental conventions
	Sub-Component 6.3 Extreme Event Preparedness and Disaster Management <i>(2 topics, 10 statistics)</i>	Topic 6.3.1: Preparedness for natural extreme events and disasters Topic 6.3.2: Preparedness for technological disasters
	Sub-Component 6.4 Environmental Information and Awareness <i>(4 topics, 13 statistics)</i>	Topic 6.4.1: Environmental information Topic 6.4.2: Environmental education Topic 6.4.3: Environmental perception and awareness Topic 6.4.4: Environmental engagement



Sub-Component 6.1: Environmental Protection and Resource Management Expenditure

Sub-Component 6.1

**Environmental
Protection and
Resource
Management
Expenditure**



Topic 6.1.1:
Government
environmental protection
and resource
management
expenditure

Topic 6.1.2:
Corporate, non-profit
institution and household
environmental protection
and resource
management
expenditure





Sub-Component 6.1: Environmental Protection and Resource Management Expenditure

- ❖ Expenditure on environmental protection and resource management may be used as one measure of public and private engagement in protecting, restoring and managing the environment towards more sustainable use.
- ❖ Monitoring and tracking the level of environmental protection and resource management expenditure is important for policy makers, analysts and civil society in order to determine the current and desired levels of engagement and commitment from both government and the private sector.





Sub-Component 6.1: Environmental Protection and Resource Management Expenditure

- ❖ Environmental protection activities include the protection of ambient air and climate, wastewater management, waste management, protection and remediation of soil, groundwater and surface water, noise and vibration abatement, protection of biodiversity and landscapes, protection against radiation, research and development for environmental protection and other environmental protection activities.
- ❖ Resource management activities (RMA) include, but are not limited to, reducing withdrawals of natural resources (including through the recovery, reuse, recycling, and substitution of natural resources); restoring natural resource stocks (via increases or recharges of natural resource stocks); the general management of natural resources (including monitoring, control, surveillance and data collection); and the production of goods and services used to manage or conserve natural resources.
 - ❖ They cover the management of mineral and energy resources; timber resources; aquatic resources; other biological resources; water resources; research and development activities for resource management; and other resource management activities.



Sub-Component 6.1: Environmental Protection and Resource Management Expenditure

- ❖ The Classification of Environmental Protection Activities (CEPA) has been in place since 2000, covering the classes of activities pertaining to environmental protection.
- ❖ In addition to classifying environmental protection and resource management expenditures according to their purpose, an important distinction should be made between those who bear the expenditures. They may be the general government, corporations, non-profit institutions and households.



Sub-Component 6.1: Environmental Protection and Resource Management Expenditure

Topic 6.1.1: Government environmental protection and resource management expenditure

- ❖ This topic includes government expenditure intended primarily to protect the environment and manage resources.
- ❖ Government (local, regional and central) expenditures to protect the environment are usually calculated by identifying and aggregating the expenditures considered to be primarily for environmental protection and resource management purposes.
 - These expenditures may be found by examining official government finance statistics in government budgets and/or administrative reports on actual government expenditure.
- ❖ Main institutional partners: official institutions in charge of reporting government expenditure and the national and sub-national level institutions (e.g., municipalities).
- ❖ The resulting statistics will usually be at the national level and can sometimes be disaggregated by functional governmental entities or level of government.
- ❖ Within the NSO, national accounts and government finance statistics also contribute to the development of government expenditure statistics. The statistics are expressed in monetary units, typically with annual periodicity, depending on the availability of resources.



Sub-Component 6.1: Environmental Protection and Resource Management Expenditure

Topic 6.1.2: Corporate, non-profit institution and household environmental protection and resource management expenditure

- ❖ Supplementary to the previous topic, this one includes corporate, non-profit institution and household environmental expenditure whose primary aim is to protect the environment and manage its resources.
- ❖ Statistics on environmental protection and resource management expenditure for corporations, non-profit institutions and households usually require the use of specific surveys of establishments in different sectors and industries.



Sub-Component 6.2: Environmental Governance and Regulation

**Sub-Component
6.2
Environmental
Governance and
Regulation**



Topic 6.2.1:
Institutional strength

Topic 6.2.2:
Environmental regulation
and instruments

Topic 6.2.3:
Participation in MEAs
and environmental
conventions





Sub-Component 6.2: Environmental Governance and Regulation

- ❖ To obtain a holistic view of a country's efforts towards sustaining and protecting the environment, policy makers, analysts and civil society require statistics on environmental governance and regulation at the national level.
- ❖ The magnitude of these activities can inform about the extent of institutional development, availability of resources, and the existence and enforcement of regulatory and market instruments whose primary purpose is to protect, regulate and manage the changing environment.
- ❖ Content:
 - Successful national environmental governance requires institutional strength as well as regulatory capabilities. Therefore, this sub-component includes setting standards and norms, providing adequate resources and ensuring the ability to enforce those standards and norms.
 - Additionally, a nation's participation in MEAs and global environmental conventions are also included in this sub-component to describe national participation in the global commitment to protect the environment.
 - Stakeholders need to be made aware of, and must sometimes also be given incentives to comply with, norms and standards. In this respect, information, education and perception elements are also included in this sub-component.
 - Sector or industry-based voluntary agreements are also included.



