The Use of the FDES and the Basic Set of Environment Statistics in Bhutan

Environment and Energy
Statistics Workshop for the
Arab Region

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Environment and Energy Statistics Branch
United Nations Statistics Division

Purpose

- To show how the FDES can be used to:

  - Provide an overview of the environment statistics and energy statistics available in a country
  - Help prioritizing future developments of the environment statistics and energy statistics in a country

- Based on a practical experience from Bhutan

Nature of environmental statistics

- The nature of environmental statistics is that environmental data are spread across several organisations compiling the statistics, e.g.

  - Ministry of the Environment
  - Environmental Protection Agency
  - Research institutions
  - Ministry of Agriculture
  - Energy Agency
  - National Statistical Offices

  - It is inherent in the concept that it is difficult to get an overview of what data are available and where

A DANIDA (Danish Development Aid) project carried out by Statistics Denmark

- Support to the National Statistics Bureau in Bhutan, who wanted to play an active role in providing environment statistics serving as a data hub for environment statistics

- Two components

- Environmental Statistics Developed
  Mission by Ole Gravgård and Thomas Olsen
  Thimphu, Bhutan 27 August - 7 September 2012

- Environmental Accounts initiated
  Mission still has not been carried out

Development of environmental statistics in Bhutan – main mission activities

- Assessment of current situation of environmental statistics

- Organising the results of the assessment using the FDES

- Workshop with stakeholders and National Statistics Bureau (NSB) staff

- Training sessions on environment statistics and accounts

Assessment of current situation of environmental statistics

- Two full days with meetings with stakeholders:
  - National Environment Commission Secretariat
  - Dep. of Planning and Policy (DPP), Ministry of Agriculture & Forests (MoAF)
  - MoAF, Department of Forests and Park Services
  - Gross National Happiness Commission
  - Department of Agriculture, National Soil Services Centre
  - The Biodiversity Centre
  - National Land Commission
  - Ministry of Economic Affairs, Department of Geology and Mines
  - Ministry of Economic Affairs, Hydro-Met Services Department
  - Ministry of Economic Affairs, Department of Renewable Energy
  - Thimphu City Corporation
  - Yangki Automobiles

- Meetings and discussions with NSB staff
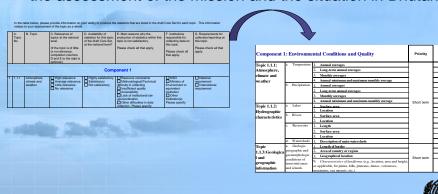- Familiarisation with NSB publications and plans

Organizing the results of the assessment using the FDES - 1

- The FDES was used to organise the information gathered during the meetings with NSB and stakeholders, etc.

- For each FDES environment statistics item it was, as far as possible, indicated
  - whether basic data is available
  - if statistics already exist (and in that case: where)
  - what is the relevance for Bhutan
  - who are the primary stakeholders/primary data sources

Organizing the results of the assessment using the FDES - 2

- The UNSD template was used as a starting point with a few adjustments to make it fit better to the specific purpose of the assessment of the mission and the situation in Bhutan

Workshop with stakeholders and NSB staff

- After the initial assessment of environmental data and statistics, a workshop with all stakeholders and NSB staff was arranged

- The principles and aims of environmental statistics and accounting were presented

- The FDES list of environment statistics with assessment was presented and discussed with stakeholders

- Based on comments and discussions a few adjustments to the list were made

FDES core set and prioritization

- After the workshop and further discussion with NSB staff the full FDES list with assessment was cut down to the Core Set of FDES environmental statistics with a few additional non-core set items (e.g. characteristics of land forms, electricity production and installed capacities)

- For each of these items a preliminary prioritization was made: *short term, medium term and long term development*

- An indication of already existing statistics was added

Example of prioritization of FDES core+ items with indication of already existing statistics

Component 1: Environmental Conditions and Quality			Priority	Statistical Year Book
Topic 1.1.1: Atmosphere, climate and weather	a. Temperature	1. **Annual averages**		5.7
		2. **Long-term annual averages**		
		3. **Monthly averages**		5.7
		4. **Annual minimum and maximum monthly average**		5.7
	b. Precipitation	1. **Annual averages**		5.8
		2. **Long-term annual averages**		
		3. **Monthly averages**		5.8
		4. **Annual minimum and maximum monthly average**	Short term	
Topic 1.1.2: Hydrographic characteristics	a. Lakes	1. **Surface area**		5.2
		2. **Location**		
	b. Rivers	1. **Surface area**		5.2
		2. **Location**		
	c. Reservoirs	1. **Length**		
		2. **Surface area**		5.2
		3. **Location**		
	d. Watersheds	1. **Description of main watersheds**		
Topic 1.1.3:Geological and geographic information	a. Geologic, geographic and geomorphologic conditions of terrestrial areas and islands	1. **Length of border**		
		2. **Area of country or region**		5.2
		3. **Geographical location**	Short term	
		9. *Characteristics of landforms* (e.g., location, area and height, as applicable, for plains, hills, plateaus, dunes, volcanoes, mountains, sea mounts, etc.)		5.5, 5.6
Topic 1.2.1: Soil characteristics	a. Soil characterization (also in 2.4.1.a-c)	1. **Area of soil types**		
	b. Degradation (also in 2.4.1.a-c)	1. **Area affected by soil erosion**	Medium/Long term	
		2. **Area affected by desertification**		
		3. **Area affected by salinization**		
		4. **Area affected by waterlogging**		
		5. **Area affected by acidification**		

Next steps

- The NSB followed up on the mission and continued the work:

- A questionnaire based on the FDES list was sent to stakeholders to obtain further information on data availability and views on relevance

- Another workshop was arranged with stakeholders for further discussions and seeking conclusions on the FDES list of environmental statistics

Summary - 1

- The list of FDES statistics (almost 500 items) was compared with the availability of data and statistics in Bhutan and key sources of data were identified for each of the FDES statistical items

- FDES helped creating an overview

- A questionnaire was send to stakeholders in order to get more precise information and their view on priorities

Summary - 2

- Preliminary prioritization of environment statistics: Short term – medium term and long term

- Short term priorities included statistics from all main components of FDES (broad coverage) and build on already existing statistics

- However, a final prioritization awaited results of the questionnaire and further analysis and discussions with stakeholders

Some conclusions on the use of the FDES in Bhutan

- It was very useful to use the FDES for the organization of the information collected during the mission

- The organisation of the statistics (components, topics, etc. seemed logical and it was easy to understand and explain to NSB staff and stakeholders

- The full list is overwhelming, therefore the *core set* of FDES statistics is necessary/useful, when you start from scratch

- In this case it was useful, though, to add a few extra items to obtain a *core+ set*

More conclusions

- All in all, we found that using the FDES in Bhutan was a success, and the FDES was well received by NSB and stakeholders

Thank you very much for your attention!