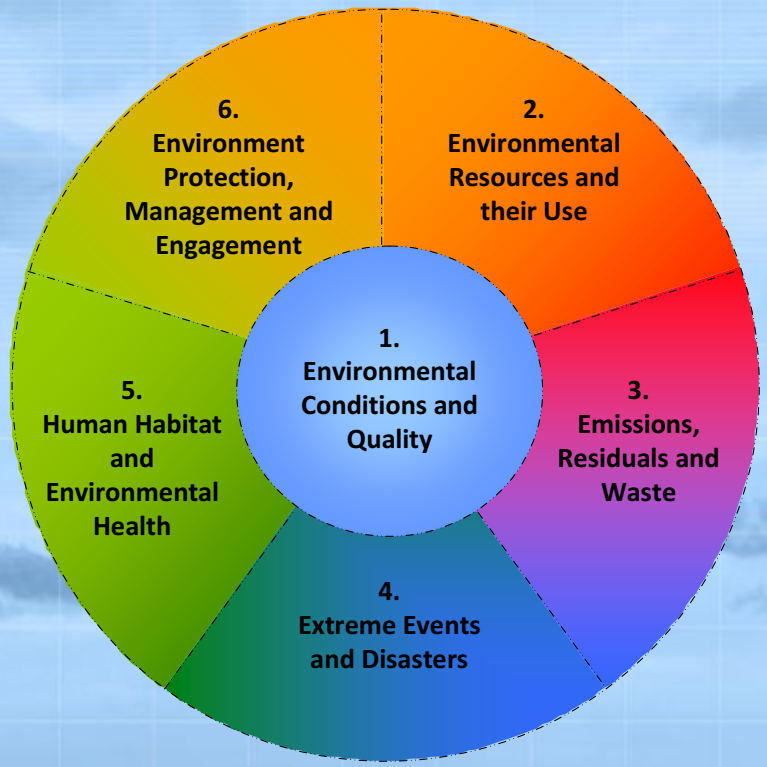
Pilot Testing of the Draft Core Set of Environment Statistics and the Global Consultation on the Draft FDES



United Nations Statistics Division

5 November 2012

- Summary Analysis of the Pilot
of the Draft Core Set of Environment Statistics

- Results from the Global Consultation on the draft FDES

Pilot of the Draft Core Set of Environment Statistics

The pilot of the draft Core Set took place Aug-Oct 2012

- **The objective of the pilot was to improve the draft Core Set through the experience and suggestions of collaborating countries. Specific objectives included:**
  - **Assessing the relevance of the statistical topics;**
  - **Comparing the Core Set with national environment statistics production;**
  - **Comparing the Core Set with environment statistics required for collection by national environmental policies and international reporting requirements; and**
  - **Identifying the primary reasons for any gaps which are identified.**
- **The pilot in each country mainly consisted of a comparison of the draft Core Set with available national environment statistics, environmental policy objectives and international reporting requirements, as well as a subsequent analysis of gaps.**

Pilot of the Core Set of Environment Statistics

25 countries and 3 international organizations took part in the pilot

- **Both developed and developing countries, in all regions, were represented:**
  - **20 developing countries**
    - **Belize, Botswana, Brazil, Cameroon, China, Costa Rica, Cote d'Ivoire, Cuba, Ecuador, India, Jamaica, Mauritius, Mexico, Nigeria, Philippines, Qatar, Sri Lanka, Venezuela, Vietnam and United Arab Emirates**
  - **5 developed countries**
    - **Hungary, Italy, Netherlands, Sweden and the United States**
- **International organizations participating in the pilot included Eurostat, UNEP and UNSD.**

There was strong support for the Core Set, with 100% of participating countries indicating the Core Set is:

1. Comprehensive
2. Effective for national statistical purposes
3. Relevant for national policy concerns
4. Adequate for covering international reporting needs
5. Useful in identifying gaps in environment statistics programmes

Selected comments from the pilot…

Is the draft Core Set comprehensive?

The proposed core set is comprehensive enough. I can say that it has exceeded our expectations in this regard.

Yes it is comprehensive, however, we wish we could also evaluate the impacts of tourism. Some areas of climate change and hazardous waste management could also use more detail.

It is more detailed than what we need.

Selected comments from the pilot…

Is the structure of the draft Core Set effective for national statistical purposes?

Yes, in fact the Core Set has identified important gaps in information generation.

Yes, because a large number of environmental concerns have already been incorporated and if it is possible to acquire all the relevant statistics, it will go a long way in addressing most of our environmental problems across the globe.

The Basic Set and its structure are useful for the design of our national system of environmental information.

Selected comments from the pilot…

Is the draft Core Set relevant for national policy concerns?

Definitely a lot of variables have exhibited great potential for the development of indicators for monitoring public policy.

Major issues/concerns are covered such as climate change and sustainable development.

Yes, because if it were possible to generate the relevant statistics of the Core Set, nations would have a better perspective of their environmental status and be in a better position to generate appropriate policy instruments for better environmental management.

Selected comments from the pilot…

Is the draft Core Set adequate for covering international reporting needs?

Yes, because the scope of the Core Set is already very wide to accommodate critical and emerging environmental issues across the globe.

The draft Core Set of Environment Statistics and the proposed topics meet most of the needs of the country information required for reporting to international conventions and treaties.

Needs more detail in areas of climate change and hazardous chemical management.

As part of our international obligations we report many other statistics, most of which are covered in Tier 2 and Tier 3. With more time, NOAA can identify specific statistics that we are required to report as part of our international obligations that are not included in this set.

Selected comments from the pilot…

Is the draft Core Set useful in identifying gaps in your environment statistics programme?

Yes, using the pilot we have identified gaps, and priorities that are necessary for the monitoring of national policies, programs and projects.

Yes, because it has enabled us to place our national level of development of environment statistics side by side with the expected global status.

The draft Core Set of Environment Statistics and the proposed topics allowed us to make a diagnosis of the information gaps that need to be corrected.

Selected comments from the pilot…

General comments on the draft Core Set (slide 1 of 3)

- **The draft Core Set is relevant for the environment statistics we are developing now in our institution. The main problems in collecting and centralizing these statistics are financial resource constraints and the lack of statistical culture of the sectoral ministries. Some of them do not know the importance of giving data to the National Institute of Statistics to centralize.**

- **The draft Core Set of Environment Statistics is a generalized application for global environment statistical database system. However, individual countries can still produce other environment statistical indicators in addition to the global template, according to their own national concerns/peculiarities.**

- **Some of the statistics are very detailed but since the detailed ones are tier 2 and optional the country may prioritize data collections.**

- **Have a problem with the cross cutting issues of water and energy as they seem to be repetitive.**

Selected comments from the pilot…

General comments on the draft Core Set (slide 2 of 3)

- **The frequency and timeliness of the data for the core set are also useful information, e.g., in topic no. 1.1.3 and 1.3.3, although it is satisfactory, the timeliness needs to be improved. Further, it is also useful to have information on whether the data is available/needed at the subnational disaggregation/level.**
- **We recommend including a glossary with more detailed explanation of statistics.**
- **Some statistics/indicators are not clear enough to considered as indicators e.g 1.3.3 Ecosystem health.**
- **Some indicators repeated on the list without citing, e.g 5.1.1 total urban and rural areas are showed in 1.2.2 by categories.**

Selected comments from the pilot…

General comments on the draft Core Set (slide 3 of 3)

- **While it covers an appropriate range of needed statistics, there needs to be further editing of the language used and perhaps the formatting. Specificity needs to be as uniform as possible within topics, sub-topics, and statistics. Ex: In Topic 3.3.2, why is amount of recycled waste (3.3.2d) a sub-topic and measure, while other waste types are separated out? Why not make 3.3.2d "Recycled Waste" with 3.3.2d1 as "Total amount collected"? Consistency is important. Ex: Topic 1.3.2 item c4 lists the measure as just "Threatened species". What about threatened species? Is is the same as the referenced 1.3.3a? There needs to be some level of consistency in the level of specificity within a topic, sub-topic, etc.**
- **Although we are also facing the problem of finding the limits of environmental indicators, we think the presented core set of indicators is beyond these limits with its details. These fields are for example meteorology, geographic information, extreme events, human habitat.**
- **Many of the "statistics" as they are labeled are not statistics and terms are used interchangeably. Ex: "Area" can refer to a measure of the size of a particular or generalized location. It isn't clear what is being referred to when it is used interchangably (Ex: Topic 1.1.3; coastal area is a sub-topic seemingly refering to a generalized location, but area of soil types is a measure just two lines below.**

STATISTICS BEING PRODUCED

The vast majority of Core Set and Basic Set statistics were being produced by the developed countries in the pilot

- **Those statistics not being produced by most or all developed countries in the pilot include the following** (It is likely that many of these statistics are not pertinent to the developed countries who participated).

1.1.1. h. Occurrence of El Niño, La Nina events 1.Occurrence

1.1.1. h. Occurrence of El Niño, La Nina events 2.Location

1.1.1. h. Occurrence of El Niño, La Nina events 3.Time period

1.1.3. c. Main sea's characterization 5. Area of sea ice

1.4.3. e. Coral bleaching 1.Area affected by coral bleaching

1.4.3. g. Plastic waste and other marine debris 1.Amount of plastic waste and other debris in marine waters

2.3.1.g. Area of land under sustainable forest management

2.4.2.e. Aquatic resources, amount used of: 1. Pellets; 2. Hormones; 3. Colorants; 4. Antibiotics; 5. Fungicides

2.5.2.i. Collection of precipitation

4.2.2.c.1-4 Effects of technological disasters on ecosystems

5.1.3. a. Urban population living in slums

5.1.3. d. Population living in informal settlements

5.1.3. f. Number of dwellings with adequacy of building materials defined by national or local standards

5.2.1. a.-5.2.5.a (All Environmental Health Topics): 4. Loss of work days; 5. Estimates of economic cost in monetary terms

6.4.4. a. Public environmental perception and awareness 1. Number of environmental awareness community programmes; 2. Description of environmental awareness community programmes

Over 80% of developing countries are producing the following statistics:

1.1.1. a. Temperature
- 1.Annual averages (Tier 1) – 94%
- 3.Monthly averages (Tier 2) – 100%
- 4.Annual minimum and maximum monthly average (Tier 2) – 94%

b. Precipitation
- 1.Annual averages (Tier 1) – 100%
- 2.Long-term annual averages (Tier 1) – 82%
- 3.Monthly averages (Tier 2) – 100%
- 4.Annual minimum and maximum monthly average (Tier 2) – 89%

c. Humidity
- 1.Annual averages (Tier 2) – 100%

d. Pressure
- 3.Monthly averages (Tier 3) – 82%
- 4.Annual minimum and maximum monthly average (Tier 3) – 82%

e. Wind speed
- 1.Annual averages (Tier 3) – 88%

1.1.3. a. Geologic, geographic and geomorphologic conditions of terrestrial areas and islands
- 1.Length of border (Tier 2) – 94%
- 2.Area of country or region (Tier 1) – 100%
- 3.Geographical location (Tier 2) – 100%
- 4.Number of islands (Tier 2) – 88%

c. Main sea's characterization
- 1.Length of marine coastline (Tier 1) – 88%
- 2.Coastal waters (Tier 2) – 88%

1.2.1. a. Soil characteristics
- 1.Area of soil types (Tier 1) – 89%

1.3.1. a. Flora – terrestrial, freshwater and marine
- 1.Number of known species (Tier 1) – 88%

b. Fauna - terrestrial, freshwater and marine
- 1.Number of known species (Tier 1) – 88%

c. Protected areas
- 1.Protected terrestrial and marine area (Tier 1) – 94%

1.3.3. a. Forest area
- 4.Protected forest area (Tier 2) – 88%

1.4.1. c. Other relevant pollutants
- 1.Concentration levels of SO_2 (Tier 1) – 94%
- 3.Concentration levels of NO_x (Tier 1) – 89%

2.1.1.a. Non-energy mineral resources
- 12.Non-energy mineral exports (Tier 2) – 83%

2.2.1.a. Mineral energy resources
- 11.Energy mineral imports (Tier 1) – 89%
- 12.Energy mineral exports ((Tier 1) – 89%

Promote any of the highlighted?

