

Environment Statistics Data Collection Programme



**Tenth meeting of the UNCEEA
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Reena Shah
Chief, Environment Statistics Section
United Nations Statistics Division

Outline

- Introduction/background
- International coordination of environment statistics
- International data collections
- UNSD data collection in environment statistics
- Examples of SDG indicators derived from the UNSD/UNEP Questionnaire on Env. Statistics
- Data dissemination
- Main findings
- Conclusions

Introduction/background

- Environment Statistics Section, UNSD is responsible for the collection of environment statistics from all non-OECD/Eurostat member states upon the request of the Statistical Commission in 1999.
- UNSD/UNEP Questionnaire on Environment Statistics is sent biennially to National Statistical Offices and Ministries of Environment. The Questionnaire started with just UNSD but since 2004 it has been conducted jointly with UNEP.
- Until 2006, air, water, land and waste were covered but since 2006 the focus has been only on water and waste.
- UNSD also compiles other indicators from other international organizations on air and climate, biodiversity, energy and minerals, forests, governance, land and agriculture, marine and coastal areas, and natural disasters.

International Coordination of Environment Statistics

- UNSD promotes coordination between international and regional organizations through the Inter-secretariat Working Group on Environment Statistics (IWG-ENV).
- The main objective of the IWG-ENV is the harmonization of international data and their collection. It focuses on:
 - development and harmonization of
 - methods
 - concepts, definitions and classifications
 - coordination of data collection
 - coordination of training

Members include: UNSD, UN-ECE, UNEP, FAO, OECD, Eurostat

International data collections: environment statistics

- Objective: to provide internationally comparable statistics on environmental issues based on standard questionnaires and methodology.
 - UNSD/UNEP Questionnaire on Environment Statistics – about 172 member states and areas in 5 languages
 - OECD/Eurostat Joint Questionnaire on the State of the Environment – their member states
- UNSD/UNEP Questionnaire is consistent and harmonized with the OECD/Eurostat Questionnaire. Close collaboration is maintained on conceptual issues, validation procedures and data validation.
- Collaboration is also maintained with, inter alia, FAO/Aquastat (water statistics), the Basel Convention (hazardous waste), ECE and ESCWA on similar issues, including translation.

International data collections: thematic/topical

Objective: provide internationally comparable data based on standard questionnaires and methodology. The aim is not directly environmental but the data are used in environment statistics.

Examples:

- **UNSD**
 - Energy statistics, industrial statistics, trade statistics, national accounts, demographic statistics
- **FAO**
 - AQUASTAT (water)
 - FAOSTAT (agriculture, nutrition, fisheries, forestry, food aid, land use and population)
 - FISHSTAT (fisheries)
 - FORIS (forests)
 - GLIPHA (Global Livestock Production and Health Atlas)
- **UNEP**
 - World Conservation Monitoring Centre (protected areas)
 - GEMS-Water (water quality)

UNSD data collection in env. statistics

- UNSD/UNEP Questionnaire 2013 on Environment Statistics – 7th round sent out in 2014 (water and waste statistics)
- **Water statistics** – The tables cover renewable freshwater resources, freshwater abstraction and use, water supply industry, wastewater generation and treatment, and population connected to waste water treatment.
- **Waste statistics** – The tables cover the generation of waste, the generation and treatment of hazardous waste, and the generation, collection, treatment, and composition of municipal waste.
- UNSD/UNEP Questionnaire is linked to economic statistics through the use of ISIC Rev. 4 in several tables, and contains:
 - time series tables
 - detailed guidance section as well as relevant definitions to assist the user to complete the Questionnaire
 - extensive built-in validation procedures
 - notes section for footnotes or other references
 - supplementary sheets for additional information

UNSD data collection in env. statistics

Responses

Year:	1999	2001	2004	2006	2008	2010	2013
Count of countries sent questionnaire:	168	177	158	163	171	172	172
Number of responses (water and/or waste):	49	62	68	78	83	83	81

- Responses refer to the number of countries that provided data, either in water or waste, or both.
- Hand-out on water/waste responses provide information on the actual number of countries that provided data for each variable per year.
- UNSD does not make any estimations or imputations for missing values so the number of data points provided are actual country data.
- UNSD carries out extensive data validation procedures, that includes built-in automated procedures, as well as manual checks and cross-references to national sources of data. Communication is carried out with countries for clarification/validation of data.
- Only data that are considered accurate or those confirmed by countries during the validation process are included in the ENVSTATS database and disseminated on the website.

