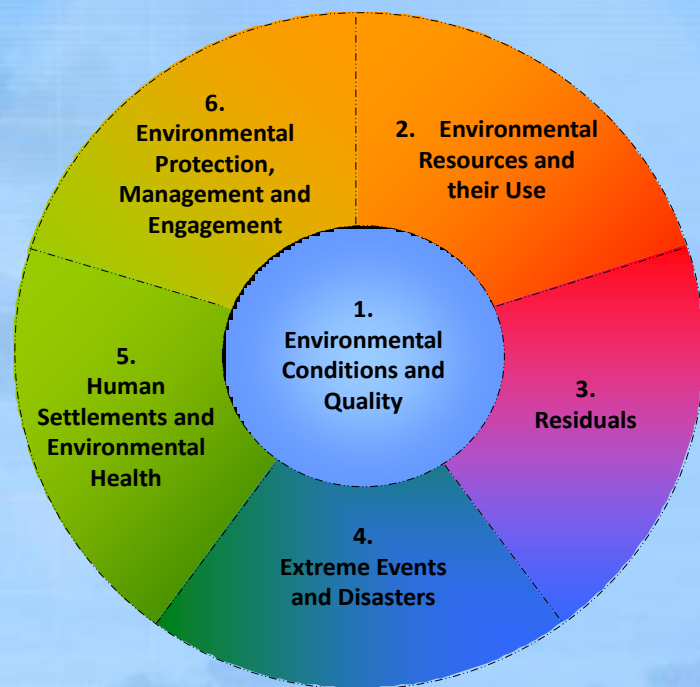
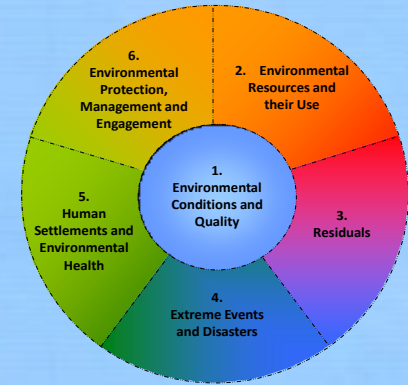




Chapter 4: From the Basic Set to the Core Set of Environment Statistics



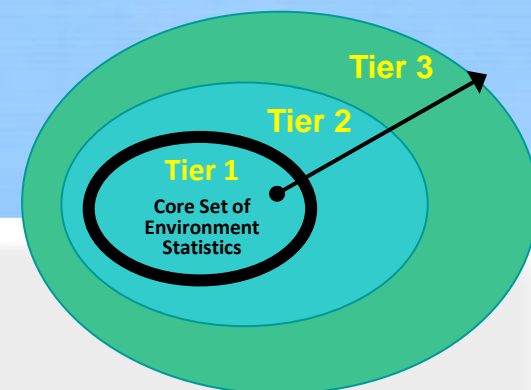
Workshop on Environment Statistics in support of the implementation of the Framework for the Development of Environment Statistics (FDES 2013) (Lomé, Togo, 19-23 October 2015)



- This presentation has been elaborated by the Environment Statistics Section of the United Nations Statistics Division.
- It is based on Chapter 4 of the Framework for the Development of Environment Statistics (FDES 2013).



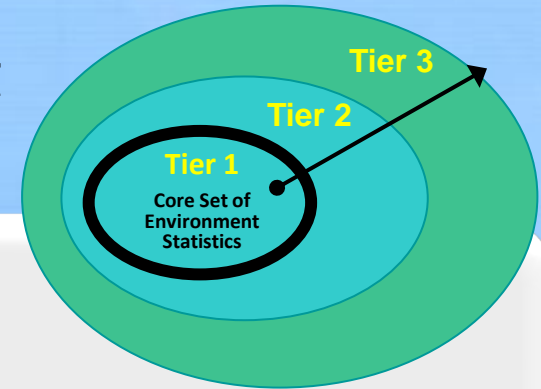
Why do we need a Basic and Core Set of ES?



- Both the Basic and Core Sets were developed in response to:
 - Country demand;
 - Their relevance to environmental issues;
 - Corresponding FDES topics.
- The statistics contained in these Sets are useful for:
 - Generating national sets or databases of environment statistics.
 - Reporting on environment or sustainable development.
 - Calculating environmental indicators.
 - Generating environmental-economic accounts.



The Basic and the Core Set of Environment Statistics

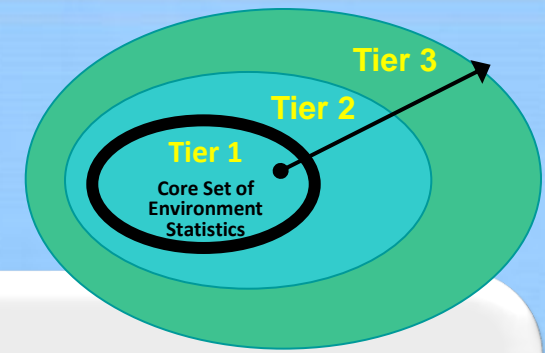


The **Basic Set of Environment Statistics** is:

- a comprehensive, but not exhaustive, set of statistics designed to support countries developing environment statistics programmes according to their national priorities for statistical development.
 - flexible enough to be adapted to individual countries' environmental concerns, priorities and resources.
- The **Basic Set** thus features a progression of three tiers, based on the level of relevance, availability and methodological development of the statistics, where Tier 1 corresponds to **the Core Set of Environment Statistics**. As national priorities require and data availability and resources permit, the scope may be widened gradually to include the statistics in Tiers 2 and 3.