Over 80% of developing countries are producing the following statistics (cont.):

2.2.2.a. Renewable and non-renewable production of energy:
1. Total (Tier 1) – 89%
2. Non-renewable (Tier 1) – 89%

b. Production of energy
1. Primary energy production (Tier 1) – 94%
2. Secondary energy production (Tier 1) – 94%

c. Total consumption of energy (Tier 1) – 100%

d. Electric energy
1.Electricity production (Tier 1) – 100%
2.Installed capacities (Tier 1) – 100%

2.3.1.a. Land area by land use category (Tier 1) – 89%

2.4.2.a. Fish capture production (Tier 1) – 100%

b.Aquaculture production (Tier 1) – 89%

c.Imports of fish and fishery products (Tier 2) – 100%

d.Exports of fish and fishery products (Tier 2) – 94%

2.4.3.a. Main annual and perennial crops
1.Area harvested (Tier 1) – 100%
3.Amount produced (Tier 1) – 100%

b.Amount used of:
2.Artificial fertilizers (Tier 1) – 83%

Promote any of the highlighted?

2.4.4.a. Livestock
1.Number of live animals (Tier 1) – 100%

c. Imports of livestock (Tier 2) – 89%

d. Exports of livestock (Tier 2) – 94%

2.5.1.a. Inflow of water to inland water resources
1. Precipitation (Tier 1) – 100%

3.1.1. b. Total emissions of indirect greenhouse gases, by activity:
1. SO_2 (Tier 1) – 89%
2. NO_X (Tier 1) – 94%

3.1.2. a. Consumption of ozone depleting substances (ODS), by substance:
1. CFCs (Tier 2) – 89%
2. HCFCs (Tier 2) – 89%

3.3.2. a. Municipal waste
1. Total municipal waste collected (Tier 1) – 94%
3. Number of municipal waste treatment and disposal facilities (Tier 1) – 89%

4. Capacity of municipal waste treatment and disposal facilities (Tier 2) – 83%

Over 80% of developing countries are producing the following statistics (cont.):

4.1.1. a. Occurrence of natural extreme events and disasters:
1. Type of natural disaster (Tier 1) – 89%
2. Location (Tier 1) - 89%
3. Magnitude (Tier 2) – 89%
4. Date of occurrence (Tier 2) – 83%

4.1.2. a. People affected by natural extreme events and disasters:
1. Number of people killed (Tier 1) – 89%
b. Economic loss due to natural extreme events and disasters (Tier 1) – 82%

5.1.1. a. Total population living in urban areas (Tier 2) – 89%
b. Total population living in rural areas (Tier 2) – 89%

5.1.2. a. Population using an improved drinking water source (Tier 1) – 94%
b. Population using an improved sanitation facility (Tier 1) – 94%
c. Population served by municipal waste collection (Tier 2) – 82%

5.1.5. g. Extent of roadways (Tier 2) – 94%

5.2.1. a. Airborne diseases and conditions:
1. Incidence (Tier 2) – 83%
2. Morbidity (Tier 2) – 89%
3. Mortality (Tier 2) – 83%

5.2.2. a. Water-related diseases and conditions:
1. Incidence (Tier 1) – 89%
2. Morbidity (Tier 1) – 89%
3. Mortality (Tier 1) – 83%

5.2.3. a. Vector borne diseases:
1. Incidence (Tier 1) – 83%
2. Morbidity (Tier 1) – 89%
3. Mortality (Tier 1) – 89%

Promote any of the highlighted?

6.2.2. a. Direct regulation
1. List of regulated pollutants and description (Tier 1) – 83%
2. Description of licensing system to ensure compliance with environmental standards for businesses or other new facilities (Tier 2) -83%

6.3.1. a. National natural disaster and extreme event preparedness and management systems
1. Existence of national disaster plans (Tier 2) – 89%

Over 80% of developing countries are producing the following statistics (cont.):

6.4.1.b. Environmental information; environment statistics:

1. Description of national environment statistics programmes (Tier 2) – 83%
2. Number and type of environment statistics products and periodicity of updates (Tier 3) – 83%
3. Existence and number of participation institutions in interagency environment statistics platforms or committees (Tier 2) – 83%

Promote any of the highlighted?

Over 80% of developing countries indicated they were NOT producing the following statistics:

1.1.3. c. Main sea's characterization
5. Area of sea ice (Tier 3)

1.2.1. b. Degradation
6. Area affected by compaction (Tier 3)

1.4.1. c. Air quality; other relevant pollutants
5. Concentration levels of dioxins (Tier 3)
6. Concentration levels of furans (Tier 3)

1.4.3.h. Urban runoff (Tier 3)

1.4.3.o. Persistent organic pollutants
2.Concentrations in marine organisms, when applicable (Tier 3)

1.4.4. a. Soil pollution; total area affected by pollution (Tier 3)

1.4.4. b. Soil pollution; Land area affected by contamination from:
1.Petroleum hydrocarbons (oil residuals) (Tier 2)
2.Solvents (Tier 3)
3.Pesticides (Tier 2)
4.Heavy metals (Tier 3)
5.Acidification (Tier 3)

2.1.1.a. Non-energy mineral resources
3. Upward reappraisals (Tier 3)
4. Upward reclassifications (Tier 3)
6. Catastrophic losses (Tier 3)
7. Downward reappraisals (Tier 3)
8. Downward reclassifications (Tier 3)

2.2.1.a. Mineral energy resources
3. Upward reappraisals (Tier 3)
4. Upward reclassifications (Tier 3)
6. Catastrophic losses (Tier 3)
7. Downward reappraisals (Tier 3)
8. Downward reclassifications (Tier 3)

2.4.2.e. Aquatic resources; amount used of:
2. Hormones (Tier 3)
3. Colorants (Tier 3)
4. Antibiotics (Tier 3)
5. Fungicides (Tier 3)

2.4.3.a. Main annual and perennial crops
5. Amount of genetically modified crops produced (Tier 3)

Over 80% of developing countries indicated they were NOT collecting the following statistics (cont.):

2.5.1.a. Inflow of water to inland water resources
3. Inflow subject to treaties (Tier 3)

2.5.1.b. Outflow of water from inland water resources
3. Outflow subject to treaties (Tier 3)

2.5.1.c. Inland water stocks
5.Surface water stocks in snow, ice and glaciers (Tier 3)

2.5.2.i. Collection of precipitation (Tier 3)

2.5.2.l. Exports of water (Tier 3)

2.5.2.m. Imports of water (Tier 3)

3.1.3. a. Emissions of other substances by activity:
2. Other (Tier 3)

4.2.2. d. Impact of technological disaster; external assistance received (Tier 3)

5.1.5. f. Population using hybrid and electric modes of transportation (Tier 3)

5.2.2.a. Water-related diseases and conditions:
4. Loss of work days (Tier 3)
5. Estimates of economic cost in monetary terms (Tier 3)

5.2.3.a. Vector borne diseases:
4. Loss of work days (Tier 3)
5. Estimates of economic cost in monetary terms (Tier 3)

5.2.4. a. Problems associated with excessive UV radiation exposure:
4. Loss of work days (Tier 3)
5. Estimates of economic cost in monetary terms (Tier 3)

5.2.5. a. Toxic substance related diseases and conditions including nuclear radiation related health problems:
4. Loss of work days (Tier 3)
5. Estimates of economic cost in monetary terms (Tier 3)

Over 80% of developing countries indicated they were NOT collecting the following statistics (cont.):

6.1.2. a. Private sector environment protection and resource protection expenditure

1. Annual total corporate environment protection expenditure by purpose (Tier 2)
2. Annual corporate resource management expenditure by purpose (Tier 3)
3. Annual household environment protection expenditure by purpose (Tier 3)
4. Annual household resource management expenditure by purpose (Tier 3)
5. Annual non-profit institution environment protection expenditure by purpose (Tier 3)
6. Annual non-profit institution resource management expenditure by purpose (Tier 3)

6.2.2. b. Economic instruments

4. Volume of trade of emission permits (Tier 2)

6.3.1. a. National natural disaster and extreme event preparedness and management systems

5. Type of internationally certified emergency and recovery management specialists (Tier 3)
6. Number of internationally certified emergency and recovery management specialists (Tier 3)
7. Number of volunteers (Tier 3)

PRIORITY OF STATISTICS FOR NATIONAL DATA COLLECTION

Over 80% of developing countries indicated the following statistics are a high priority for national data collection

1.1.1. a. Temperature
- 1.Annual averages (Tier 1) – 89%
- 3.Monthly averages (Tier 2) – 89%

b. Precipitation
- 1.Annual averages (Tier 1) – 89%
- 3.Monthly averages (Tier 2) – 89%

1.1.3. a. Geologic, geographic and geomorphologic conditions of terrestrial areas and islands
- 1.Length of border (Tier 2) – 88%
- 2.Area of country or region (Tier 1) – 88%
- 3.Geographical location (Tier 2) – 88%

1.3.1. b. Fauna - terrestrial, freshwater and marine
- 3.Number of endemic species (Tier 2) – 88%
- 4.Number of invasive alien species (Tier 2) – 88%

c. Protected areas
- 1.Protected terrestrial and marine area (Tier 1) – 94%

1.3.3. a. Forest area
- 1.Total (Tier 1) – 88%

Promote any of the highlighted?

1.4.1. c. Other relevant pollutants
- 1. Concentration levels of SO2 (Tier 1) – 88%
- 3. Concentration levels of NOX (Tier 1) – 88%

2.2.2.a. Renewable and non-renewable production of energy:
- 1. Total (Tier 1) – 94%
- 2. Non-renewable (Tier 1) – 94%
- 3. Renewable (Tier 1) – 88%

b. Production of energy
- 1. Primary energy production (Tier 1) – 94%
- 2. Secondary energy production (Tier 1) – 88%

c. Total consumption of energy (Tier 1) – 94%

d. Electric energy
- 1.Electricity production (Tier 1) – 100%
- 2.Installed capacities (Tier 1) – 94%

Over 80% of developing countries indicated the following statistics are a high priority for national data collection (cont.)

Promote any of the highlighted?

2.4.2.a. Fish capture production (Tier 1) – 88%

2.5.1.a. Inflow of water to inland water resources

1. Precipitation (Tier 1) – 88%

3.1.1. b. Total emissions of indirect greenhouse gases, by activity:

1. SO2 (Tier 1) – 89%
2. NOX (Tier 1) – 89%

3.1.2. a. Consumption of ozone depleting substances (ODS), by substance:

1. CFCs (Tier 2) – 89%

3.2.3. a. Wastewater discharge

1. Total volume of wastewater discharged to the environment after treatment (Tier 1) – 88%
2. Total volume of wastewater discharged to the environment without treatment (Tier 1) – 87%

3.3.2. a. Municipal waste

1. Total municipal waste collected (Tier 1) – 89%
3. Number of municipal waste treatment and disposal facilities (Tier 1) – 94%

b. Hazardous waste

1. Total hazardous waste collected (Tier 1) – 94%
2. Amount of hazardous waste by type of treatment (Tier 1) – 94%

4.1.1. a. Occurrence of natural extreme events and disasters:

1. Type of natural disaster (Tier 1) – 94%
2. Location (Tier 1) - 94%
4. Date of occurrence (Tier 2) – 88%

5.1.1. a. Total population living in urban areas (Tier 2) – 88%

b. Total population living in rural areas (Tier 2) – 88%

6.2.3. a. Participation in MEAs and other global environmental conventions

1. List and description of MEAs and other global environmental conventions (Tier 1) – 88%

Developed countries indicated most Core Set statistics were a high priority for national data collection

- **The only Core Set statistics which one or more developed countries indicated was a low priority, are presented below:**

1.1.2. d. Watersheds

1. Description of main watersheds (1/4 Low)

1.2.1. b. Degradation (also in 2.4.1.a-c)

1. Area affected by soil erosion (1/3 Low)

2. Area affected by desertification (1/3 Low)

1.2.2. a. Extent and spatial distrib. of main land cover categories (also in 1.3.3.b)

2. Location of land cover categories (1/4 Low)

1.4.1. b. Breathable gases

2. Concentration levels of carbon monoxide (CO) (1/4 Low)

2.1.1.a. Non-energy mineral resources

1. Stocks of commercially recoverable resources by mineral (1/4 Low)

5. Extraction (1/3 Low)

2.2.3.a. Renewable and non-renewable production of energy

2. Non-renewable (1/3 Low)

2.3.1.b. Area of inland waters by use categories (1/3 Low)

3.2.1. a. Volume of wastewater generated (1/3 Low)

3.3.2. a. Municipal waste

3. Number of municipal waste treatment and disposal facilities (1/4 Low)

Developed countries indicated most Core Set statistics were a high priority for national data collection (cont.)