UNSD data collection in env. statistics

- Water
 - W1 Renewable Freshwater Resources
 - W2 Freshwater Abstraction and Use
 - W3 Water Supply Industry (ISIC 36)
 - W4 Wastewater Generation and Treatment
 - W5 Population Connected to Wastewater Treatment
 - W6 Supplementary information sheet

Tables W2, W3 and W4 are linked to economic statistics through the use of ISIC Rev. 4

<http://unstats.un.org/unsd/environment/questionnaire.htm>

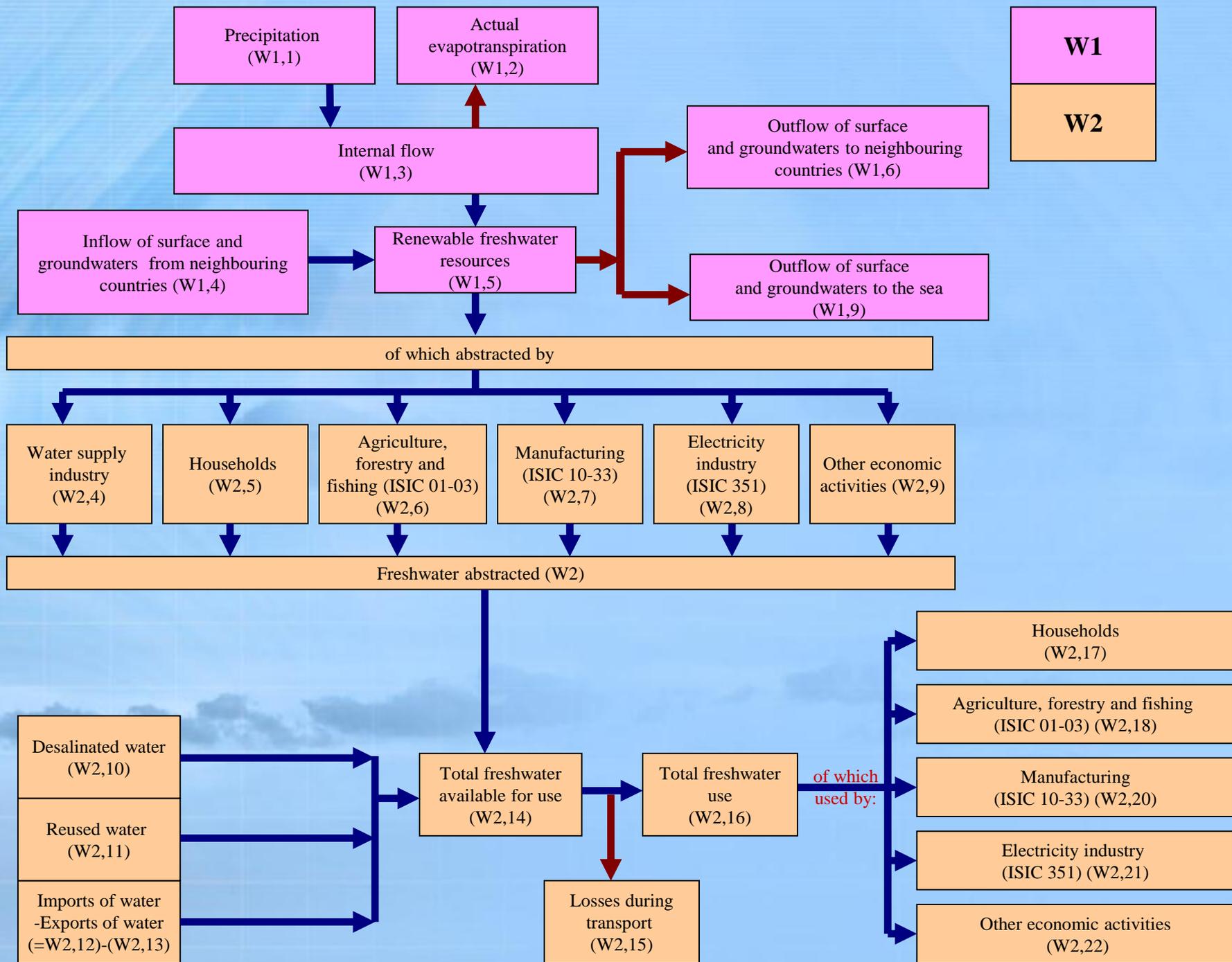


Table W1: Renewable Freshwater Resources

Line	Category	Unit	2012
1	Precipitation	mio m ³ /y	
2	Actual evapotranspiration	mio m ³ /y	
3	Internal flow (=1-2)	mio m ³ /y	
4	Inflow of surface and groundwaters from neighbouring countries	mio m ³ /y	
5	Renewable freshwater resources (=3+4)	mio m ³ /y	
6	Outflow of surface and groundwaters to neighbouring countries	mio m ³ /y	
7	<i>Of which:</i> Secured by treaties	mio m ³ /y	
8	Not secured by treaties	mio m ³ /y	
9	Outflow of surface and groundwaters to the sea	mio m ³ /y	

