
Environment and Energy Statistics Branch, United Nations Statistics Division

• This presentation has been elaborated by the Environment Statistics Section of the United Nations Statistics Division.

1. Need for a framework for developing environment statistics

- Environmental information describes quantitative, qualitative or geographically referenced facts representing the state of the environment and its changes.
- **Quantitative environmental information**
  - Consists of data, statistics and indicators and is generally disseminated through databases, spreadsheets, compendia and yearbook type products.
- Qualitative environmental information
  - Consists of descriptions (e.g. textual, pictorial) of the environment or its constituent parts that cannot be adequately represented by accurate quantitative or geographically referenced 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.
Environmental data

• Environmental data are large amounts of unprocessed observations and measurements about the environment (or its components) and related processes.
• They can be collected or compiled by:
  • NSOs, environmental ministries, sectoral authorities (water, forest, mining, etc)
  • Using different types of sources:
    • Statistical surveys (censuses or sample surveys)
    • Administrative records, registers, and inventories
    • Monitoring networks, remote sensing, scientific research, and field studies.

Environment statistics

Environment statistics describe, aggregate, synthesize and structure environmental and other data according to statistical methods, standards and procedures.
Environment statistics process environmental data into meaningful statistics describing the state and trends of the environment and the main processes affecting it.
Not all environmental data are used in the production of environment statistics.

The FDES provides a framework that identifies environmental data that fall within its scope
The FDES contributes to structuring, synthesizing and aggregating the data into statistical series and indicators.
2. Revision of FDES and Development of a Core Set of Environment Statistics


Statistical Commission endorsement: The 44th (2013) session endorsed the FDES 2013 as the framework for strengthening environment statistics programmes in countries, and recognized it as a useful tool to adequately respond to the increasing demand for environmental information in the follow-up to Rio+20 and the Post-2015 Development Agenda.

2. Revision of FDES and development of the Core Set of Environment Statistics

- Contents and structure of FDES required considerable work by EG and UNSD
- To develop the draft Core Set of Environment Statistics, more than 2,500 environmental indicators and statistics were analyzed, in terms of relevance, statistical feasibility and methodological soundness.
- The draft Core Set was tested in 25 countries through a pilot exercise (August to September 2012): substantive improvement, prioritized statistics within Basic Set
- Both the revised FDES and the Basic Set were subjected to a Global Consultation process, 76 countries, areas and organizations provided feedback (September to November 2012).

Expert Group on the Revision of the FDES
Comprised of experts representing all regions, including developing (13) and developed (10) countries, as well as 7 international agencies and UNCEEA. It represented the interest of NSOs, environmental ministries and agencies, and academia.

EG and UNSD met four times and worked together remotely continually during the process.
3. What is the FDES 2013?

The resulting FDES 2013 is a flexible, multi-purpose conceptual and statistical framework that enables and facilitates the compilation, collection and production 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 and it can be applied to inform about cross-cutting issues such as climate change.

Scope of the FDES

Covers biophysical aspects of the environment and those aspects of the human sub-system that directly influence and interact with the state and quality of the environment.

Objective of the FDES

- Primarily to guide countries at early stages in the development of their environment statistics programmes.
- Also applicable to countries in general, and at the regional and global levels.
3. What is the FDES 2013?

Users of the FDES

- Environment statisticians in NSOs, environmental administrations/authorities
- Other producers/users of environmental data and environment statistics in line ministries, sectoral authorities and other institutions.
- The FDES marks out the roles of the different data producers, thus facilitating inter-agency coordination within countries. It can be used by inter-institutional collaborating committees/round-tables participating in the production and dissemination of environment statistics.
- It can also be used by international and regional institutions to organize and strengthen their production and dissemination of environment statistics.