- **The only Core Set statistics which one or more developed countries indicated was a low priority are continued, from the previous slide, below:**

  3.3.2. b. Hazardous waste

  3. Number of hazardous waste treatment and disposal facilities (1/4 Low)

  4.1.1. a. Occurrence of natural extreme events and disasters:

  1. Type of natural disaster (1/4 Low)

  2. Location (2/4 Low)

  4.1.2. a. People affected by natural extreme events and disasters

  1. Number of people killed (1/3 Low)

  4.1.2. b. Economic loss due to natural extreme events and disasters (1/3 Low)

  5.1.2. a. Population using an improved drinking water source (1/4 Low)

  5.1.2. b. Population using an improved sanitation facility (1/3 Low)

  5.1.5. c. Number of private and public vehicles (1/3 Low)

  5.2.1.a. Airborne diseases; 5.2.2. a. Water-related diseases and conditions; 5.2.4.a: Problems associated with excessive UV radiation exposure; 5.2.5.a: Toxic substance related diseases and conditions:

  1. Incidence (1/3 Low)

  2. Morbidity (1/3 Low)

  3. Mortality (1/3 Low)

  5.2.3. a. Vector borne diseases: 1. Incidence; 2. Morbidity; 3. Mortality (2/3 Low)

  6.2.3. a. Participation in MEAs and other global environmental conventions

  1. List and description of MEAs and other global environmental conventions (1/2 Low)

Over 50% of developing countries indicated the following statistics are a low priority for national data collection

1.1.1. g. UV radiation
- 1.Annual averages (Tier 3) - 53%
- 2.Long-term annual averages (Tier 3) – 59%
- 3.Monthly averages (Tier 3) – 53%
- 4.Annual minimum and maximum monthly average (Tier 3) – 59%

2.1.1.a. Non-energy mineral resources
- 3. Upward reappraisals (Tier 3) – 58%
- 4. Upward reclassifications (Tier 3) – 58%
- 6. Catastrophic losses (Tier 3) – 58%
- 7. Downward reappraisals (Tier 3) – 62%
- 8. Downward reclassifications (Tier 3) – 58%

2.2.1.a. Mineral energy resources
- 3. Upward reappraisals (Tier 3) – 69%
- 4. Upward reclassifications (Tier 3) – 75%
- 6. Catastrophic losses (Tier 3) – 69%
- 7. Downward reappraisals (Tier 3) – 67%
- 8. Downward reclassifications (Tier 3) – 67%

2.4.1.a. Timber resources
- 5. Felling residues (Tier 3) – 60%
- 9. Reclassifications (Tier 3) – 60%

2.4.2.e. Aquatic resources and their use; amount used of:
- 1. Pellets (Tier 3) – 57%
- 2. Hormones (Tier 3) – 58%
- 3. Colorants (Tier 3) – 67%
- 4. Antibiotics (Tier 3) – 62%
- 5. Fungicides (Tier 3) – 62%

2.4.3.a. Main annual and perennial crops
- 5. Amount of genetically modified crops produced (Tier 3) – 67%

2.4.3.c. Monoculture / resource-intensive crops
- 3. Amount of genetically modified crops produced (Tier 3) – 79%

2.4.4.b. Livestock; amount used of:
- 2. Hormones (Tier 3) – 69%

2.4.5.c. Reported wild animals killed or trapped for food or sale (Tier 3) – 56%

2.5.1.c. Inland water stocks
- 5.Surface water stocks in snow, ice and glaciers (Tier 3) – 82%

Over 50% of developing countries indicated the following statistics are a low priority for national data collection

3.1.3. a. Emissions of other substances by activity:
2. Other (Tier 3) – 67%

4.2.2. d. Impact of technological disasters; external assistance received (Tier 3) – 85%

5.1.4. b. Population exposed to noise pollution in main cities (Tier 3) – 53%

5.2.2. a. Water-related diseases and conditions:
4. Loss of work days (Tier 3) – 59%

5.2.4. a. Problems associated with excessive UV radiation exposure:
4. Loss of work days (Tier 3) – 69%
5. Estimates of economic cost in monetary terms (Tier 3) – 53%

5.2.5. a. Toxic substance related diseases and conditions:
4. Loss of work days (Tier 3) – 64%
5. Estimates of economic cost in monetary terms (Tier 3) – 60%

6.1.2. a. Private sector environment protection and resource protection expenditure:
2. Annual corporate resource management expenditure by purpose (Tier 3) - 69%
3. Annual household environment protection expenditure by purpose (Tier 3) - 62%
4. Annual household resource management expenditure by purpose (Tier 3) - 69%
5. Annual non-profit institution environment protection expenditure by purpose (Tier 3) - 62%
6. Annual non-profit institution resource management expenditure by purpose (Tier 3) - 69%

RELEVANCE OF TOPICS AND SATISFACTION WITH AVAILABILITY OF STATISTICS

There are only five topics, of the 60+ in the FDES, which a large majority (>70%) of developing countries are satisfied with the availability of statistics at the national level:

1.1.1 Atmosphere, climate and weather (79%)
2.2.2 Production and use of energy (74%)
3.1.2 Consumption of ozone depleting substances (79%)
5.1.1 Urban and rural population (94%)
5.1.2 Access to water, sanitation and energy (74%)

Developed countries in the pilot were satisfied with the availability of environment statistics in their country for nearly all topics of the FDES

Three topics where some developed countries indicated they were not satisfied include:

2.4.1 Soil resources (2/3)

5.2.4 Health problems associated with excessive UV radiation exposure (2/4)

5.2.5 Toxic substance related diseases and conditions (2/4)

Over 70% of developing countries were NOT satisfied with the availability of statistics within the following topics, at the national level:

1.2.1 Soil characteristics (89%)
1.4.3 Marine water quality (94%)
1.4.4 Soil pollution (82%)
1.4.5 Noise (81%)
1.3.2 Ecosystems (79%)
1.4.2 Freshwater quality (79%)
2.1.1 Stocks and changes of non-energy mineral resources (72%)
2.4.5 Wild, uncultivated biological resources (other than fish and timber) (83%)
2.5.2 Abstraction, use and returns of water (74%)
3.1.3 Emissions of other substances (75%)
3.2.1 Generation and pollutant content of wastewater (95%)
3.2.2 Collection and treatment of wastewater (74%)
3.2.3 Discharge of wastewater to the environment (79%)
3.3.1 Generation of waste (74%)
3.3.2 Management of waste (74%)
4.2.1 Occurrence of technological disasters (82%)
4.2.2 Impact of technological disasters (89%)
5.1.4 Exposure to ambient pollution related to spatial location of population (78%)
5.2.4 Health problems associated with excessive UV radiation exposure (75%)
5.2.5 Toxic substance and radiation related diseases and conditions (75%)
6.1.2 Corporate, non-profit institution and household environment protection and resource management expenditure (100%)
6.3.2 Preparedness for technological disasters (94%)
6.4.4 Environmental perception and awareness (78%)

Among developing countries, those statistical topics with the HIGHEST relevance and LOWEST satisfaction with availability include:

1.2.1 Soil characteristics (153)
1.3.2 Ecosystems (153)
1.4.2 Freshwater quality (158)
1.4.3 Marine water quality (161)
2.5.1 Water resources (158)
2.5.2 Abstraction, use and returns of water (153)
3.1.1 Emissions of greenhouse gases (153)
3.2.1 Generation and pollutant content of wastewater (168)
3.2.2 Collection and treatment of wastewater (158)
3.2.3 Discharge of wastewater to the environment (168)
3.3.1 Generation of waste (168)
3.3.2 Management of waste (163)

(Methodology: % indicating high relevance plus % indicating not satisfied with availability; combined scores >150)

Among developing countries, those statistical topics with the HIGHEST relevance and HIGHEST satisfaction with availability include:

1.1.1 Atmosphere, climate and weather (168)
1.3.3 Forests (151)
2.2.3 Production and use of energy (168)
3.1.2 Consumption of ozone depleting substances (163)
5.1.1 Urban and rural population (184)
5.1.2 Water and sanitation (168)

These topics represent areas where national environment statistics production has done a better job of keeping pace with areas of particular relevance for countries.

(Methodology: % indicating high relevance plus % indicating satisfied or highly satisfied with availability; combined scores >140):

REASONS FOR WHY PRODUCTION OF STATISTICS IS NOT SATISFACTORY

Across all topics, resource constraints, methodological/technical difficulty in collecting, and lack of institutional set-up/coordination were the main reasons for lack of satisfaction in the production of environment statistics

The frequency of resource constraints was largest for Components 1 and 3.

The frequency of methodological/technical difficulty in collection was largest for Components 3 and 4.

The frequency of insufficient quality was largest for Components 1 and 3.

The frequency of accessibility was largest for Components 1 and 4.

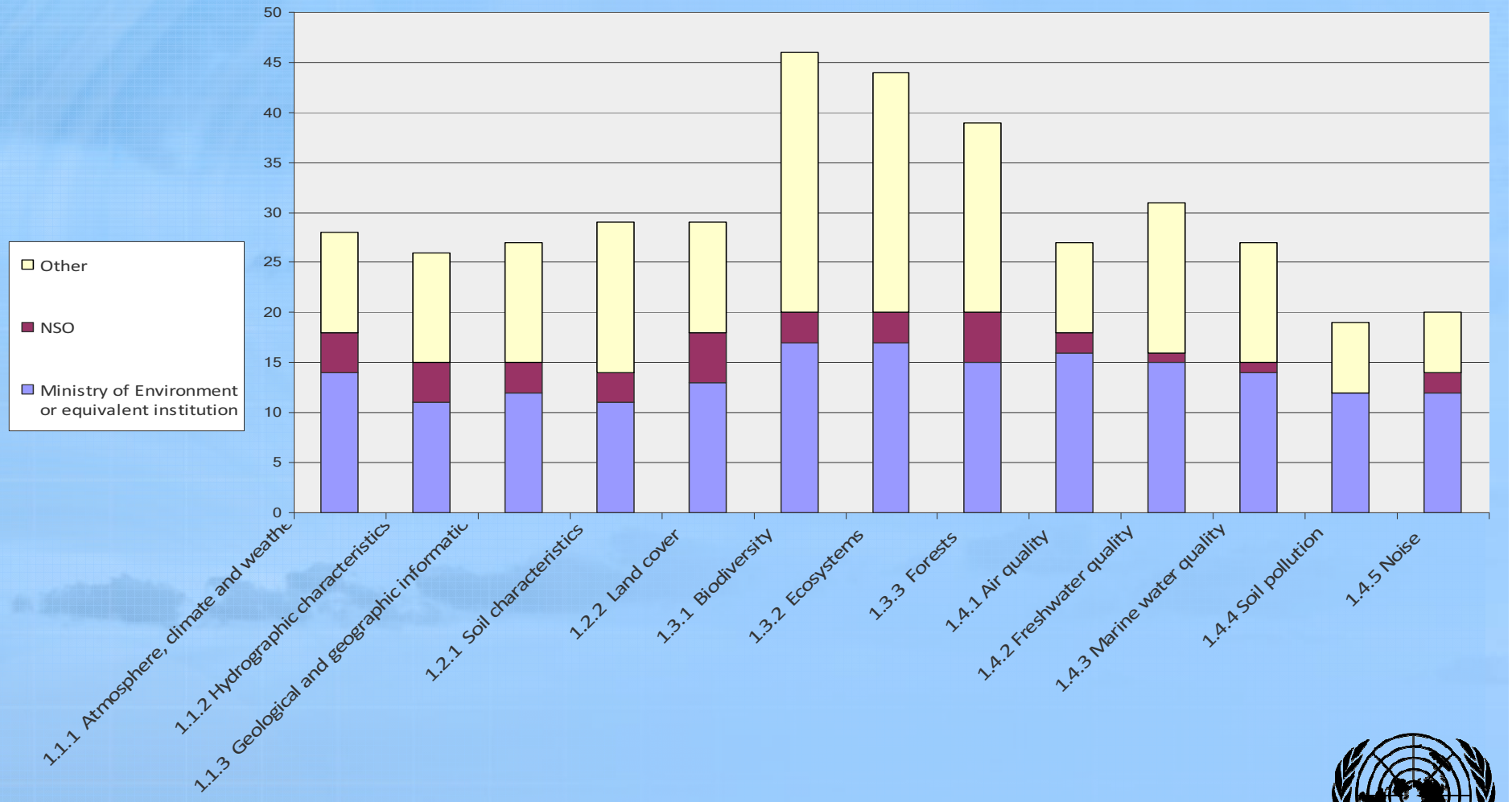
The frequency of lack of institutional set-up/coordination was largest for Components 3, 4 and 6.