The Basic Set and its three tiers of statistics



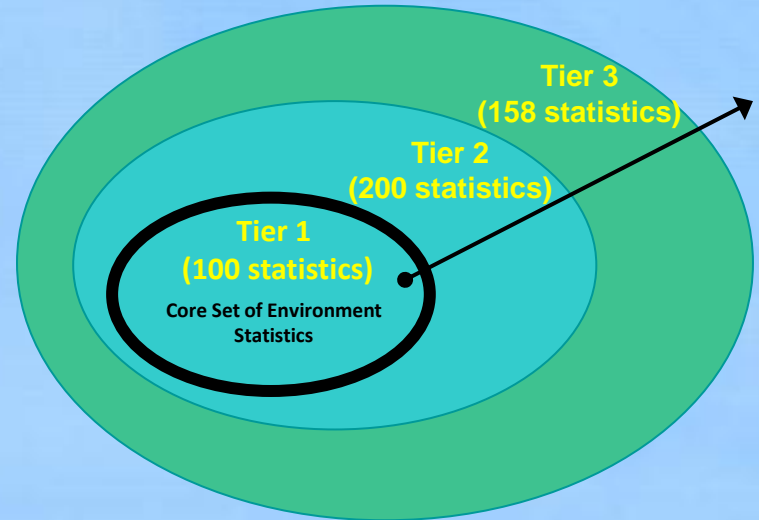
The three tiers of statistics are defined as follows:

- Tier 1, corresponding to the Core Set of Environment Statistics, includes 100 statistics which are of high priority and relevance to most countries and have a sound methodological foundation. It is recommended that countries consider producing them in the **short-term**.
- Tier 2 includes 200 environment statistics which are of priority and relevance to most countries but require greater investment of time, resources or methodological development. It is recommended that countries consider producing them in the **medium-term**.
- Tier 3 includes 158 environment statistics which are either of lower priority or require significant methodological development. It is recommended that countries consider producing them in the **long-term**.



Number of environment statistics in the Basic and Core Set

Core Set or Tier 1 = 100 statistics
Basic Set = 458 statistics



Number of Statistics	Component 1	Component 2	Component 3	Component 4	Component 5	Component 6	Total
Tier 1	32	30	19	4	12	3	100
Tier 2	58	51	34	11	22	24	200
Tier 3	51	43	5	16	20	23	158
Total	141	124	58	31	54	50	458



Core Set of Environment Statistics

- The **Core Set of Environment Statistics** is a set of statistics which countries are recommended to consider producing in the short-term.
- The Core Set of Environment Statistics consists of:
 - a limited number of statistics.
 - some non-statistical information on the environment (e.g., qualitative descriptions).
- The Core Set represents a broad consensus of opinion on the pertinence and feasibility of these statistics.

Purpose:

- Intended to foster collection, coordination and harmonization of environment statistics at the national, regional and global levels.



The Basic Set is presented in the FDES structure, supplemented with additional guidance

Component 4: Extreme Events and Disasters					
Sub-component 4.1: Natural Extreme Events and Disasters					
Topic	Statistics and Related Information		Category of Measurement	Potential Aggregations and Scales	Methodological Guidance
	(Bold Text - Core Set/Tier 1; Regular Text - Tier 2; <i>Italicized Text - Tier 3</i>)				
Topic 4.1.1: Occurrence of natural extreme events and disasters	a.	Occurrence of natural extreme events and disasters		<ul style="list-style-type: none"> By event National Sub-national 	<ul style="list-style-type: none"> Centre for Research on the Epidemiology of Disasters Emergency Events Database (CRED EMDAT) UN Economic Commission for Latin America and the Caribbean (ECLAC) Handbook for Estimating the Socio-economic and Environmental Effects of Disasters The United Nations Office for Disaster Risk Reduction (UNISDR)
		1. Type of natural extreme event and disaster (geophysical, meteorological, hydrological, climatological, biological)	Description		
		2. Location	Location		
		3. Magnitude (where applicable)	Intensity		
		4. Date of occurrence	Date		
		5. Duration	Time period		
Topic 4.1.2: Impact of natural extreme events and disasters	a.	People affected by natural extreme events and disasters		<ul style="list-style-type: none"> By event By ISIC economic activity National Sub-national By direct and indirect damage 	<ul style="list-style-type: none"> The United Nations Office for Disaster Risk Reduction (UNISDR)
		1. Number of people killed	Number		
		2. Number of people injured	Number		
		3. Number of people homeless	Number		
		4. Number of people affected	Number		
	b.	Economic losses due to natural extreme events and disasters (e.g., damage to buildings, transportation networks, loss of revenue for businesses, utility disruption)	Currency		
	c.	Physical losses/damages due to natural extreme events and disasters (e.g., area and amount of crops, livestock, aquaculture, biomass)	Area, Description, Number		
	d.	Effects of natural extreme events and disasters on integrity of ecosystems		<ul style="list-style-type: none"> By event By ecosystem National Sub-national 	
		<i>1. Area affected by natural disasters</i>	Area		
		<i>2. Loss of vegetation cover</i>	Area		
		<i>3. Area of watershed affected</i>	Area		
		<i>4. Other</i>	Description		
e.	<i>External assistance received</i>	Currency	<ul style="list-style-type: none"> By event National 		