Chart W1: Renewable Freshwater Resources

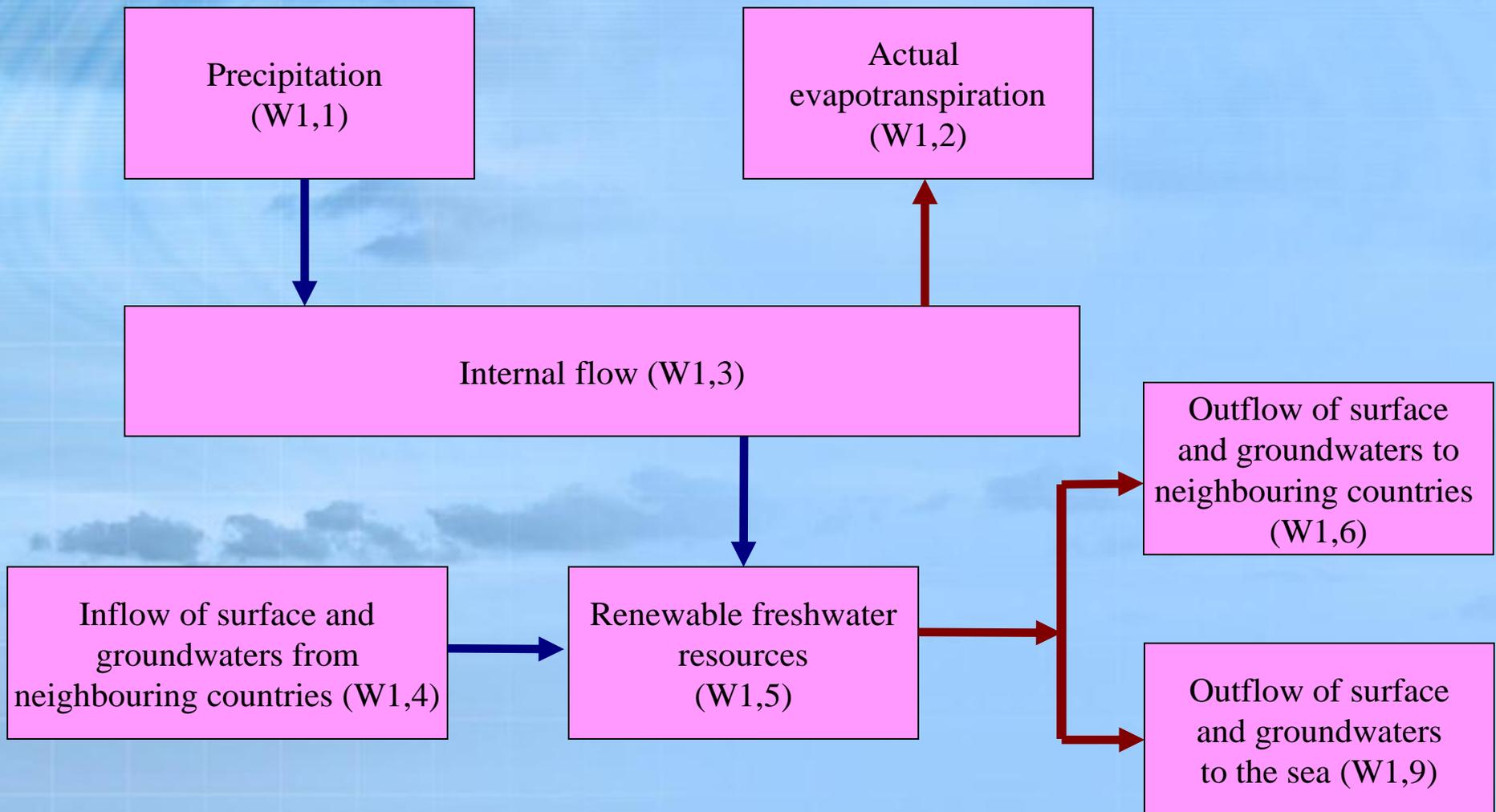


Table W2: Freshwater Abstraction and Use

Line	Category	Unit	2012
1	Fresh surface water abstracted	mio m ³ /y	
2	Fresh groundwater abstracted	mio m ³ /y	
3	Freshwater abstracted (=1+2)	mio m ³ /y	
	<i>of which abstracted by:</i>		
4	Water supply industry (ISIC 36)	mio m ³ /y	
5	Households	mio m ³ /y	
6	Agriculture, forestry and fishing (ISIC 01-03)	mio m ³ /y	
7	Manufacturing (ISIC 10-33)	mio m ³ /y	
8	Electricity industry (ISIC 351)	mio m ³ /y	
9	Other economic activities	mio m ³ /y	
10	Desalinated water	mio m ³ /y	
11	Reused water	mio m ³ /y	
12	Imports of water	mio m ³ /y	
13	Exports of water	mio m ³ /y	
14	Total freshwater available for use (=3+10+11+12-13)	mio m ³ /y	
15	Losses during transport	mio m ³ /y	
16	Total freshwater use (=14-15)	mio m ³ /y	
	<i>of which used by:</i>		
17	Households	mio m ³ /y	
18	Agriculture, forestry and fishing (ISIC 01-03)	mio m ³ /y	
19	<i>of which for:</i> Irrigation in agriculture	mio m ³ /y	
20	Manufacturing (ISIC 10-33)	mio m ³ /y	
21	Electricity industry (ISIC 351)	mio m ³ /y	
22	Other economic activities	mio m ³ /y	