Methodology: Total frequency for Component divided by number of topics

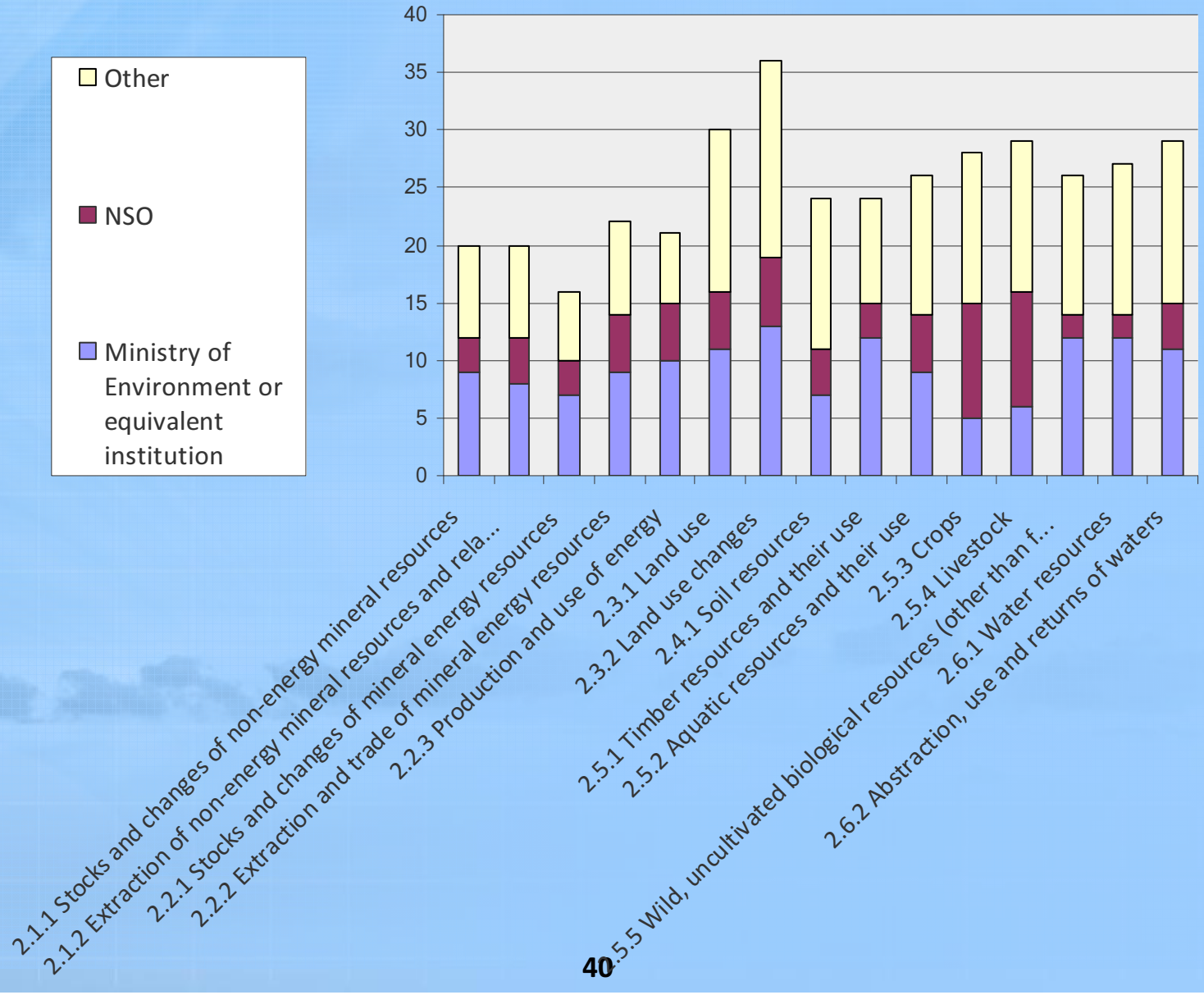
	Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6
Resource constraints	11.3	9.4	11.9	10.5	7.6	8.9
Methodological/technical difficulty in collection	8.8	8	10.8	11.3	6.5	7.5
Insufficient quality	5.5	3.5	6.4	5	3.6	3.6
Accessibility	7.2	5.1	5	7.3	4.5	5.8
Lack of institutional set-up/coordination	7.2	6.1	8.5	8.8	6.6	8.7

INSTITUTIONS RESPONSIBLE FOR DATA COLLECTION

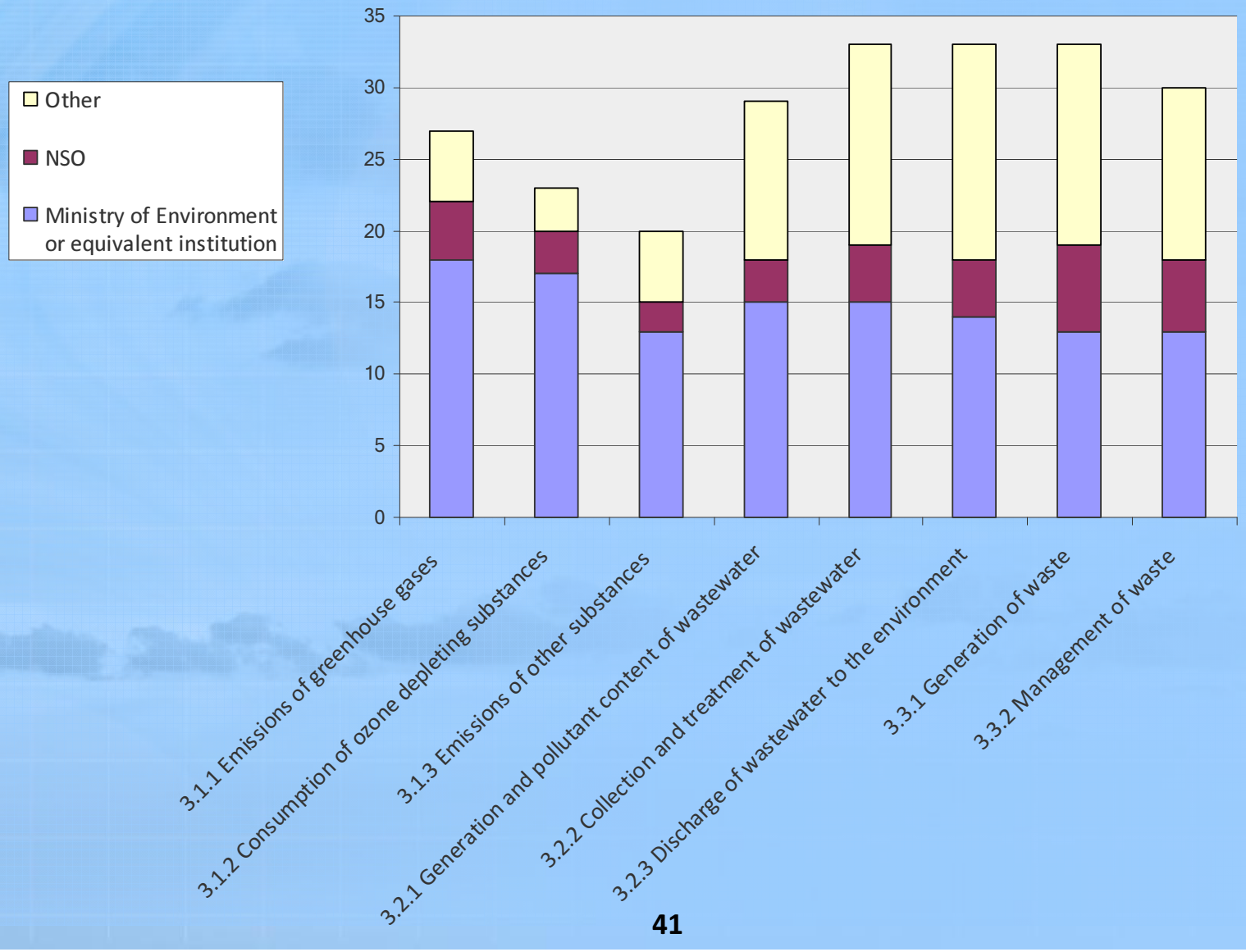
Institutions responsible for collecting data on this topic *(Frequency among developing countries)* – Component 1



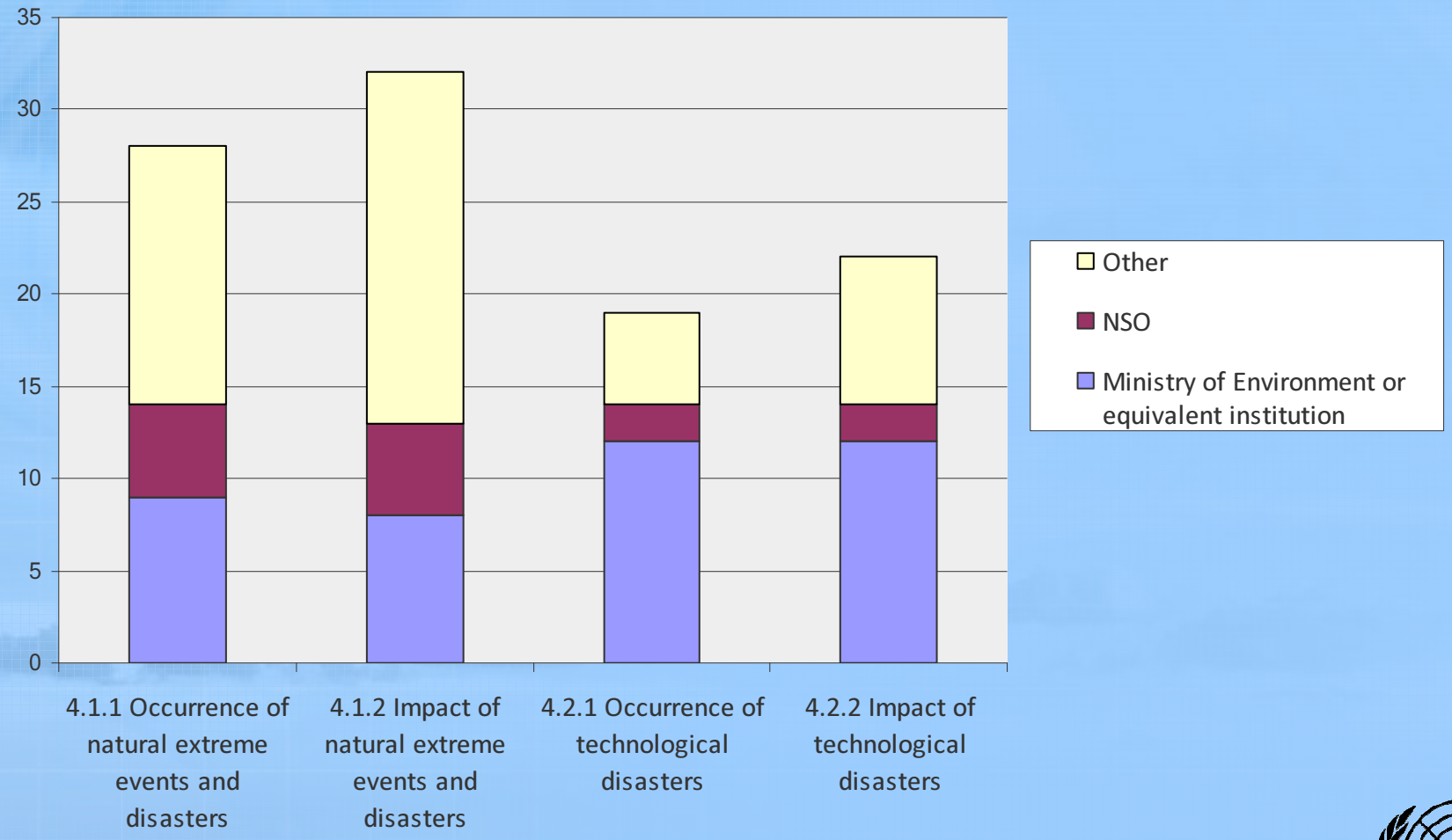
Institutions responsible for collecting data on this topic *(Frequency among developing countries)* – Component 2