- The complete Basic Set can be found at: <http://unstats.un.org/unsd/environment/FDES/BasicSet.htm>



Selection criteria of the Core Set of Environment Statistics

- The main selection criteria of the Core Set of Environment Statistics (Tier 1) were:
 - I. **Relevance**: Core statistics should meet the needs of the broad variety of users and be responsive to changes in the environment and related human activities;
 - II. **Measurability**: Core statistics should have sufficient supporting data and meta-data readily available, be of accepted quality, and be updated regularly, or it should be possible to compile them in the near term;
 - III. **Methodological soundness**: Core statistics should adhere to professional and scientific methods, as well as to internationally agreed concepts and definitions to the extent possible.



Sample of the Core Set of Environment Statistics

Component	Sub-component	Topic	Core Set / Tier 1 Statistics	Category of Measurement	
Component 1: Environmental Conditions and Quality	Sub-component 1.1: Physical Conditions	Topic 1.1.1: Atmosphere, climate and weather	a. Temperature	1. Monthly average	Degrees
				2. Minimum monthly average	Degrees
				3. Maximum monthly average	Degrees
			b. Precipitation (also in 2.6.1.a)	1. Annual average	Height
		2. Long-term annual average		Height	
		Topic 1.1.2: Hydrographical characteristics	d. Watersheds	1. Description of main watersheds	Area, Description
		Topic 1.1.3: Geological and geographical information	a. Geological, geographical and geomorphological conditions of terrestrial areas and islands	2. Area of country or region	Area, Location
				b. Coastal waters (including area of coral reefs and mangroves)	Area, Description
			c. Length of marine coastline		Length
			d. Coastal area		Area
	Topic 1.1.4: Soil characteristics	a. Soil characterization	1. Area of soil types	Area	
		b. Soil degradation	1. Area affected by soil erosion	Area	
			2. Area affected by desertification	Area	
			a. Area under land cover categories		Area
	Sub-component 1.2: Land Cover, Ecosystems and Biodiversity	Topic 1.2.2: Ecosystems and biodiversity	a. General ecosystem characteristics, extent and pattern	1. Area of ecosystems	Area
			c. Biodiversity	1. Known flora and fauna species	Number
			d. Protected areas	1. Protected terrestrial and marine area (also in 1.2.3.a)	Number, Area
		Topic 1.2.3: Forests	a. Forest area	1. Total	Area
Sub-component 1.3: Environmental Quality			Topic 1.3.1: Air quality	a. Local air quality	1. Concentration levels of particulate matter (PM ₁₀)
	2. Concentration levels of particulate matter (PM _{2.5})	Concentration			
	3. Concentration levels of tropospheric ozone (O ₃)	Concentration			
	4. Concentration levels of carbon monoxide (CO)	Concentration			
	5. Concentration levels of sulphur dioxide (SO ₂)	Concentration			
	6. Concentration levels of nitrogen oxides (NO _x)	Concentration			
	Topic 1.3.2: Freshwater quality	a. Nutrients and chlorophyll	1. Concentration of nitrogen	Concentration	
			2. Concentration of phosphorous	Concentration	
		b. Organic matter	1. Biochemical oxygen demand (BOD)	Concentration	
		c. Pathogens	1. Concentration levels of faecal coliforms	Concentration	
Topic 1.3.3: Marine water quality	a. Nutrients and chlorophyll	1. Concentration levels of nitrogen	Concentration		
		2. Concentration levels of phosphorous	Concentration		
	b. Organic matter	1. Biochemical oxygen demand (BOD)	Concentration		
	g. Coral bleaching	1. Area affected by coral bleaching	Area		



Use of the Core Set of Environment Statistics

- The Core Set can also help to identify data gaps in established national environment statistics programmes. Some countries may have initiated environment statistics programmes in response to very specific event-driven imperatives.
- The use of the Core Set and the forthcoming methodological guidance for its compilation will allow countries to build on such beginnings by adding or adjusting statistics based on an organized set of concepts and definitions that have been agreed upon and used widely. These can complement existing environmental data collection activities to provide countries with a more complete statistical description of environmental concerns.



Thank you for your attention!

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