Chart W2: Freshwater Abstraction and Use

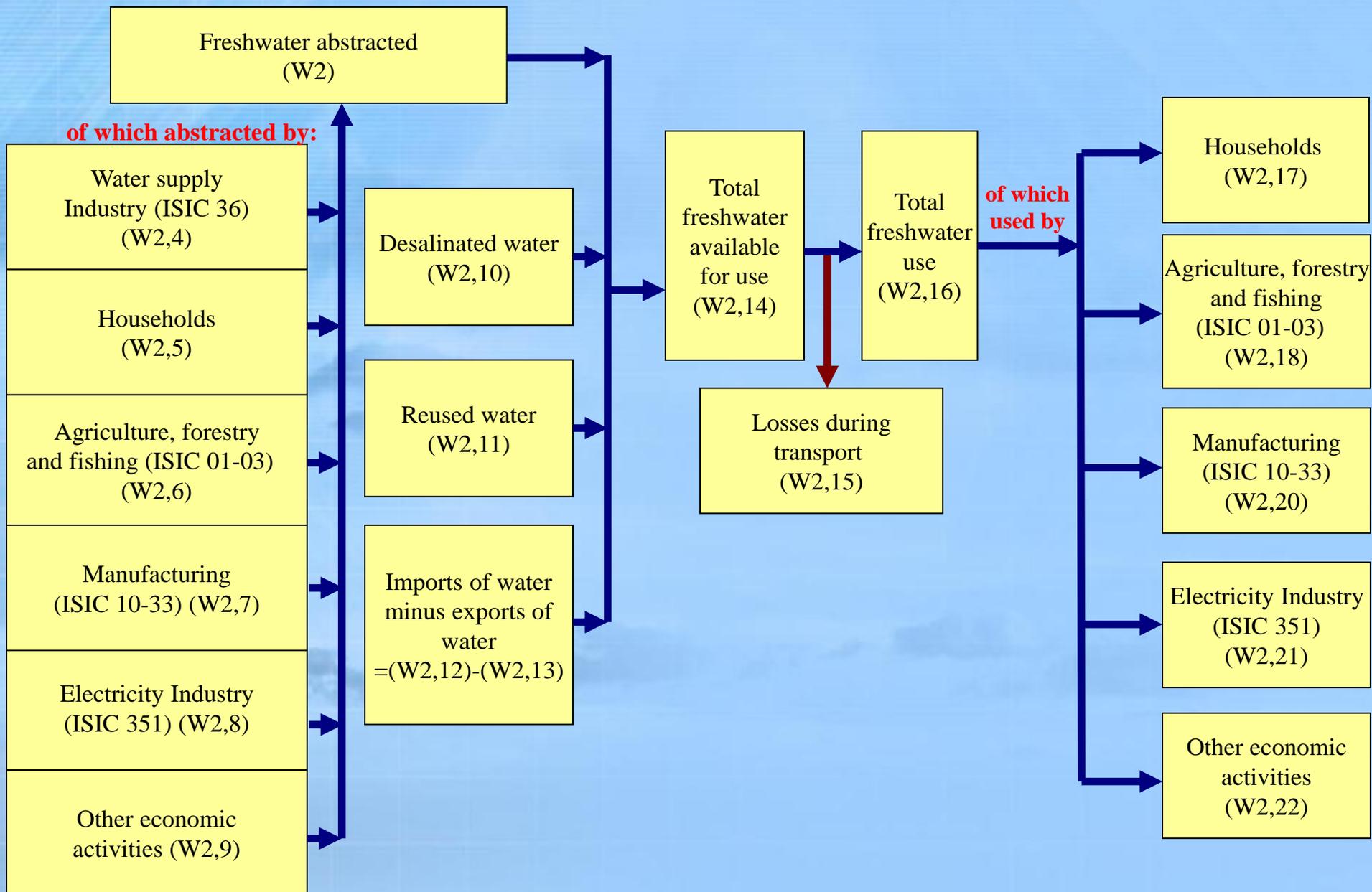


Table W3: Water Supply Industry (ISIC 36)