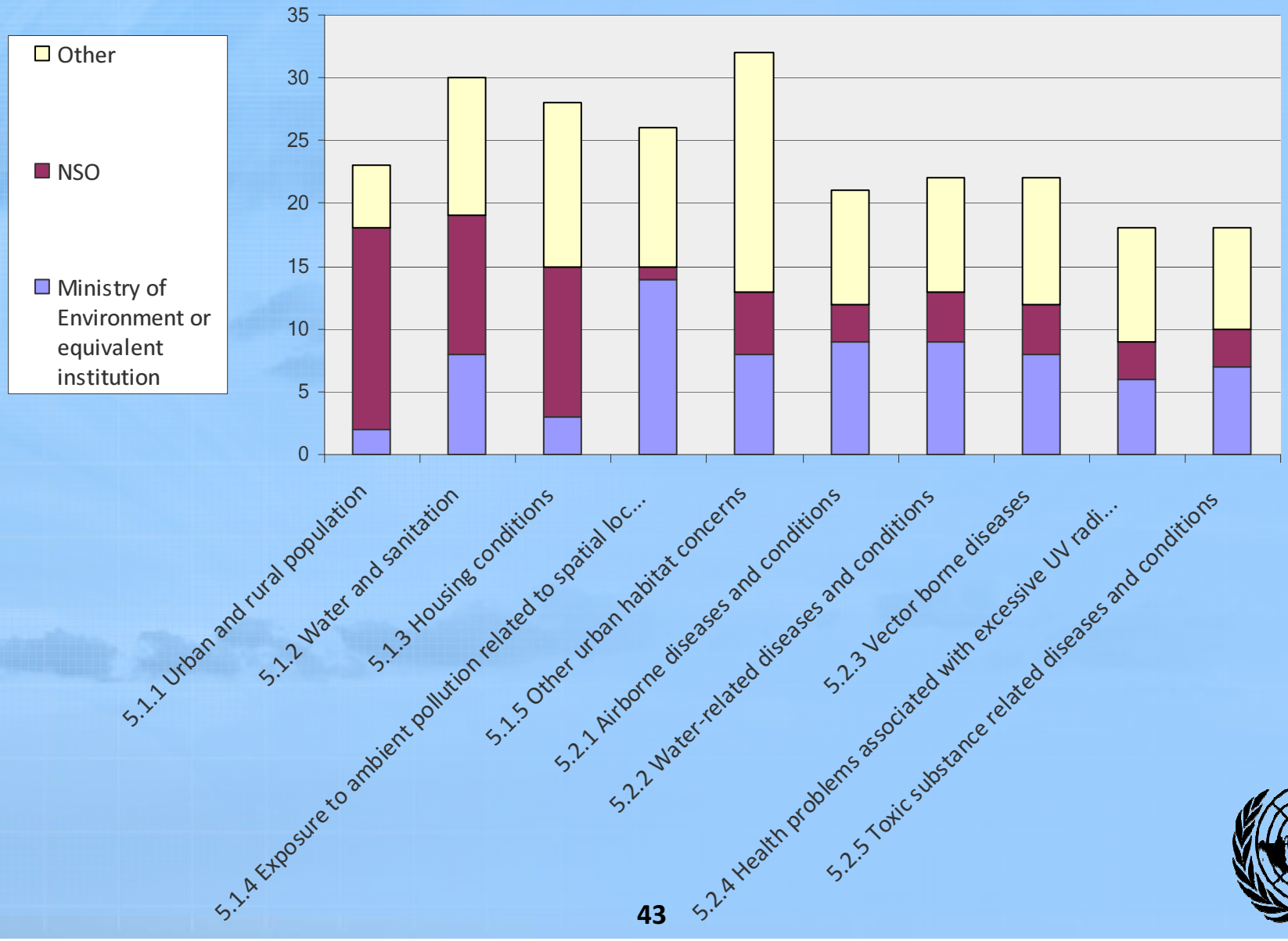
Institutions responsible for collecting data on this topic *(Frequency among developing countries)* – Component 3



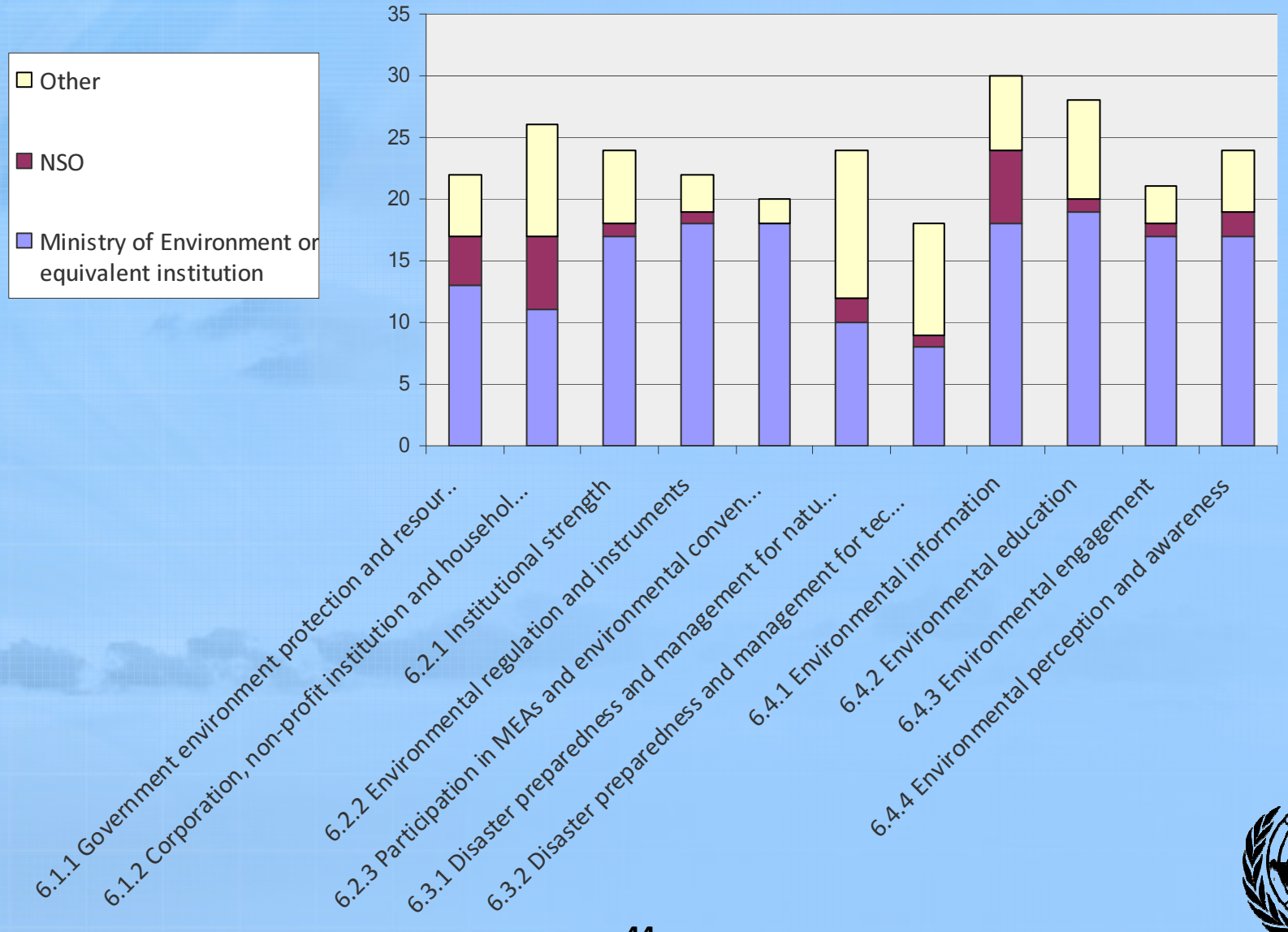
Institutions responsible for collecting data on this topic *(Frequency among developing countries)* – Component 4



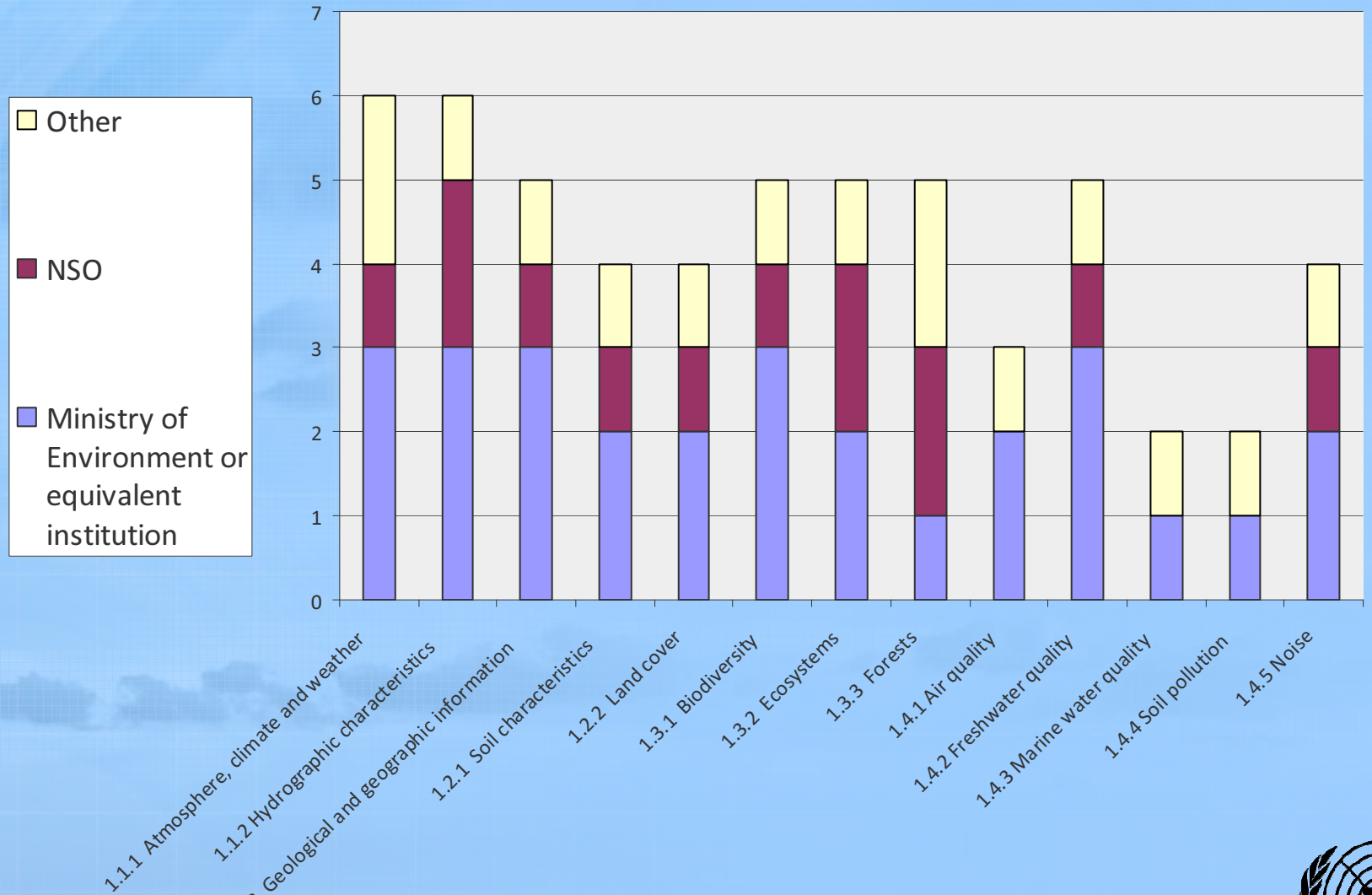
Institutions responsible for collecting data on this topic *(Frequency among developing countries)* – Component 5