4. Conceptual foundation of the FDES

The environment, the human sub-system, and interactions between them
4. Conceptual foundation of FDES

Environmental conditions and their changes

- Natural Processes
- Human Activities
- Impacts from the Changing Environment

Changes over time

- Environmental Conditions $t_0$
- Human Sub-system
- Environmental Conditions $t_1$

5. The FDES 2013 structure

- Six components
- At the centre of the FDES: Environmental conditions and quality
- All of the components relate to each other
- Multi-layered (component, sub-component, topic, individual statistics)
- Flexible
- Adaptable
Multi-layered structure of the FDES

<table>
<thead>
<tr>
<th>Levels of the FDES</th>
<th>1 digit</th>
<th>2 digits</th>
<th>3 digits</th>
<th>4 or 5 digits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
<td>Sub-component</td>
<td>Statistical</td>
<td>Topic</td>
<td>Statistics</td>
</tr>
</tbody>
</table>

**Component 1: Environmental Conditions and Quality**
- Sub-component 1.1: Physical Conditions
  - Physical Qualitative
  - Geospatial
- Sub-component 1.2: Land Cover, Ecosystems and Biodiversity
- Sub-component 1.3: Environmental Quality

**Component 2: Environmental Resources and their Use**
- Sub-component 2.1: Non-energy Mineral Resources
- Sub-component 2.2: Energy Resources
- Sub-component 2.3: Land
- Sub-component 2.4: Biological Resources
- Sub-component 2.5: Water Resources

**Component 3: Residuals**
- Sub-component 3.1: Emissions to Air
- Sub-component 3.2: Generation and Management of Waste

**Component 4: Extreme Events and Disasters**
- Sub-component 4.1: Natural Extreme Events and Disasters
- Sub-component 4.2: Technological Disasters

**Component 5: Human Settlements and Environmental Health**
- Sub-component 5.1: Human Settlements
- Sub-component 5.2: Environmental Health

**Component 6: Environment Protection, Management, and Engagement**
- Sub-component 6.1: Environment Protection and Resource Management Expenditure
- Sub-component 6.2: Environmental Governance and Regulation
- Sub-component 6.3: Extreme Event Preparedness and Disaster Management
- Sub-component 6.4: Environmental Information and Awareness

Flexibility and adaptability: prioritizing components, sub-components and topics

Flexibility and adaptability: tiers

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Main Attributes of the Components of the FDES

<table>
<thead>
<tr>
<th>FDES Component</th>
<th>Description</th>
<th>Types of Data</th>
<th>Main Sources and Institutions</th>
<th>Relation to DPSIR and the SEEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Environmental Conditions and Quality</td>
<td>Conditions/characteristics of the environment [meteorological, hydrographical, biological, physical and chemical, geological, geographically that determine ecosystems and environmental quality]</td>
<td>Geospatial Physical Geospatial Qualitative</td>
<td>State and Impact element in DPSIR</td>
<td>State and Impact element in DPSIR</td>
</tr>
<tr>
<td>2 Environmental Resources &amp; their Use</td>
<td>Quantities of environmental resources and their changes; as well as statistics on activities related to their use and management</td>
<td>Physical Geospatial</td>
<td>Driving force</td>
<td>State and Impact element in DPSIR</td>
</tr>
<tr>
<td>3 Residuals</td>
<td>Generation, management and discharge of residuals to air, water and soil</td>
<td>Physical</td>
<td>Pressure and Response elements in DPSIR</td>
<td>Environmental ecosystem accounts of the SEEA Central Framework</td>
</tr>
<tr>
<td>4 Extreme Events &amp; Disasters</td>
<td>Occurrence and impact of natural extreme events and disasters, and technological disasters</td>
<td>Physical Geospatial Geospatial Qualitative</td>
<td>Pressure, Impact and Response</td>
<td>Asset and physical flow accounts of the SEEA Central Framework</td>
</tr>
</tbody>
</table>
### Main Attributes of the Components of the FDES…continued

<table>
<thead>
<tr>
<th>FDES Component</th>
<th>Description</th>
<th>Types of Data</th>
<th>Main Sources and Institutions</th>
<th>Relation to DPSIR and the SEEA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5 Human Settlements &amp; Environmental Health</strong></td>
<td>The built environment in which humans live, particularly with regard to population, housing, living conditions, basic services and environmental health</td>
<td>• Geospatial • Physical</td>
<td>• Population and housing censuses, household surveys, administrative records, and remote sensing • Housing and urban planning and oversight authorities • Cartographic authorities • Transport authorities • For health, administrative records, the health Authority</td>
<td>• Driving force, Pressure and Impact elements in DPSIR</td>
</tr>
<tr>
<td><strong>6 Environment Protection, Management &amp; Engagement</strong></td>
<td>Environment protection and resource management expenditure; environment regulation both direct and via market instruments; disaster preparedness; environmental perception, awareness and engagement of the society</td>
<td>• Monetary • Qualitative</td>
<td>• Administrative records • Surveys • The entity producing government expenditure statistics • The statistical entity in charge of national or sub-national surveys • The environmental authority and other sector authorities</td>
<td>• Response element in DPSIR + Environmental activity accounts and related flows of the SEEA Central Framework</td>
</tr>
</tbody>
</table>