Line	Category	Unit	2012
1	Gross freshwater supplied by water supply industry (ISIC 36)	mio m ³ /y	
2	Losses during transport by ISIC 36	mio m ³ /y	
3	Net freshwater supplied by water supply industry (ISIC 36) (=1-2) (=4+5+6+7+8)	mio m ³ /y	
	<i>of which supplied to:</i>		
4	Households	mio m ³ /y	
5	Agriculture, forestry and fishing (ISIC 01-03)	mio m ³ /y	
6	Manufacturing (ISIC 10-33)	mio m ³ /y	
7	Electricity industry (ISIC 351)	mio m ³ /y	
8	Other economic activities	mio m ³ /y	
	<i>Population supplied by water supply industry (ISIC 36)</i>		
9	Total population supplied by water supply industry (ISIC 36)	%	
10	Urban population supplied by water supply industry (ISIC 36)	%	
11	Rural population supplied by water supply industry (ISIC 36)	%	

Chart W3: Water Supply Industry (ISIC 36)

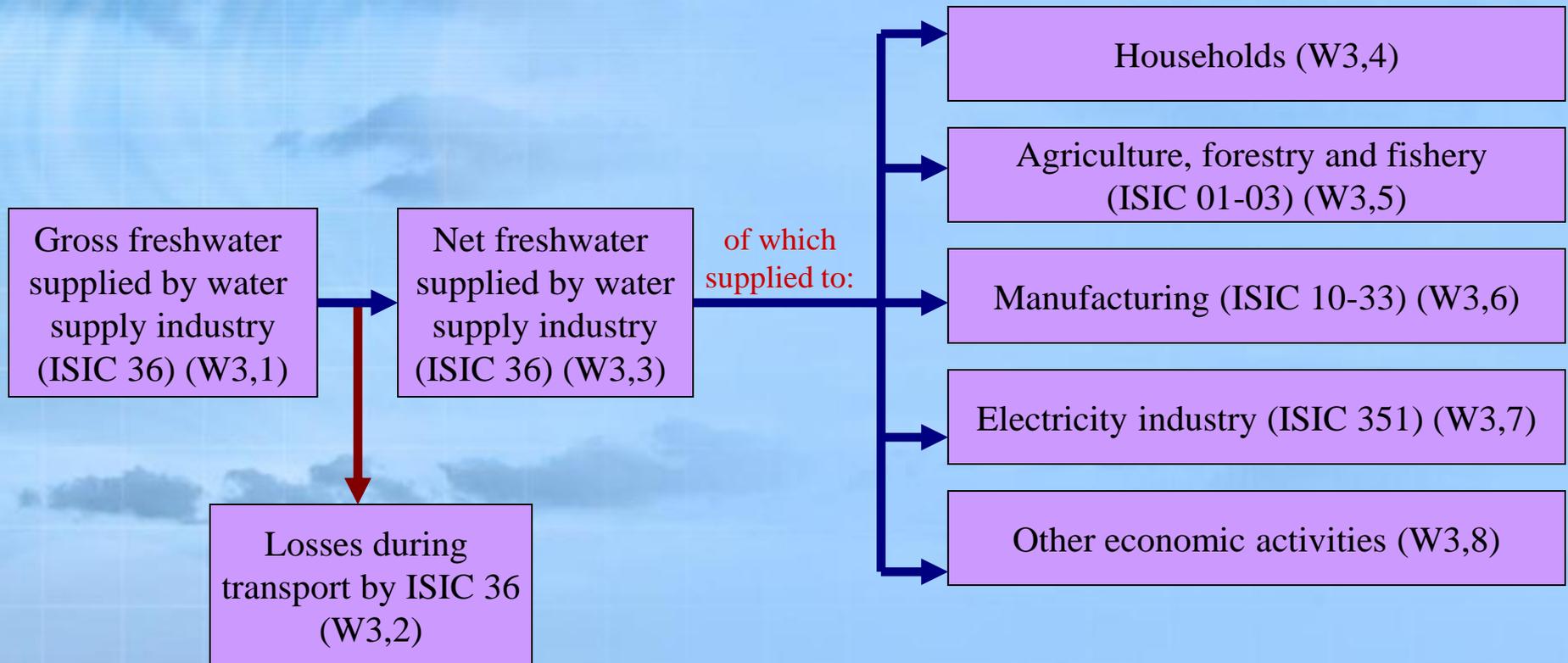


Table W4: Wastewater Generation and Treatment

Line	Category	Unit	2001
1	Total wastewater generated	1000 m ³ /d	
2	by: Agriculture, forestry and fishing ISIC (01-03)	1000 m ³ /d	
3	Manufacturing (ISIC 10-33)	1000 m ³ /d	
4	Electricity industry (ISIC 351)	1000 m ³ /d	
5	Other economic activities	1000 m ³ /d	
6	Households	1000 m ³ /d	
7	Wastewater treated in urban wastewater treatment plants	1000 m ³ /d	
8	<i>Of which:</i> Primary treatment	1000 m ³ /d	
9	Secondary treatment	1000 m ³ /d	
10	Tertiary treatment	1000 m ³ /d	
11	Wastewater treated in other treatment plants	1000 m ³ /d	
12	<i>Of which:</i> Primary treatment	1000 m ³ /d	
13	Secondary treatment	1000 m ³ /d	
14	Tertiary treatment	1000 m ³ /d	
15	Wastewater treated in independent treatment facilities	1000 m ³ /d	
16	Non-treated wastewater	1000 m ³ /d	
17	Sewage sludge production (dry matter)	1000 t	