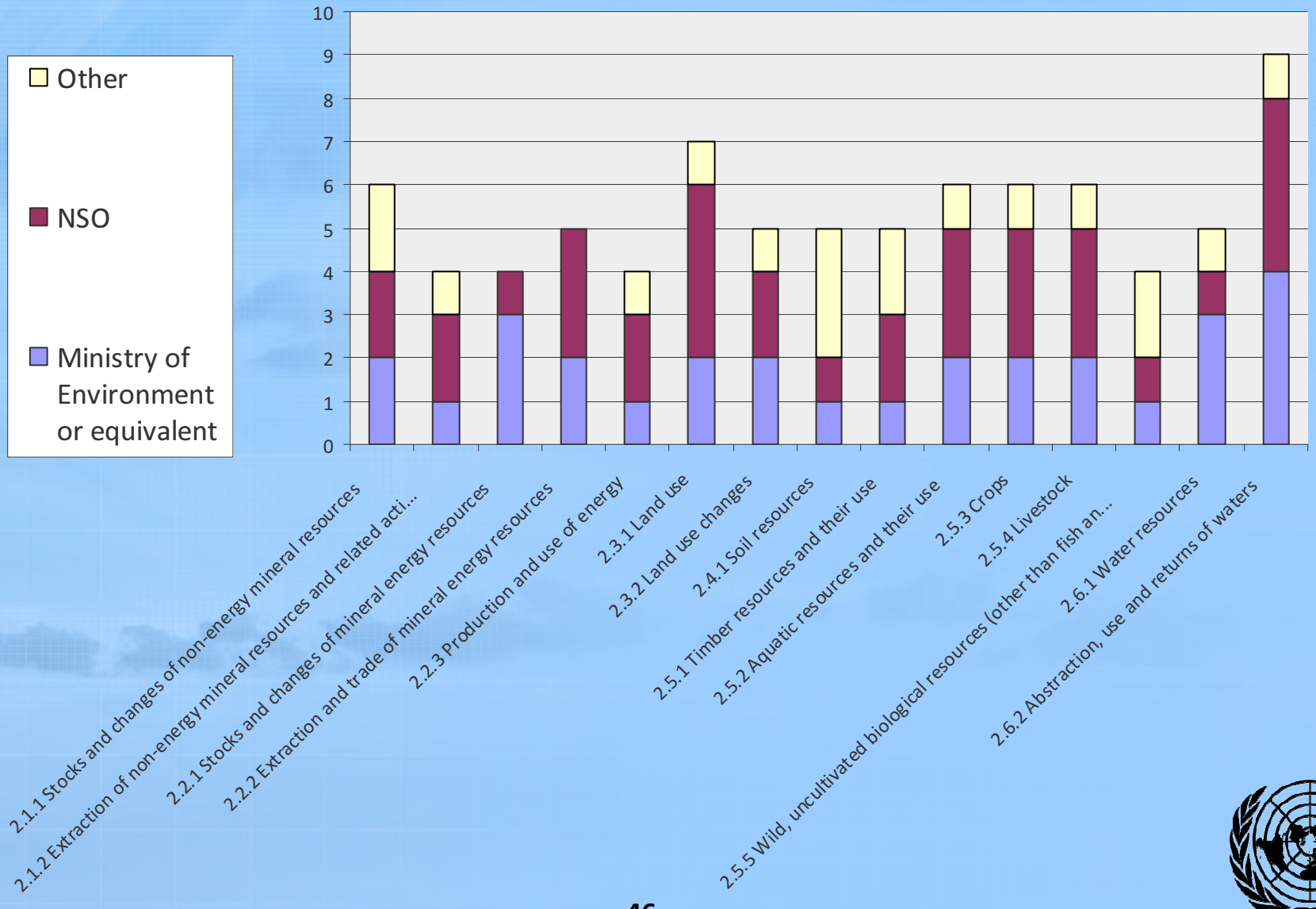
Institutions responsible for collecting data on this topic *(Frequency among developing countries)* – Component 6



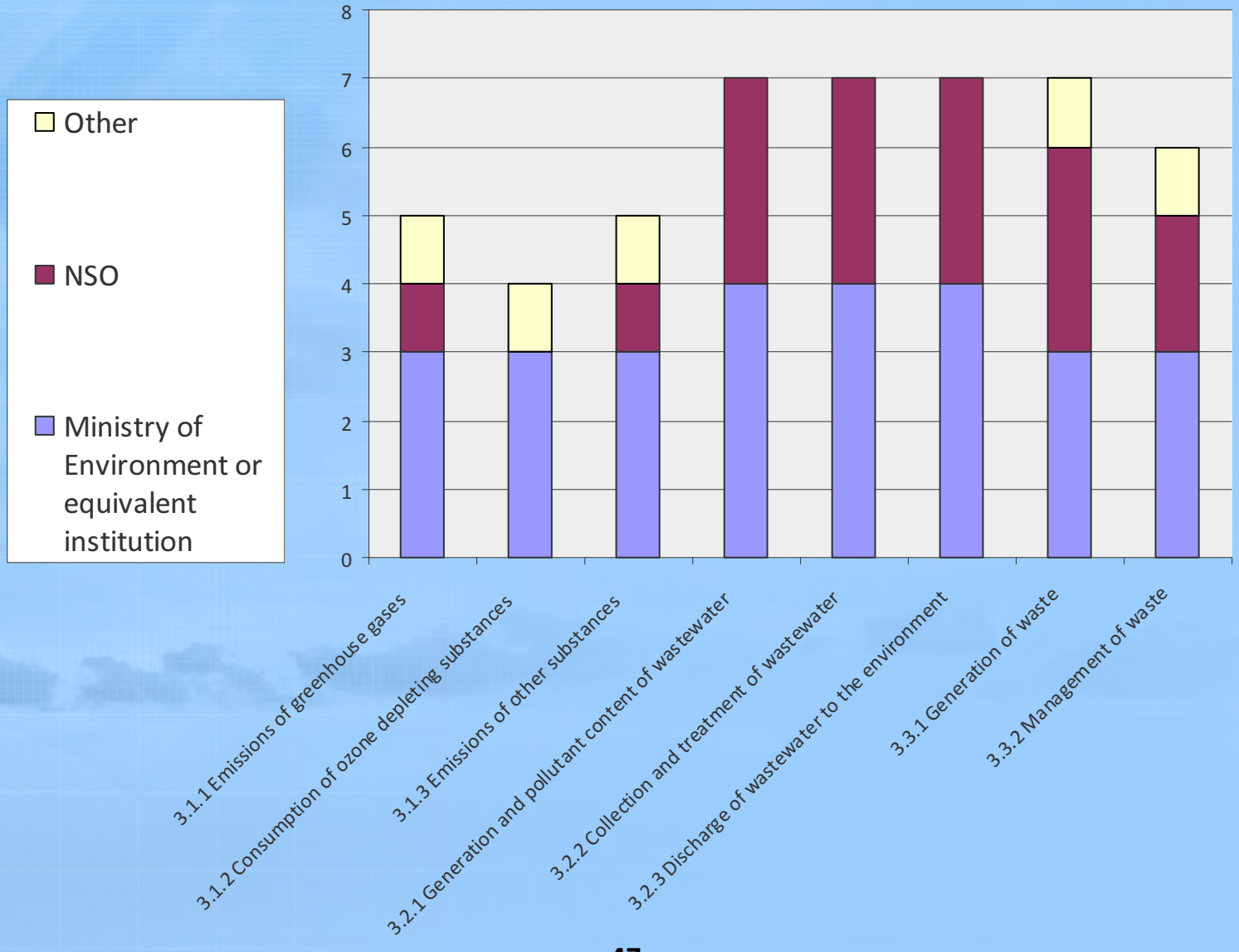
Institutions responsible for collecting data on this topic *(Frequency among developed countries)* – Component 1



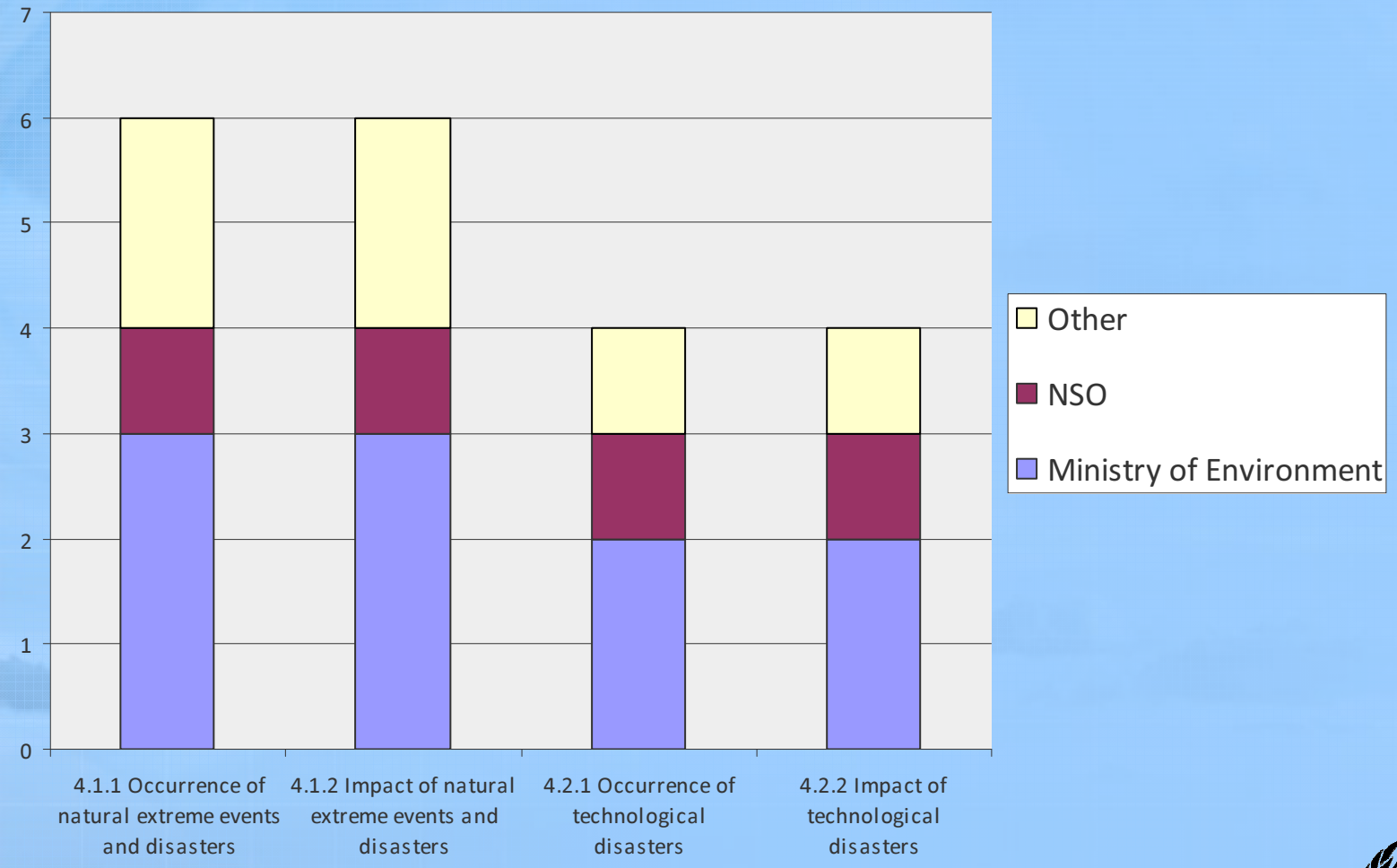
Institutions responsible for collecting data on this topic *(Frequency among developed countries)* – Component 2