### Overview of each Component of the FDES 2013

- 1. Environmental Conditions and Quality
- 2. Environmental Resources and their Use
- 3. Residuals
- 4. Extreme Events and Disasters
- 5. Human Settlements and Environmental Health
### Component 1: Environmental Conditions and Quality

Sub-component 1.1: Physical Conditions
Sub-component 1.2: Land Cover, Ecosystems and Biodiversity
Sub-component 1.3: Environmental Quality

#### Example of Core Set Statistics within a topic of Component 1:

<table>
<thead>
<tr>
<th>Topic 1.2.2: Ecosystems</th>
<th>a. General ecosystem characteristics, extent and pattern</th>
<th>1. Area of ecosystems</th>
</tr>
</thead>
<tbody>
<tr>
<td>c. Biological components of ecosystems (also in 1.2.3.a-b)</td>
<td>4. Threatened species</td>
<td></td>
</tr>
</tbody>
</table>

### Component 2: Environmental Resources and their Use

Sub-component 2.1: Non-energy Mineral Resources
Sub-component 2.2: Energy Resources
Sub-component 2.3: Land
Sub-component 2.4: Soil Resources
Sub-component 2.5: Biological Resources
Sub-component 2.6: Water Resources

#### Example of Basic Set Statistics within a topic of Component 2:

<table>
<thead>
<tr>
<th>Topic 2.5.3: Crops</th>
<th>a. Harvest area and potential crop</th>
<th>1. Area harvested</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b. Harvested area per crop</td>
<td>Area</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Harvested crops</td>
<td>Mass</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Amount of organic production</td>
<td>Mass</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. Amount of genetically modified crops produced</td>
<td>Mass</td>
<td></td>
</tr>
<tr>
<td></td>
<td>f. Amount of all other crops</td>
<td>Area, Mass, Volume</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Fertilizers (e.g., manure, compost, etc.)</td>
<td>Area, Mass, Volume</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Chemical fertilizers</td>
<td>Area, Mass, Volume</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Pesticides</td>
<td>Area, Mass, Volume</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Herbicides</td>
<td>Area, Mass, Volume</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Pesticides at harvest</td>
<td>Area, Mass, Volume</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Harvest area per crop</td>
<td>Area</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. Amount of organic production</td>
<td>Mass</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. Amount of genetically modified crops produced</td>
<td>Mass</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Harvest area</td>
<td>Area</td>
<td></td>
</tr>
</tbody>
</table>

### Figure

The figure illustrates the organization of topics within each component. Component 1 focuses on environmental conditions and quality, with sub-components for physical conditions, land cover, ecosystems, and biodiversity. Component 2 addresses environmental resources and their use, with sub-components for non-energy mineral resources, energy resources, land, soil, biological resources, and water resources.
Component 3: Residuals

Sub-component 3.1: Emissions to Air
Sub-component 3.2: Generation and Management of Wastewater
Sub-component 3.3: Generation and Management of Waste

Example of Core Set Statistics within a topic of Component 3:

Topic 3.1.1: Emissions of greenhouse gases

a. Total emissions of direct greenhouse gases (GHGs), by gas:
   1. Carbon dioxide (CO₂)
   2. Methane (CH₄)
   3. Nitrous oxide (N₂O)

b. Total emissions of indirect greenhouse gases (GHGs), by gas:
   1. Sulphur dioxide (SO₂)
   2. Nitrogen oxides (NOx)

Component 4: Extreme Events and Disasters

Sub-component 4.1: Natural Extreme Events and Disasters
Sub-component 4.2: Technological Disasters

Example of Core Set Statistics within a topic of Component 4:

Topic 4.1.1: Occurrence of natural extreme events and disasters

a. Occurrence of natural extreme events and disasters:
   1. Type of natural disaster (geophysical, meteorological, climatological, biological)
   2. Location

Topic 4.1.2: Impact of natural extreme events and disasters

a. People affected by natural extreme events and disasters
   1. Number of people killed

b. Economic loss due to natural extreme events and disasters (e.g., damage to buildings, transportation networks, loss of revenue for businesses, utility disruption, etc.)
Component 5: Human Settlements and Environmental Health

Sub-component 5.1: Human Settlements
Sub-component 5.2: Environmental Health

Example of Core Set Statistics within a topic of Component 5:

<table>
<thead>
<tr>
<th>Topic 5.1.2: Access to water, sanitation and energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Population using an improved drinking water source</td>
</tr>
<tr>
<td>b. Population using an improved sanitation facility</td>
</tr>
<tr>
<td>d. Population connected to wastewater collection</td>
</tr>
<tr>
<td>e. Population connected to wastewater treatment</td>
</tr>
</tbody>
</table>

Component 6: Environment Protection, Management and Engagement

Sub-component 6.1: Environment Protection and Resource Management Expenditure
Sub-component 6.2: Environmental Governance and Regulation
Sub-component 6.3: Extreme Event Preparedness and Disaster Management
Sub-component 6.4: Environmental Information and Awareness

Example of Core Set Statistics within a topic of Component 6:

<table>
<thead>
<tr>
<th>Topic 6.1.1: Government environment protection and resource management expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Government environment protection and management expenditure</td>
</tr>
<tr>
<td>1. Annual government environment protection expenditure</td>
</tr>
</tbody>
</table>
6. The Basic Set of Environment Statistics

- The Basic Set of Environment Statistics organizes a comprehensive (though not exhaustive) list of environment statistics.
- The Basic Set is organized in three tiers, based on the level of relevance, availability and methodological development of the statistics.

- The Core Set of Environment Statistics correspond to Tier 1 which are of high priority and relevance to most countries and have a sound methodological foundation.
- Tier 2 includes environment statistics that are of priority and relevance to most countries but need more investment in time, resources or methodological development.
- Tier 3 includes environment statistics which are either of less priority or require significant methodological development.

The objective of the Core Set of Environment Statistics is to serve as an agreed, limited set of environment statistics that are of high priority and relevance to most countries.

It is flexible and adaptable to the countries circumstances.

The Core Set is organized and presented in accordance to the FDES 2013 structure.
A self-assessment tool has been developed based on the Core and Basic Set, that can be used by countries ex ante and ex post to measure the state and progress in developing their environment statistics.

Number of environment statistics in the Basic and Core Set

Core Set or Tier 1 = 107
Basic Set = 492

<table>
<thead>
<tr>
<th>Component</th>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Tier 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component 1</td>
<td>35</td>
<td>43</td>
<td>43</td>
<td>122</td>
</tr>
<tr>
<td>Component 2</td>
<td>35</td>
<td>46</td>
<td>63</td>
<td>144</td>
</tr>
<tr>
<td>Component 3</td>
<td>19</td>
<td>12</td>
<td>5</td>
<td>36</td>
</tr>
<tr>
<td>Component 4</td>
<td>4</td>
<td>17</td>
<td>17</td>
<td>48</td>
</tr>
<tr>
<td>Component 5</td>
<td>11</td>
<td>21</td>
<td>21</td>
<td>53</td>
</tr>
<tr>
<td>Component 6</td>
<td>3</td>
<td>23</td>
<td>23</td>
<td>49</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>212</td>
<td>173</td>
<td>492</td>
</tr>
</tbody>
</table>
### Component 4: Extreme Events and Disasters

