

Status and completion of the Manual on the Basic Set of Environment Statistics

Environment Statistics Section, UNSD



Session Three: Environment Statistics Toolbox



Outline

1. BSES manual completion
2. Published chapters
3. Wastewater chapter
4. Water quality chapter
5. Concluding remarks



BSES manual completion (1)

Component 1: Environmental Conditions and Quality	Component 2: Environmental Resources and their Use	Component 3: Residuals
Sub-component 1.1: Physical Conditions	Sub-component 2.1: Mineral Resources	Sub-component 3.1: Emissions to Air
Topic 1.1.1: Atmosphere, climate and weather	Topic 2.1.1: Stocks and changes of mineral resources	Topic 3.1.1: Emissions of greenhouse gases
Topic 1.1.2: Hydrographical characteristics	Topic 2.1.2: Production and trade of minerals	Topic 3.1.2: Consumption of ozone depleting substances
Topic 1.1.3: Geological and geographical information	Sub-component 2.2: Energy Resources	Topic 3.1.3: Emissions of other substances
Topic 1.1.4: Soil characteristics	Topic 2.2.1: Stocks and changes of energy resources	Sub-component 3.2: Generation and Management of Wastewater
Sub-component 1.2: Land Cover, Ecosystems and Biodiversity	Topic 2.2.2: Production, trade and consumption of energy	Topic 3.2.1: Generation and pollutant content of wastewater
Topic 1.2.1: Land cover	Sub-component 2.3: Land	Topic 3.2.2: Collection and treatment of wastewater
Topic 1.2.2: Ecosystems and biodiversity	Topic 2.3.1: Land use	Topic 3.2.3: Discharge of wastewater to the environment
Topic 1.2.3: Forests	Topic 2.3.2: Use of forest land	Sub-component 3.3: Generation and Management of Waste
Sub-component 1.3: Environmental Quality	Sub-component 2.4: Soil Resources	Topic 3.3.1: Generation of waste
Topic 1.3.1: Air quality	Topic 2.4.1: Soil resources	Topic 3.3.2: Management of waste
Topic 1.3.2: Freshwater quality	Sub-component 2.5: Biological Resources	Sub-component 3.4: Release of Chemical Substances
Topic 1.3.3: Marine water quality	Topic 2.5.1: Timber resources	Topic 3.4.1: Release of chemical substances
Topic 1.3.4: Soil pollution	Topic 2.5.2: Aquatic resources	
Topic 1.3.5: Noise	Topic 2.5.3: Crops	
	Topic 2.5.4: Livestock	
	Topic 2.5.5: Other non-cultivated biological resources	
	Sub-component 2.6: Water Resources	
	Topic 2.6.1: Water resources	
	Topic 2.6.2: Abstraction, use and returns of water	

Complete
Draft under review
Not started



BSES manual completion (2)

Component 4: Extreme Events and Disasters	Component 5: Human Settlements and Environmental Health	Component 6: Environmental Protection, Management and Engagement
Sub-component 4.1: Natural Extreme Events and Disasters	Sub-component 5.1: Human Settlements	Sub-component 6.1: Environmental protection and resource management expenditure
Topic 4.1.1: Occurrence of natural extreme events and disasters	Topic 5.1.1: Urban and rural population	Topic 6.1.1: Government environmental protection and resource management expenditure
Topic 4.1.2: Impact of natural extreme events and disasters	Topic 5.1.2: Access to selected basic services	Topic 6.1.2: Corporate, non-profit institution and household environmental protection and resource management expenditure
Sub-component 4.2: Technological Disasters	Topic 5.1.3: Housing conditions	Sub-component 6.2: Environmental Governance and Regulation
Topic 4.2.1: Occurrence of technological disasters	Topic 5.1.4: Exposure to ambient pollution	Topic 6.2.1: Institutional strength
Topic 4.2.2: Impact of technological disasters	Topic 5.1.5: Environmental concerns specific to urban settlements	Topic 6.2.2: Environmental regulation and instruments
	Sub-component 5.2: Environmental Health	Topic 6.2.3: Participation in MEAs and environmental conventions
	Topic 5.2.1: Airborne diseases and conditions	Topic 6.3.1: Preparedness for natural extreme events and disasters
	Topic 5.2.2: Water-related diseases and conditions	Topic 6.3.2: Preparedness for technological disasters
	Topic 5.2.3: Vector-borne diseases	Sub-component 6.4: Environmental Information and Awareness
	Topic 5.2.4: Health problems associated with excessive UV radiation exposure	Topic 6.4.1: Environmental Information
	Topic 5.2.5: Toxic substance- and nuclear radiation-related diseases and conditions	Topic 6.4.2: Environmental Education
		Topic 6.4.3: Environmental Perception and Awareness

Complete















Draft under review

Not started



Published chapters

As there are 458 environment statistics identified in the [Basic Set of Environment Statistics](#), their methodology sheets are being developed in a modular and progressive manner. The available volumes (sets) of methodology sheets are disseminated below.