Sub-Component 6.2: Environmental Governance and Regulation

Topic 6.2.1: Institutional strength

- ❖ This topic includes statistics on environmental institutions and their resources, organized according to the main government environmental authority (name, budget and staff), and other relevant environmental institutions (names, budget and staff).
- ❖ Main institutional partners include the environmental authority (e.g., Ministry of Environment or equivalent institution) and other relevant environmental institutions.
- ❖ The information to be produced for this topic should be mainly descriptive, but may also include monetary statistics on budgets. It is usually compiled at the national level but should also cover sub-national levels and natural resources (e.g., rivers, forests).





Sub-Component 6.2: Environmental Governance and Regulation

Topic 6.2.2: Environmental regulation and instruments

- ❖ This topic refers to policy responses to regulate and establish acceptable limits for protecting the environment and human health.
- ❖ It entails both direct regulatory and economic instruments.
 - Direct regulatory instruments include environmental and related laws, standards, limits and their enforcement capacities. They can be measured using statistics on regulated pollutants, licensing systems, applications for licences, quotas for biological resource extraction, and budget and the number of staff dedicated to enforcement of environmental regulations.
 - Economic instruments may comprise the existence and number of green/environmental taxes, environmental subsidies, eco-labelling and certification and emission permits.
- ❖ Information to be produced for this topic will be mainly descriptive, for example, a list of regulated pollutants and their description, but may also include quantitative data on budgets or emission permits traded.
- ❖ Depending on the national institutional arrangement, main partners in this context include:
 - the environmental authority and other environmentally relevant authorities, along with other institutions that may enforce environmental regulations (e.g., local governments or sectoral authorities).





Sub-Component 6.2: Environmental Governance and Regulation

Topic 6.2.3: Participation in MEAs and environmental conventions

- ❖ This topic includes information on a country's participation in MEAs and other global environmental conventions, including, for example, the Montreal and Kyoto protocols.
- ❖ The information to be produced on this topic is mainly descriptive, although comparable time series can also be derived from these statistics.
- ❖ The main institutional partners include the environmental authority, along with other institutions that may be responsible for MEAs or environmental conventions.

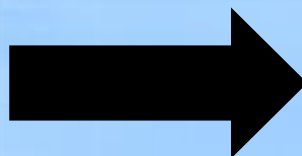




Sub-Component 6.3: Extreme Event Preparedness and Disaster Management

**Sub-Component
6.3**

**Extreme Event
Preparedness
and Disaster
Management**



Topic 6.3.1:
Preparedness for natural
extreme events and
disasters

Topic 6.3.2:
Preparedness for
technological disasters





Sub-Component 6.3: Extreme Event Preparedness and Disaster Management

- ❖ This topic includes statistics describing extreme event preparedness and disaster management will differ by country, based on the type of extreme event and disaster that usually occurs or may occur.
- ❖ In general, these statistics include the existence and strength of the disaster management agency's facilities and infrastructure.
- ❖ Extreme event preparedness and disaster management expenditure should also be captured under this sub-component. It refers to any public or private expenditure whose primary purpose is to help inform, educate and protect the population from extreme events and disasters.
 - Includes expenditure on: establishing and maintaining warning systems, monitoring stations and systems, signals, communication systems, emergency centres and shelters.





Sub-Component 6.3: Extreme Event Preparedness and Disaster Management

Topic 6.3.1: Preparedness for natural extreme events and disasters

- ❖ Relevant information may include: the existence and description of national disaster plans; the type and number of shelters in place; the type and number of internationally certified emergency and recovery management specialists; the number of volunteers; and the quantity of first aid, emergency supplies and equipment stockpiles.
- ❖ The existence of early warning systems for all major hazards, and expenditure on disaster prevention, preparedness, clean-up and rehabilitation, are also important data requirements.
- ❖ Common data sources are national and sub-national authorities responsible for disaster management and assistance as well as emergency management agencies and municipalities.
- ❖ Global and regional meteorological forecasting agencies can also provide useful data on the spatial scale and likelihood of a crisis.
- ❖ NSOs may provide relevant population data, while authorities responsible for flood and drainage control may provide pertinent flood and drainage control information.
- ❖ Close agro-meteorological collaboration can also provide effective and actionable joint forecast information from agriculture ministries and counterparts in meteorological agencies, complementing data from each of their domains.



Sub-Component 6.3: Extreme Event Preparedness and Disaster Management

Topic 6.3.2: Preparedness for technological disasters

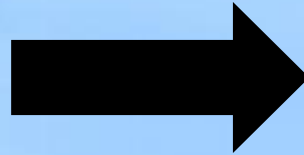
- ❖ Preparedness for technological disasters can be quite different from natural extreme event and disaster preparedness.
 - This is because technological disasters usually arise at an industrial location or on a mode of transportation where the corporate sector is often the actor with a vested interest or legal obligation in contributing to preparedness and clean-up.
- ❖ Measures of corporate disaster preparedness vary according to size of enterprise, its location and historical profile for technological disasters.
- ❖ Relevant information may include:
 - the existence of an emergency management plan, and expenditure on disaster prevention, preparedness, clean-up and rehabilitation.