#### Sub-component 4.1.1: Natural Extreme Events and Disasters

<table>
<thead>
<tr>
<th>Topic</th>
<th>Category of Measurement</th>
<th>Potential Aggregation and Scale</th>
<th>Methodological Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic 4.1.1: Impact of natural extreme events and disasters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area affected by natural disasters</td>
<td>Location, Extent</td>
<td>National, Sub-national</td>
<td>By event, By national, By sub-national</td>
</tr>
<tr>
<td>Number of people killed</td>
<td>Number</td>
<td>National, Sub-national</td>
<td>By event, By national, By sub-national</td>
</tr>
<tr>
<td>Number of people injured</td>
<td>Number</td>
<td>National, Sub-national</td>
<td>By event, By national, By sub-national</td>
</tr>
<tr>
<td>Number of people homeless</td>
<td>Number</td>
<td>National, Sub-national</td>
<td>By event, By national, By sub-national</td>
</tr>
<tr>
<td>Date of occurrence</td>
<td>Date</td>
<td>National, Sub-national</td>
<td>By event, By national, By sub-national</td>
</tr>
<tr>
<td>Magnitude (where applicable)</td>
<td>Intensity</td>
<td>National, Sub-national</td>
<td>By event, By national, By sub-national</td>
</tr>
<tr>
<td>Location</td>
<td>Area</td>
<td>National, Sub-national</td>
<td>By event, By national, By sub-national</td>
</tr>
<tr>
<td>Physical loss/damage due to natural extreme events and disasters (e.g., damage to buildings, transportation networks, loss of revenue for businesses, utility disruption, etc.)</td>
<td>Area, Cost, Time period</td>
<td>National, Sub-national</td>
<td>By event, By national, By sub-national</td>
</tr>
<tr>
<td>Loss of vegetation cover</td>
<td>Number</td>
<td>National, Sub-national</td>
<td>By event, By national, By sub-national</td>
</tr>
<tr>
<td>Economic loss due to natural extreme events and disasters</td>
<td>Cost</td>
<td>National, Sub-national</td>
<td>By event, By national, By sub-national</td>
</tr>
</tbody>
</table>

### Sample of the Core Set of Environment Statistics

<table>
<thead>
<tr>
<th>Component</th>
<th>Sub-component</th>
<th>Topic</th>
<th>Core Set / Tier 1 Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component 1: Environmental Conditions and Quality</td>
<td>Sub-component 1.1: Physical Conditions</td>
<td>Topic 1.1.1: Atmosphere, climate, and weather</td>
<td>Temperature, Monthly averages, Minimum temperature, Maximum temperature, Annual averages, Long-term average</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Topic 1.1.2: Hydrographical Characteristics</td>
<td>Watersheds, Description of major watersheds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Topic 1.1.3: Geological and geographical information</td>
<td>Area of country or region</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Topic 1.1.4: Soil characteristics</td>
<td>Area of soil types, Area affected by soil erosion, Area affected by desertification</td>
</tr>
<tr>
<td></td>
<td>Sub-component 1.2: Land Cover, Ecosystems and Biodiversity</td>
<td>Topic 1.2.1: Land cover</td>
<td>Extent of land cover, Area of land cover</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Topic 1.2.2: Ecosystems</td>
<td>General ecosystem characteristics, extent and pattern of ecosystems, Biodiversity components of ecosystems (also in 1.2.1.a-b)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Topic 1.2.3: Biodiversity</td>
<td>Flora - terrestrial, (includes in 1.2.2.a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Flora - freshwater, Flora - marine (also in 1.2.2.a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fauna - terrestrial, Fauna - freshwater, Fauna - marine (also in 1.2.2.a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Protected areas, Protected terrestrial (includes inland water) and marine areas (also in 1.2.4.a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Topic 1.2.4: Forests</td>
<td>Area of forest (also in 1.2.1.a and 1.2.2.a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Area deforested</td>
</tr>
</tbody>
</table>
### Sample of the Core Set of Environment Statistics

