Existing and emerging environment statistics classifications

Expert Group Meeting on the Framework for the Development of Environment Statistics

(New York, 4-6 May 2011)

United Nations Statistics Division

Outline

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1. Introduction

Since the mid eighties, work on the development of environment statistics classifications has gained pace.

A review of these (existing and emerging) classifications is useful, because:

- They indicate what has been considered relevant within the environmental field;
- They illustrate the scope of the environmental field;
- They brake down the environmental issues into measurable categories.

The present review covers the environment statistics classifications developed and adopted by ECE between 1989 and 1996 and the classification considered within the frame of the revision of the SEEA.

2. ECE Environment statistics classifications (1989-1996)

- ECE Standard Statistical Classification of Water Use (1989)
- ECE Standard Statistical Classification of Freshwater Quality for the Maintenance of Aquatic Life (1992)
- ECE Standard Statistical Classification of Marine Water Quality (1992)
- ECE Standard Statistical Classification of Land Use (1989)
- ECE Standard Statistical Classification of Wastes (1989)
- ECE Standard Statistical Classification of Ambient Air Quality (1990)
- ECE Standard Statistical Classification of Flora, Fauna and Biotopes (1996)
- Single European Standard Statistical Classification of Environment Protection Activities and Facilities (1994)

2.1 SSC of Water Use

Categories of the classification:

- Water resources
- Water abstraction
- Water supply
- Agricultural and industrial use of water
- Waste water

Each category has its own underlying classification(s)

2.2 SSC of Surface Freshwater Quality for the Maintenance of Aquatic life

Categories of the classification:

- Oxygen regime
- Eutrophication
- Acidification
- Metals
- Chlorinated micropollutants and other hazardous substances
- Radioactivity

Each category has a list of variables (pollutants) and concentration ranges by quality class

2.3 SSC of Marine Water Quality follows similar principles with categories and variables relevant to marine water

2.4 SSC of Land Use

Categories of the classification:

- Agricultural land
- Forest and other wooded land
- Built up and related land
- Wet open land
- Dry open land with special vegetation cover
- Open land without, or with insignificant, vegetation cover
- Waters

Basically a land cover classification at the 1 digit level; land use aspects are included at the 2 and 3 digit levels

2.5 SSC of Wastes

Categories of the classification

- Generation of all wastes (incl. hazardous)
  - by material
  - by activity
- Recycling and reuse of materials
  - by material/waste stream
- Treatment and disposal of waste (excl. hazardous)
- Generation, trade and stocks of hazardous wastes
  - by waste streams
  - by hazardous constituent
- Treatment and disposal of hazardous wastes
  - by treatment type

Generation is also broken down by economic activity

2.6 SSC of Ambient Air Quality

Categories of the classification:

- Chemicals for measurement or estimation (variables under 9 groups)
- Emissions (stationary and mobile sources)
  - by process
  - by activity
- Concentrations in ambient air measured at:
  - impact stations
  - national/regional background stations
  - global background stations

Accompanied by a description and assessment of analytical methods

2.7 SSC of Flora, Fauna and Biotopes

Categories of the classification:

Species statistics:	Species groups
	Status categories
	Causes of threat
Biotope statistics:	Biogeographic regions
	Land cover classes
	Biotopes
Protected area statistics:	Management categories
	Areas of international significance
Hunting and fishing statistics:	Hunted or fished species
	Fish catch areas

2.8 SESC of Environment Protection Activities and Facilities

Categories of the classification:

- Environment protection activities
  - Protection of ambient air and climate
  - Waste water management
  - Waste management
  - Protection of soil and groundwater
  - Noise and vibration abatement
  - Protection of biodiversity and landscape
  - Protection against radiation
  - Research and Development
  - Other environment protection activities
- Environment protection facilities (underlined plus water management)
- (Overtaken by CEPA without facilities, see later)

Summary of ECE classifications

The ECE environment statistics classifications are heterogeneous and are not pure classifications in the classical sense.

Most of them include more than one single hierarchical classification; they include recommendations for definitions, measurement methods and tabulations.

They have been used for international data collection extensively by ECE, OECD/Eurostat and UNSD.

3. Classifications being developed within the frame of the SEEA

Work in progress – the classifications contained in the SEEA-2003 are under revision – slides for illustration only.

Main classifications:

- Classification of assets
- Classification of physical flows

3.1 Classification of assets

Categories of the classification:

- Environmental assets (cultivated and non cultivated)
  - Mineral and energy
  - Land and associated water
  - Soil
  - Forest/timber
  - Fish
  - Other biological
  - Water

Each category has underlying classification(s)

3.2 Classification of physical flows

Categories of the classification:

- Classification of natural inputs
  - Natural resources
  - Ecosystem inputs
  - Non-fuel energy inputs

3.2 Physical flows

Classification of residuals

- Solid waste
- Wastewater
- Emission to air
- Emissions to water
- Residuals from dissipative use
- Dissipative losses
- Water returns and losses
- Residual heat
- Unused extraction

Each category has underlying classification(s).

3.3 Classifications of environmental activities

Classification of Environment Protection Activites and expenditures (CEPA)

Classification of Resource Use and Management Activities and expenditures (CRUMA)

Classification of Environmental Activities (CEA = CEPA + CRUMA)

4. Other classifications relevant to environment statistics

- Economic statistics classifications
- Social statistics classifications
    - Provide the link to economic and social statistics
- Classifications contained in different MEAs
    - Not statistical classifications, but very important for environment statistics (policy and scientific relevance). Link to economic and social classifications oftentime has to be bridged.

5. Conclusions and questions

- Existing and emerging classifications have to be taken into account in the revision of the FDES when developing its “rows” and “columns” and “cells”.
- A detailed review of the classifications in MEAs has to be completed.
- A section in the revised FDES should deal with the issue of classifications.
- Are there other classifications to be included in the review?

Thank you
for your attention