Sub-Component 6.4: Environmental Information and Awareness

Sub-Component 6.4
Environmental
Information and
Awareness



Topic 6.4.1:
Environmental
information

Topic 6.4.2:
Environmental
education

Topic 6.4.3:
Environmental
perception and
awareness

Topic 6.4.4:
Environmental
engagement



Sub-Component 6.4: Environmental Information and Awareness

- ❖ This sub-component covers statistics about environmental information and diverse processes that contribute to increasing social awareness of environmental issues, thus promoting pro-environmental engagement and actions by the public and decision-makers at both local and national levels.
- ❖ The statistics in this sub-component are relevant for policy makers, analysts and civil society to understand, for example:
 - which information and education programmes are in place in their country,
 - whether these activities are increasing or decreasing over time,
 - the potential impact of information and education on public perception, awareness of environmental issues and social engagement in pro-environmental actions.
- ❖ An understanding of environmental perceptions among the general public and key local constituencies can also help policy makers to shape local and national environmental policies and programmes.





Sub-Component 6.4: Environmental Information and Awareness

Topic 6.4.1: Environmental information

- ❖ Environmental information describes quantitative and qualitative facts representing the state of the environment and its changes, as described in FDES.
 - Quantitative environmental information is generally produced in the form of data, statistics and indicators, and is generally disseminated through databases, spreadsheets, compendia and yearbooks.
 - Qualitative environmental information consists of descriptions (e.g., textual or pictorial) of the environment or its constituent parts that cannot be adequately represented by accurate quantitative descriptors.

Geographically referenced environmental information provides facts on the environment and its components using digital maps, satellite imagery and other sources linked to a location or map feature.

- ❖ This topic may include information on the characterization of:
 - i. National environmental information systems (e.g., existence of publicly accessible systems and number of users);
 - ii. Environment statistics programmes within national statistical systems (e.g., description of programme, number and type of environment statistics products, inter-agency platforms or committees).





Sub-Component 6.4: Environmental Information and Awareness

Topic 6.4.1: Environmental information

- ❖ The production and dissemination of environment statistics within national statistical systems makes it possible to produce robust environmental and sustainable development indicators (SDIs) to substantiate reports on the changing environment and guide policy making.
- ❖ Determining which institution is responsible for producing which types of information can be helpful in identifying information gaps, areas of overlapping responsibility or efforts, and areas where efficiency gains can be achieved.
- ❖ The main institutional partners here include the environmental authority and the NSO, along with other institutions that may produce databases containing environmental information and reports containing environmental statistics and indicators.
- ❖ Information to be produced on this topic is primarily descriptive but may also include quantitative data on budgets. It is usually compiled at the national level.





Sub-Component 6.4: Environmental Information and Awareness

Topic 6.4.2: Environmental education

- ❖ This topic may include but is not limited to the characterization of environmental education programmes, the specific actions associated with them and their results, in terms of the number of people participating in such programmes.
- ❖ Statistics on environmental education may include the allocation of resources for education, the number and description of education programmes in schools and the number of students pursuing environment-related higher education.
- ❖ The main institutional partners include the ministry of education, ministry of environment or equivalent institution, and the NSO. They also include other institutions, such as universities and non-profit institutions, that develop and deliver environmental education curricula.
- ❖ The information to be produced for this topic:
 - comes primarily from administrative records
 - is usually qualitative in nature, but may also include monetary data on resources spent
 - is usually compiled at the national and sub-national levels.





Sub-Component 6.4: Environmental Information and Awareness

Topic 6.4.3: Environmental perception and awareness

- ❖ This topic:
 - includes the perceptions and awareness of the environment on the part of the general public or a specific group through the measurement of knowledge, attitudes, values and actions.
 - It also encompasses perceptions of governments' environmental policies to address pressing environmental concerns.

- ❖ The main institutional partners include:
 - the environmental authority and the NSO, along with other institutions that may conduct surveys of environmental perceptions (e.g., local governments or polling firms).

- ❖ Statistics
 - that fall under this topic are primarily qualitative and are compiled at both the sub-national and national levels.
 - are produced through surveys designed for data collection on this topic.





Sub-Component 6.4: Environmental Information and Awareness

Topic 6.4.4: Environmental engagement

- ❖ Environmental engagement involves the transformation of perceptions and attitudes into concrete, pro-environmental actions.
- ❖ Statistics may include:
 - the number and capacity of pro-environmental NGOs, such as the number of institutions and amount of financial and human resources. This information is usually available.
 - the number of pro-environmental activities and pro-environmental programmes.
- ❖ Data about environmental participation and actions are based on administrative records or are obtained from surveys, and are usually produced at the sub-national level.





Questions, comments for Component 6?





Thank you for your attention!

For more information please contact the Environment Statistics Section
at the UN Statistics Division:

E-mail: envstats@un.org

website: <http://unstats.un.org/unsd/ENVIRONMENT/>