Chart W4: Wastewater Generation and Treatment

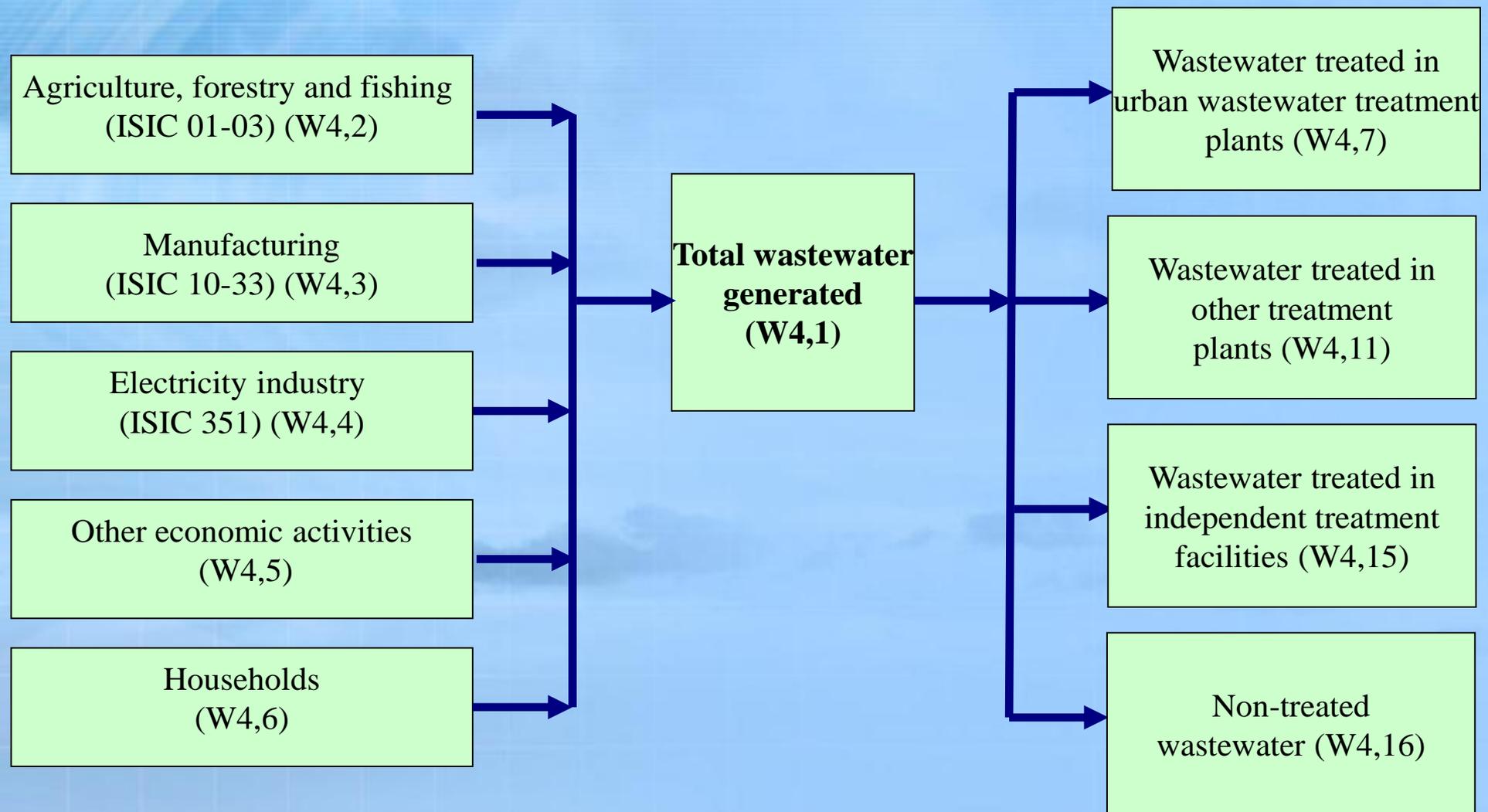


Table W5: Population Connected to Wastewater Treatment

Line	Category	Unit
1	Population connected to wastewater collecting system	%
2	Population connected to wastewater treatment	%
3	<i>of which</i> at least secondary treatment	%
4	Population with independent wastewater treatment (e.g., septic tanks)	%
5	Population not connected to wastewater treatment (100% - (2) - (4))	%