<table>
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<tr>
<th>Component</th>
<th>Sub-component</th>
<th>Topic</th>
<th>Core Set / Tier 1 Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component 4: Extreme Events and Disasters</td>
<td>Sub-component 4.1: Occurrence of natural extreme events and disasters</td>
<td>Occurrence of natural extreme events and disasters</td>
<td>Type of natural disaster (geophysical, meteorological, biological)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Location</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>People affected by natural extreme events and disasters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Economic loss due to natural extreme events and disasters (e.g., damage to buildings, transportation networks, loss of revenue for businesses, utility disruption, etc.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Component 5: Human Settlements and Environmental Health</td>
<td>Sub-component 5.1: Human Settlements</td>
<td>Access to water, sanitation and energy</td>
<td>Population using an improved drinking water source</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Population connected to a wastewater collection facility</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Population connected to wastewater treatment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Number of private and public vehicles</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Sub-component</th>
<th>Topic</th>
<th>Core Set / Tier 1 Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-component 5.2: Environmental Health</td>
<td>Topic 5.2.1: Water-related diseases and conditions</td>
<td>Water-related diseases and conditions (e.g., diarrheal disease, gastrointestinal and waterborne gastroenteritis infections)</td>
<td>Incidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Prevalence</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mortality</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Morbidity</td>
</tr>
<tr>
<td></td>
<td>Topic 5.2.3: Vector borne diseases</td>
<td>Vector borne diseases (e.g., malaria, dengue fever, yellow fever and Lyme disease)</td>
<td>Incidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Prevalence</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mortality</td>
</tr>
</tbody>
</table>

### 7. Applications of the FDES to cross-cutting issues
(Chapter 5 FDES 2013)

The FDES can be applied to inform about cross-cutting policy issues important to countries at any given time:

- Climate change
- Energy and the environment
- Agriculture and the environment
- Water and the environment
Agricultural Production

Sub-component 2.5: Biological Resources

- Topic 2.5.3: Crops
  - 2.5.3.a: Main annual and perennial crops
    - 2.5.3.a.1: Area harvested
    - 2.5.3.a.2: Area planted
    - 2.5.3.a.3: Amount produced
    - 2.5.3.a.4: Amount of organic production
    - 2.5.3.a.5: Amount of genetically modified crops produced
  - 2.5.3.c: Monoculture / resource-intensive crops:
    - 2.5.3.c.1: Area being used for production
    - 2.5.3.c.2: Amount produced
    - 2.5.3.c.3: Amount of genetically modified crops produced

- Topic 2.5.4: Livestock
  - 2.5.4.a: Number of live animals
  - 2.5.4.b: Number of animals slaughtered

Residuals

Sub-component 3.2: Generation and Management of Wastewater

- Topic 3.2.1: Generation and pollutant content of wastewater
  - 3.2.1.a: Volume of wastewater generated (from agriculture)
  - 3.2.1.b: Emissions of pollutants to wastewater (from agriculture)

- Sub-component 3.3: Generation and Management of Waste
  - Topic 3.3.1: Generation of waste
    - 3.3.1.a: Amount of waste generated by economic activity (by agriculture)
    - 3.3.1.b: Amount of waste generated by waste category (by agriculture)
    - 3.3.1.c: Generation of hazardous waste (by agriculture)
    - 3.3.1.d: Amount of hazardous waste generated (by agriculture)

Climate Change statistics

Source: Intergovernmental Panel on Climate Change
8. Links to social and economic statistics

- The FDES 2013 is structured in a way that allows links to economic and social domains.
- It seeks to be compatible with other frameworks and systems, both statistical and analytical, such as the System of Environmental-Economic Accounting (SEEA), the Driving force – Pressure – State – Impact – Response (DPSIR) framework, and the Millennium Development Goals (MDGs) as well as the Sustainable Development Indicator frameworks.
- It uses existing concepts and relies on existing statistical classifications (when applicable).
- As such, the FDES facilitates data integration within environment statistics and with economic and social statistics.
9. FDES Future Work

Following the endorsement of the FDES 2013, work will focus on:

- Programme of technical assistance and capacity building to member States using the FDES 2013 and associated tools
- Development of detailed methodological guidance for the Core Set of Environment Statistics and the Basic Set of Environment Statistics, including classifications, definitions and data collection and compilation methods. It will build on existing methodologies as well as ongoing methodological work in the field of environment statistics and environmental-economic accounting.
- Expert Group on Environment Statistics 2013 ->

9. Putting the FDES to work

- Plan of Work endorsed by SC February 2013
- Objective of the Plan of Work is focused on assisting countries most in need of developing and strengthening their environment statistics’ production and dissemination.
- Way forward for making the FDES and the CSES operational in countries that need guidance in their environment statistics’ programmes.
- It is applicable to countries at preparatory, foundational, operational and consolidation stages of their environment statistics programmes.
Thank you for your attention!

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

E-mail: envstats@un.org
website: http://unstats.un.org/unsd/ENVIRONMENT/