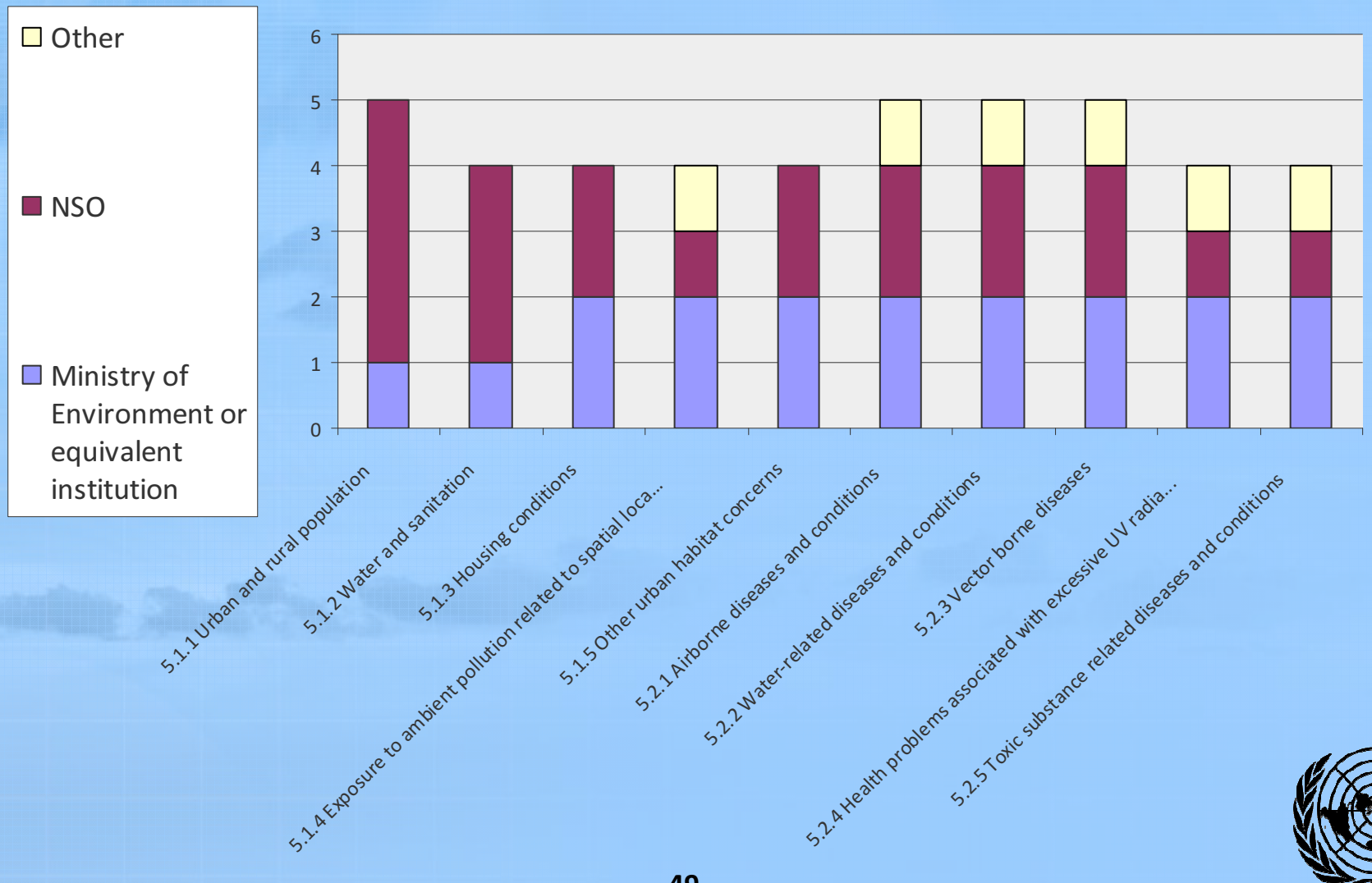
Institutions responsible for collecting data on this topic *(Frequency among developed countries)* – Component 3



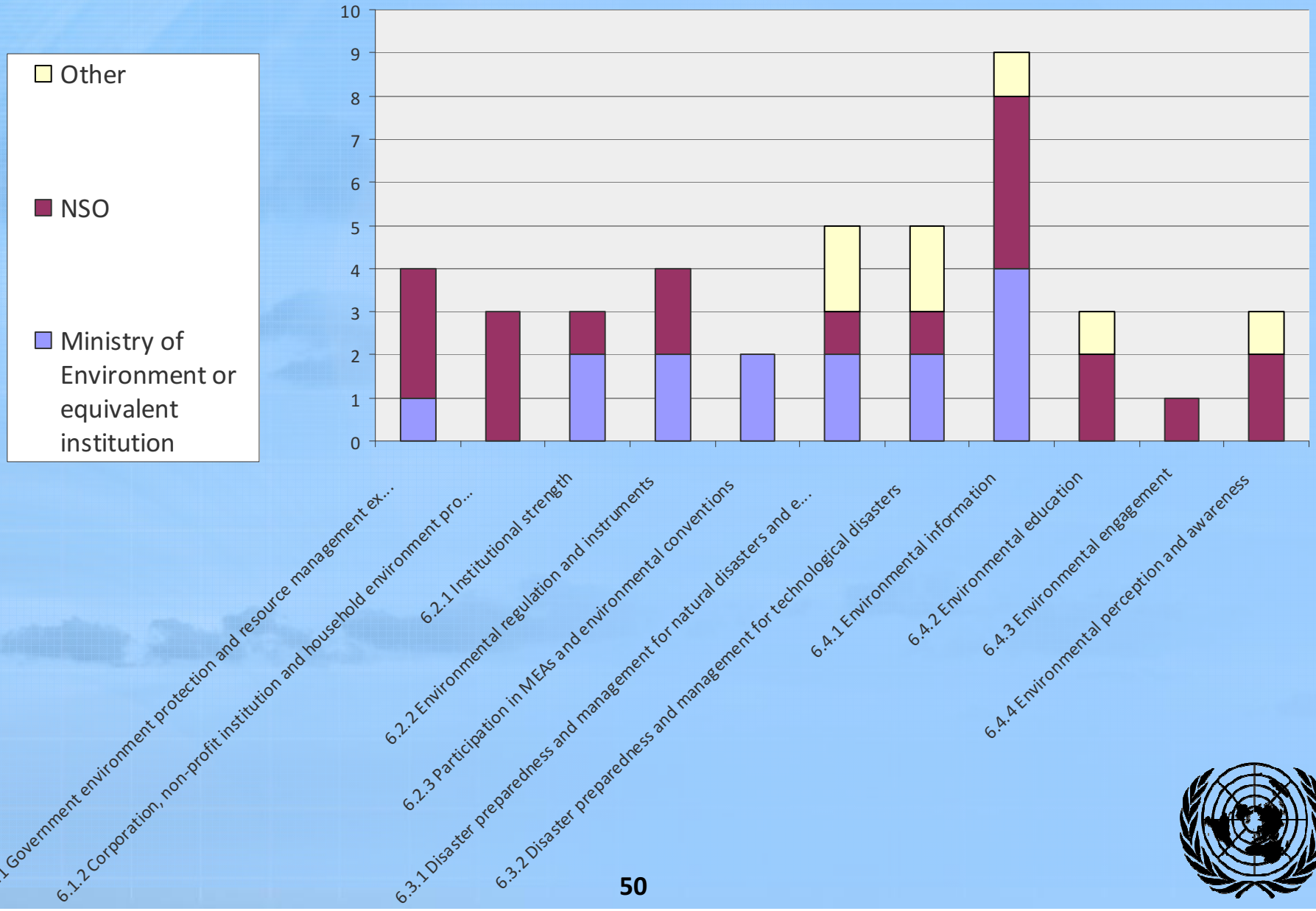
Institutions responsible for collecting data on this topic *(Frequency among developed countries)* – Component 4



Institutions responsible for collecting data on this topic *(Frequency among developed countries)* – Component 5



Institutions responsible for collecting data on this topic *(Frequency among developed countries)* – Component 6



RECOMMENDATIONS FOR CHANGES TO CORE SET

(refers to the earlier Draft of the Core Set consisting of two Tiers)

Statistics recommended for addition to the Core Set

- Exclusive Economic Zone area should move into the core set
- EIAs for tourism in 6.2.2
- Statistics on Tourism - not sure yet how to integrate but hopefully we can find a way.
- Tourist arrivals in Human Habitat
- Tourism associated with protected areas.
- Ratio of tourists to population in Human Habitat
- Contaminated sites and abandoned industrial sites
- Daily Precipitation (topic 1.1.1.b)
- Indicators of compliance and enforcement of the effective environmental laws
- Number of days where maximum allowable levels of pollutants in fresh water were surpassed per year
- Clean Development Mechanism projects
- Data relating to climate change - I hope we can use the Climate change panel categories instead of economic ones.
- Extent of Glacier retreat- Glacier wise (under 1.1.2)
- Extent of Glacier Ice Volume- Glacier wise (under 1.1.2)
- Caves - Component 1
- Rate of forest coverage
- Coverage of trees in human habitat
- Environmental governance - e.g. No. of EIA issued/approved
- For Topic 4.1.1 (Occurrence of natural extreme events and disasters), we encourage you to move 4. Date of occurrence and 5. Duration up to Core Set/Tier 1.
- Suggest moving Topic 1.1.3c3 and 2.3.1d ("Exclusive Economic Zone (EEZ) up to Tier 1. This is a critical area designation for security and compliance with international agreements.

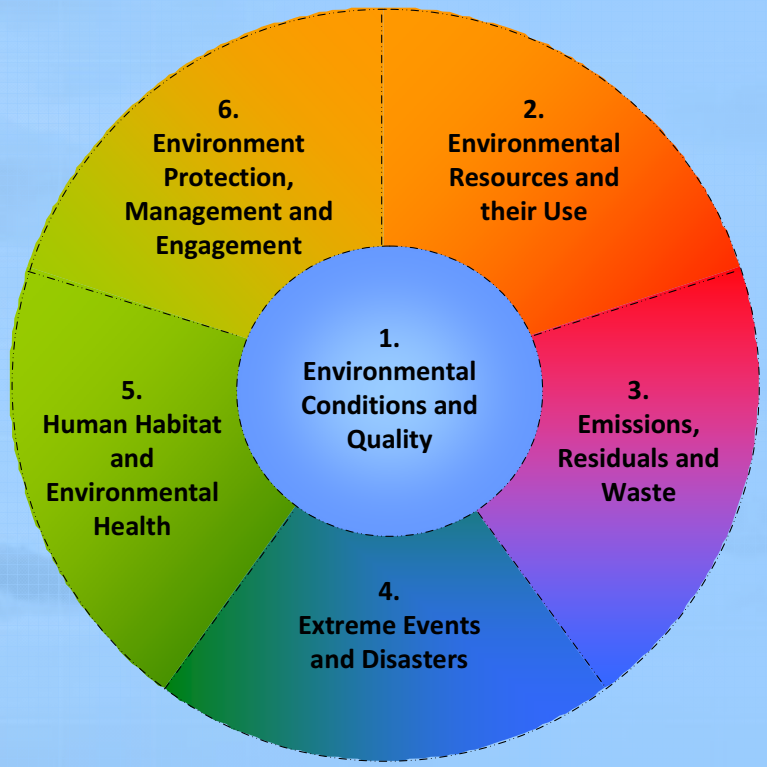
Statistics recommended for addition to the Core Set (cont.)

- Government budget for environmental protection and management - Component 6
- Volume of Aquifers (topic 1.1.2.f)
- Water Quality of Aquifers (topic 1.1.2.f)
- Volume of Reservoir (topic 1.1.2.c)
- Meat and Milk Production
- Reduce, reuse of waste in Waste Management
- Amount and percentage of reused waste by waste category
- Number of ecotourism projects in operation
- Percentage of animal manure used for biogas
- Number of Vehicles using natural gas and biofuels (ethanol, biodiesel) (topic 5.1.5)
- Revenue of tax for environmental depletion
- Annual environment protection expenditure by purpose of economic sectors and enterprises
- Annual environment protection expenditure funded by donors
- Number of legal frameworks for environmental protection and sustainable development
- Legislation/policy implementing public access requirements for environmental data
- Energy consumption of households (should be in 2.2.3.c) - Istat is carrying on the first edition of a CATI survey on Energy consumption of households. According to an ongoing proposal of modification of Energy Statistics Regulation (EC) No 1099/2008, which is going to include data collection on energy consumption in households, the FDES should include this subject.
- Environmentally related subsidies, such as fossil fuel subsidies

Statistics recommended for removal from the Core Set

- Those data fields not compliant with the Collaborative Forest Resources Questionnaire (CFRQ)
- Soil resources (belong to the agricultural census)
- Crops (belong to the agricultural census)
- Livestock (belong to the agricultural census)
- Airborne diseases (Public health topic)
- Water related diseases (Public health issue topic)
- Vector borne diseases (Public health topic)
- Health problems associated with UV exposure (Public health topic)
- Topic 1.4.2. Temperature - Reason(s) for deletion: Methodology and its usefulness
- Topic 1.4.3 Amount of plastic waste and other debris in marine waters - Reason(s) for deletion: Should consider the feasibility.
- Topic 2.1.1 Extraction - Reason(s) for deletion: Duplication with Topic 2.1.2 c
- Topic 2.2.3 using energy extracted resource - Reason(s) for deletion: Energy using that monitoring law of energy saving and efficiency
- Topic 2.2.4 using energy imported resource - Reason(s) for deletion: Energy using that monitoring law of energy saving and efficiency
- Topic 3.2.2 c. Population connected to wastewater collection - Reason(s) for deletion: Feasibility of collecting the information and its cost effective
- Topic 3.2.2 d. Population connected to wastewater treatment - Reason(s) for deletion: Feasibility of collecting the information and its cost effective

FDES Global Consultation Summary



There was strong support from member States for the FDES; feedback was overwhelmingly positive

"The FDES is a good and very helpful tool / guide for the development of environment statistics." (**Mauritius**)

"The document draws very well the general picture of the nature and structure of environment statistics." (**Georgia**)

"The FDES is a useful tool to develop environment statistics and will contribute to strengthen the NSO, especially in the on the three pillars of Sustainable Development: Environment" (**Dominican Republic**)

"The FDES has the potential to be a useful framework for integrating environmental, social and economics statistics. Statistics **New Zealand** are in an ongoing dialogue with New Zealand's Ministry for Environment on the role the FDES could take in coordinating state of environment, sustainable development, SEEA, and Green Growth reporting."