UNSD/UNEP 2013 Questionnaire Content

- Waste
 - R1: Generation of Waste by Source
 - R2: Management of Hazardous Waste
 - R3: Management of Municipal Waste
 - R4: Composition of Municipal Waste
 - R5: Management of Municipal Waste – City Data
 - R6: Supplementary information sheet

Table R1 is linked to economic statistics through the use
of ISIC Rev. 4

<http://unstats.un.org/unsd/environment/questionnaire.htm>

Table R1: Generation of Waste by Source

Line	Category	Unit	1990
1	Agriculture, forestry and fishing (ISIC 01-03)	1000 t	
2	Mining and quarrying (ISIC 05-09)	1000 t	
3	Manufacturing (ISIC 10-33)	1000 t	
4	Electricity, gas, steam and air conditioning supply (ISIC 35)	1000 t	
5	Construction (ISIC 41-43)	1000 t	
6	Other economic activities excluding ISIC 38	1000 t	
7	Households	1000 t	
8	Total waste generation (=1+2+3+4+5+6+7)	1000 t	

Table R2: Management of Hazardous Waste

Line	Category	Unit
1	Stock of hazardous waste at the beginning of the year	tonnes
2	Hazardous waste generated during the year	tonnes
3	Hazardous waste imported during the year	tonnes
4	Hazardous waste exported during the year	tonnes
5	Hazardous waste treated or disposed of during the year (=6+7+9+10)	tonnes
6	<i>Amounts going to:</i> Recycling	tonnes
7	Incineration	tonnes
8	<i>of which:</i> with energy recovery	tonnes
9	Landfilling	tonnes
10	Other, please specify in the footnote	tonnes
11	Stock of hazardous waste at the end of the year (=1+2+3-4-5)	tonnes