-  [MS 1.1.4 Soils](#)
-  [MS 1.2.2 Ecosystems and Biodiversity Statistics](#)
-  [MS 1.2.1 & 2.3.1 Land Cover and Land Use](#)
-  [MS 1.2.3, 2.3.2, 2.5.1 & 2.5.5 Forests](#)
-  [MS 1.3.1 Air Quality](#)
-  [MS 1.3.1 and 3.1.1 GHG Statistics](#) **new**
-  [MS 1.3.3 Marine Water Quality Statistics](#) **new**
-  [MS 2.1 Mineral Resources](#)
-  [MS 2.2 Energy Resources](#)
-  [MS 2.5 Crops and Livestock Statistics](#)
-  [MS 2.6 Water Resources](#)
-  [MS 3.3.1 & 3.3.2 Generation and Management of Waste](#)
-  [MS 5.1 Human Settlements](#)
-  [MS 6.1.1 Environmental Protection Expenditures](#)



Wastewater chapter

1. Complete, for final editing, to be published very soon
2. The draft presented at EGES twice [early draft and last year draft, group-work in 2019]
3. Reviewed latest by OECD, UN-Habitat, WHO and FAO [during the last years]
4. Some issues that were addressed:
 - application of ISIC (how to address domestic versus industrial);
 - Unit of measurement (shifting towards million m³ per year).



Water quality chapter

Component 1: Environmental Conditions and Quality				
Sub-component 1.3: Environmental Quality				
Topic 1.3.2: Freshwater quality				
Statistics and Related Information (Bold Text - Core Set/Tier 1; Regular Text - Tier 2; Italicized Text - Tier 3)		Category of Measurement	Potential Aggregations and Scales	Methodological Guidance
a.	Nutrients and chlorophyll		<ul style="list-style-type: none"> By water body By watershed/river basin By surface or groundwater By point measurement By type of water resource 	<ul style="list-style-type: none"> UNECE Standard Statistical Classification of Freshwater Quality for the Maintenance of Aquatic Life (1992) UN Environment Programme (UNEP) Global Environment Monitoring System-Water (GEMS-Water) WHO
	1. Concentration level of nitrogen	Concentration		
	2. Concentration level of phosphorous	Concentration		
3. Concentration level of chlorophyll A	Concentration			
b.	Organic matter			
	1. Biochemical oxygen demand (BOD)	Concentration		
	2. Chemical oxygen demand (COD)	Concentration		
c.	Pathogens			
	1. Concentration levels of faecal coliforms	Concentration		
d.	Metals (e.g., mercury, lead, nickel, arsenic, cadmium)			
	1. Concentration levels in sediment and freshwater	Concentration		
	2. Concentration levels in freshwater organisms	Concentration		
e.	Organic contaminants (e.g., PCBs, DDT, pesticides, furans, dioxins, phenols, radioactive waste)		<ul style="list-style-type: none"> UNECE Standard Statistical Classification of Freshwater Quality for the Maintenance of Aquatic Life (1992) UNEP GEMS-Water Stockholm Convention 	
	1. Concentration levels in sediment and freshwater	Concentration		
	2. Concentration levels in freshwater organisms	Concentration		
f.	Physical and chemical characteristics		<ul style="list-style-type: none"> UNECE Standard Statistical Classification of Freshwater Quality for the Maintenance of Aquatic Life (1992) UNEP GEMS-Water 	
	1. pH/Acidity/Alkalinity	Level		
	2. Temperature	Degrees		
	3. <i>Total suspended solids (TSS)</i>	Concentration		
	4. Salinity	Concentration		
g.	Plastic waste and other freshwater debris			
	1. Amount of plastic waste and other debris	Area, Mass		



Concluding remarks

1. Some topics are challenging to complete because of very dynamic developments
 - Disasters: Hazard Definition Classification Review has been published (in 2020), <https://www.undrr.org/publication/hazard-definition-and-classification-review>
 - Environmental health
2. BSES updates are compiled on:
 - Disasters,
 - GHGs,
 - Marine water quality,
 - Possibly needed on Env. Health,
 - Minor updates already included in the manual (on crops and livestock), mostly reflecting on new guidance.
3. Other topics are hard to address in statistics, e.g. mainly in component six (Tier 3).
 - Geology and geographic information includes statistics which hardly change
 - Environmental awareness – also addressed in the Global Set

Questions

1 BSES Manual is nearly complete (besides the tier 3 topics in component 6). Should we still prioritize the remaining topics?

2 How to address duplicated topics/indicators included in the Global Set?

3 Should we plan to update the BSES?

- Suggested in 2023, once all methodology sheets are complete



Thank you for your attention!

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Climate Change Statistics Website

<https://unstats.un.org/unsd/envstats/climatechange.cshtml>

and

https://unstats.un.org/unsd/envstats/ClimateChange_StatAndInd_global.cshtml