General Opinions on the FDES

Is the FDES comprehensive?

- 55 of 56 countries agreed that the FDES was comprehensive.
- Palestine disagreed, noting that paragraph 2.3 did not mention the role of the FDES in the dissemination of environment statistics.

Is the scope of the FDES adequate for the purposes of developing an environment statistics programme?

- 54 of 56 countries agreed with this statement.
- India disagreed because they believed some concepts in the FDES need to be better defined. (Methodological handbooks will be produced in the future)

Is the FDES relevant for national policy concerns?

- All countries agreed with this statement.
- Jordan stated that the FDES is relevant for national policy concerns because it is concerned with sustainable development and climate change topics, the drivers for many environmental policies.

General Opinions on the FDES

Is the FDES useful in identifying gaps in environment statistics in your country?

- **54 of 56 countries agreed.**
- **Sweden disagreed because the primary means for identifying gaps in their country is by looking at policies and comparing user needs.**
- **Many countries were vocal about how helpful the draft FDES has been and will be in identifying gaps, some of their comments include:**
  - "Although the **Polish** statistics system on environmental information is quite well developed, organised and coordinated, we consider the FDES as a very useful instrument for us that allows links to other statistical systems e.g. SEEA."
  - "The FDES is a good tool for developing countries, like **China**, to identify their data gaps in environment statistics and make improvements with regard to national priorities and urgent needs."
  - "The draft FDES has been in **Qatar** to identify national environment statistics priorities and to develop the National Framework on Environment Statistics. The document has proven to be useful for practical implementation."
  - "**Slovenia**, like many other countries, still have some gaps in the field of environment statistics and the FDES will help us to overcome these gaps"
  - "**Montenegro** has many gaps in the field of environment statistics and the FDES will help us to overcome some of these gaps."

Comments on the Introduction

Is the text provided in the Introduction clear?

- **54 of 55 countries agreed that the introduction was clear.**
- **Norway disagreed, noting that paragraph 1.4 defines the usefulness of the framework, but not what a framework is.**
- **Other comments included:**
  - "We support the intention to turn the revised FDES into an organizing structure to guide the collection and compilation of environment statistics and for synthesis of data by internationally comparable manner. In our view, the most significant contribution of the revised FDES consists in covering all aspects of the environment relevant for analysis, policy and decision making." (**Bulgaria**)
  - "The introduction has been very educative and gives a general picture of FDES which makes it worthy to uphold as an instrument for environment statistics." (**Sierra Leone**)

Comments and suggestions for Chapter 1

Are the contents and structure of Chapter 1 clear?

- 54 of 54 countries agreed that the contents and structure of Chapter 1 were clear.

Are the objective and scope of environment statistics clear?

- 53 or 54 countries agreed with this statement.

Are the most important issues pertinent to environment statistics well covered?

- 50 or 54 countries agreed with this statement.
- Australia disagreed and suggested the section on the relationship between the FDES and other frameworks, specifically the SEEA, could be expanded.
- Switzerland also disagreed and suggested that additional chapters on data quality, the timeliness of data, the subjective perception of the environment, and the evaluation of indicators would be very helpful.
- Jordan agreed, and noted that while the list is not necessary exhaustive, the framework's generality and flexibility allows for additional topics as well as for additional details with the topic.

Other Chapter 1 comments

It is important that environmental data, environment statistics and environmental indicators were clearly defined and differentiated. (**Antigua and Barbuda**)

The nature of environmental information, data and statistics and the importance of geospatial information is well explained, as well as the institutional dimension. (**Finland**)

The definitions of the different levels of environmental information, such as data, statistics, frameworks, indicators etc was very helpful. (**New Zealand**)

Comments and suggestions for Chapter 2

Are the contents and structure of Chapter 2 clear?

- All countries agreed that the contents and structure of Chapter 2 were clear.
- New Zealand mentioned that the FDES may provide the structure for state of environment reporting in New Zealand.
- South Africa noted that the structure is very useful in providing guidance in organizing statistics.

Is the conceptual foundation of the FDES clear?

- 52 of 54 countries agreed that the conceptual foundation was clear.
- Vietnam disagreed because they believe the FDES needs more information on scientific theories which underpin the conceptual foundation.

Comments and suggestions for Chapter 2

Is the structure of the FDES useful for the purpose of organizing and guiding the development of environment statistics?

- **All countries agreed.**
- **Chile noted that, "It is suitable for outlining environmental statistics, without prejudice to any other approach or arrangement that may be used, depending on the objectives of each institution or country."**

Is the relationship between environment statistics and other frameworks and systems well covered and clear?

- **52 of 54 countries agreed.**
- **Australia disagreed suggesting adding another arrow directly from "Environmental and related data" to the top three boxes**
- **Poland disagreed suggesting that language needed to revised in item 2.32 to say "the FDES and the SNA are complimentary statistical frameworks where the common intersection is the SEEA."**

Comments and suggestions for Chapter 3

Are the contents and structure of Chapter 3 clear?

- All countries agreed that the contents and structure of Chapter 3 was clear.
- Bhutan wrote that "The Structure and Components of the FDES are well organized."

Are the main attributes of the FDES components (Table 3.2) helpful?

- 55 of 56 countries agreed that Table 3.2 was helpful.

Other general comments

- Mauritius said, "The chapter is interesting and will help guide the collection and compilation of environment statistics. It describes the sub-components and statistical topics clearly. Further the relevancy of environment policy, scope, content, type of data, sources, and the main institutional stakeholders has been included in the description, these will help to better understand the topics."
- Jordan indicated that the FDES is "integrative in nature, comprehensive and flexible enough to accommodate the information needs of new and emerging environmental and policy issues."

Comments and suggestions for Component 1

Is the explanatory text for Component 1 helpful?

- All countries agreed that the explanatory text was helpful.

Are the contents (sub-components and topics) in Component 1 adequate and well allocated?

- 49 of 54 countries agreed that the contents were adequate and well allocated.

Any other suggestions

- New Zealand said, "A detailed response on the adequacy and allocation of sub-components is not possible within the time available. However, the general themes and topics appear to cover the important issues covered by the component."

Comments and suggestions for Component 2

Is the explanatory text for Component 2 helpful?

- **All countries agreed that the explanatory text was helpful.**

Are the contents (sub-components and topics) in Component 2 adequate and well allocated?

- **52 of 55 countries agreed that the contents were adequate and well allocated.**

Any other suggestions

- **South Africa said, "Useful to contextualize the development of environmental economic accounts."**
- **Serbia indicated that Component 2 is "Very clear and satisfactory explanations."**

Comments and suggestions for Component 3

Is the explanatory text for Component 3 helpful?

- All countries agreed that the explanatory text was helpful.

Are the contents (sub-components and topics) in Component 3 adequate and well allocated?

- 50 of 54 countries agreed that the contents were adequate and well allocated.

Any other suggestions

- Ireland said that "Difficulties in terminology and definitions on waste will prove problematic in assembling representative, consistent and systematic waste data."

Comments and suggestions for Component 4

Is the explanatory text for Component 4 helpful?

- 50 of 52 countries agreed that the explanatory text was helpful.
- Suriname wrote that "The term 'extreme' is not well defined."

Are the contents (sub-components and topics) in Component 4 adequate and well allocated?

- 47 of 52 countries agreed that the contents were adequate and well allocated.

Any other suggestions

- Philippines indicated that, "A further explanation on what extreme natural events are may be helpful."

Comments and suggestions for Component 5

Is the explanatory text for Component 5 helpful?

- All countries agreed that the explanatory text was helpful.

Are the contents (sub-components and topics) in Component 5 adequate and well allocated?

- All countries agreed that the contents were adequate and well allocated.

Any other suggestions

- Italy indicated that, “Given the impact that changes in the state of the environment have on humans, not only the impact of natural disaster on population and the impact of pollution on human health should be considered, but also the topics linked to well-being should be emphasized.”

Comments and suggestions for Component 6

Is the explanatory text for Component 6 helpful?

- 54 of 55 countries agreed that the explanatory text was helpful.

Are the contents (sub-components and topics) in Component 6 adequate and well allocated?

- 52 of 54 countries agreed that the contents were adequate and well allocated.

Any other suggestions

- Kazakhstan mentioned, “Please provide for each indicator the unit of measurement and approaches on how to collect data.”
- Norway indicated that “Statistics on environmental perception and awareness can be produced through special surveys, as told in the draft FDES. But it is perhaps more fruitful to produce such statistics as part of general opinion surveys, which gives the possibility of comparing awareness for the environment with other societal challenges.”

Comments and suggestions for Chapter 4

Is the introductory text for Chapter 4 clear and helpful?

- **54 of 55 countries agreed that the introductory text was clear and helpful.**

Is the Basic Set of Environment Statistics adequate for national statistical purposes?

- **54 of 55 countries agreed that the Basic Set was adequate.**

Is the structure of the Basic Set of Environment Statistics in Tiers 1, 2, and 3, as well as the allocation of individual statistics in each tier helpful?

- **All countries agreed that the structure and allocation of individual statistics was helpful.**
- **Australia mentioned that "The structure and definition of the three tiers of statistics are well defined. However, it is difficult to separate environment statistics across three tiers."**
- **Norway said that "The structure is helpful, and the statistics listed clearly shows that environmental challenges are many-sided. The lists are useful as check lists for national statistics production and it also gives good ideas of what should and can be produced."**

Comments and suggestions for Chapter 4 (contd.)

Is the Core Set (Tier 1) of Environment Statistics relevant for national policy concerns?

- **All countries agreed that the Core Set (Tier 1) was relevant.**

Is the Core Set (Tier 1) of Environment Statistics useful for covering international reporting needs?

- **53 of 54 countries agreed that the Core Set (Tier 1) was useful.**

Any other comments

- **Ireland said "The tiered approach to statistics outlined is appropriate and is useful to see the connection of the core set to the basic set etc. and the need to have qualitative information."**
- **New Zealand mentioned "The rationale behind the core set is clear as is the process undertaken to develop them. The pilot test by over 20 countries provides a reasonable level of confidence that other countries, such as New Zealand, may find them useful and their implementation achievable."**
- **South Africa indicated "For developing countries it is useful to have both the basic and core sets of indicators, since the selection may indicate priorities."**

Comments and suggestions for Chapter 5

Are the contents and structure of Chapter 5 adequate?

- **All countries agreed that the contents and structure of Chapter 5 was adequate.**

Is the objective of Chapter 5 clear?

- **All countries agreed that the objective was clear.**

Are the selected cross-cutting issues capable of illustrating the capacity of the FDES to be applied to different user needs?

- **51 of 53 countries agreed that the issues were capable of illustrating the capacity of the FDES to be applied to different user needs.**

Comments and suggestions for Chapter 5 (contd.)

Are the contents and presentation of the selected cross-cutting issues helpful?

- **52 of 53 countries agreed that the contents and presentation of Chapter 5 were helpful.**

Any other comments

- **Poland suggested "Expanding those cross cutting issues on other important topics e.g. land cover and deforestation."**
- **Serbia indicated "Very nice descriptions for very important part of environmental statistics, water, energy and climate change. It part and clarifications will be very useful for statistical offices."**
- **Botswana said "Cross-cutting issues like tourism and transport should be taken into consideration."**

Comments and suggestions for the Annexes

Are the contents of the Annexes comprehensive and helpful?

- 47 of 48 countries agreed that the contents were comprehensive and useful.

Is there any additional topic or issue pertaining to environment statistics that might be added as or covered by an Annex?

- Gambia suggested "It may be useful to show a list of emission factors used by countries in their GHG emission estimates."

Any other comments

- Norway indicated "The Annexes are very useful as reference information to the FDES."
- Poland said "The Annexes are very useful source of additional information particularly for persons less acquainted with the subject of environmental statistics."
- Vietnam mentioned "Explanations are clear and easy to understand."

Thank you. Any questions?