Chart R2: Management of Hazardous Waste

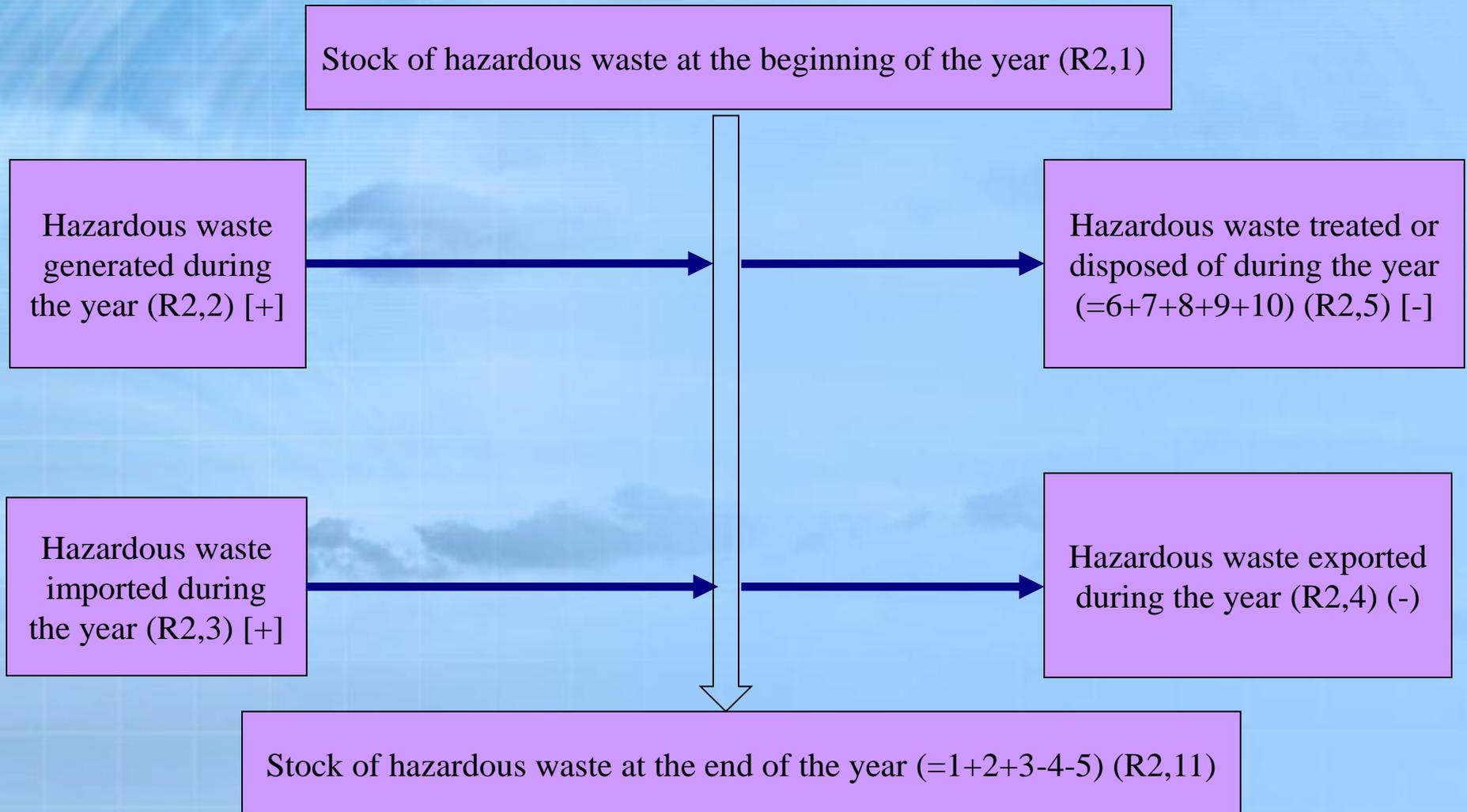


Table R3: Management of Municipal Waste

Line	Category	Unit	1990
1	Municipal waste collected from households	1000 t	
2	Municipal waste collected from other origins	1000 t	
3	Total amount of municipal waste collected (=1+2)	1000 t	
4	Municipal waste imported for treatment/disposal	1000 t	
5	Municipal waste exported for treatment/disposal	1000 t	
6	Municipal waste managed in the country (=3+4-5)	1000 t	
7	<i>Amounts going to:</i> Recycling	1000 t	
8	Composting	1000 t	
9	Incineration	1000 t	
10	<i>of which:</i> with energy recovery	1000 t	
11	Landfilling	1000 t	
12	<i>of which:</i> controlled landfilling	1000 t	
13	Other, please specify in the footnote	1000 t	
14	Total population served by municipal waste collection	%	
15	Urban population served by municipal waste collection	%	
16	Rural population served by municipal waste collection	%	

Table R4: Composition of Municipal Waste

Line	Category	Unit	1990
1	Paper, paperboard	%	
2	Textiles	%	
3	Plastics	%	
4	Glass	%	
5	Metals	%	
6	Other inorganic material	%	
7	Organic material	%	
8	<i>of which: food and garden waste</i>	%	
9	TOTAL	%	100

Table R5: Management of Municipal Waste – City Data

Line	Category	Unit	1990
1	Total population of the city	1000 inh.	
2	Percentage of city population served by municipal waste collection	%	
3	Municipal waste collected from households	1000 t	
4	Municipal waste collected from other origins	1000 t	
5	Total amount of municipal waste collected (=3+4)	1000 t	
	<i>Amounts going to:</i>		
6	Recycling	1000 t	
7	Composting	1000 t	
8	Incineration	1000 t	
9	<i>of which: with energy recovery</i>	1000 t	
10	Landfilling	1000 t	
11	<i>of which: controlled landfilling</i>	1000 t	
12	Other, please specify in the footnote	1000 t	

Examples of SDG indicators that can be compiled with statistics from the UNSD/UNEP Questionnaire

Water

- Proportion of freshwater abstracted to total available freshwater resources ($\text{Available freshwater resources} / \text{Total freshwater abstraction}$)
- Proportion of wastewater treated of total wastewater generated

Waste

- Proportion of municipal waste collected and treated (by type of treatment)
- Proportion of recycled waste
- Hazardous waste collected over total hazardous waste generated (by type of treatment)

UNSD Data Dissemination

UNSD disseminates data through:

- UNSD Environmental Indicators (Air and climate, Biodiversity, Energy and minerals, Forests, Governance, Inland water resources, Land and agriculture, Marine and coastal areas, Natural disasters, and Waste) (<http://unstats.un.org/unsd/environment/qindicators.htm>)
- Country Files (access to country files is restricted to countries and international organizations that participate in the data collection (<http://unstats.un.org/unsd/environment/Questionnaires/index.asp>)
- Country Snapshots (these include UNSD environmental indicators and other economic/demographic data (http://unstats.un.org/unsd/environment/Questionnaires/country_snapshots.htm)
- Environment statistics in UNData (<http://data.un.org/>)

UNSD Environmental Indicators

 United Nations Statistics Division

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Environment Statistics

- History and current activities
- Brochure on Environment Statistics
- FAQ

▼ **Methodology**

- FDES 2013
- International Recommendations for Water Statistics
- Concepts and methods in Environment Statistics
- Glossary
- Working Papers

▼ **Data**

- UNSD environmental indicators
- Country Snapshots
- Country Files (Limited access)
- Questionnaires

▼ **Technical cooperation**

- ECOWAS project
- ESCWA project
- CARICOM project
- Workshops

▼ **Coordination**

- Intersecretariat Working Group on Environment Statistics
- Work Session on Water Statistics

▼ **Reports to the Statistical Commission**

▼ **ENVSTATS newsletters**

▼ **Useful links**

- National data sources
- International and regional data sources
- Environmental accounting

UNSD Environmental Indicators

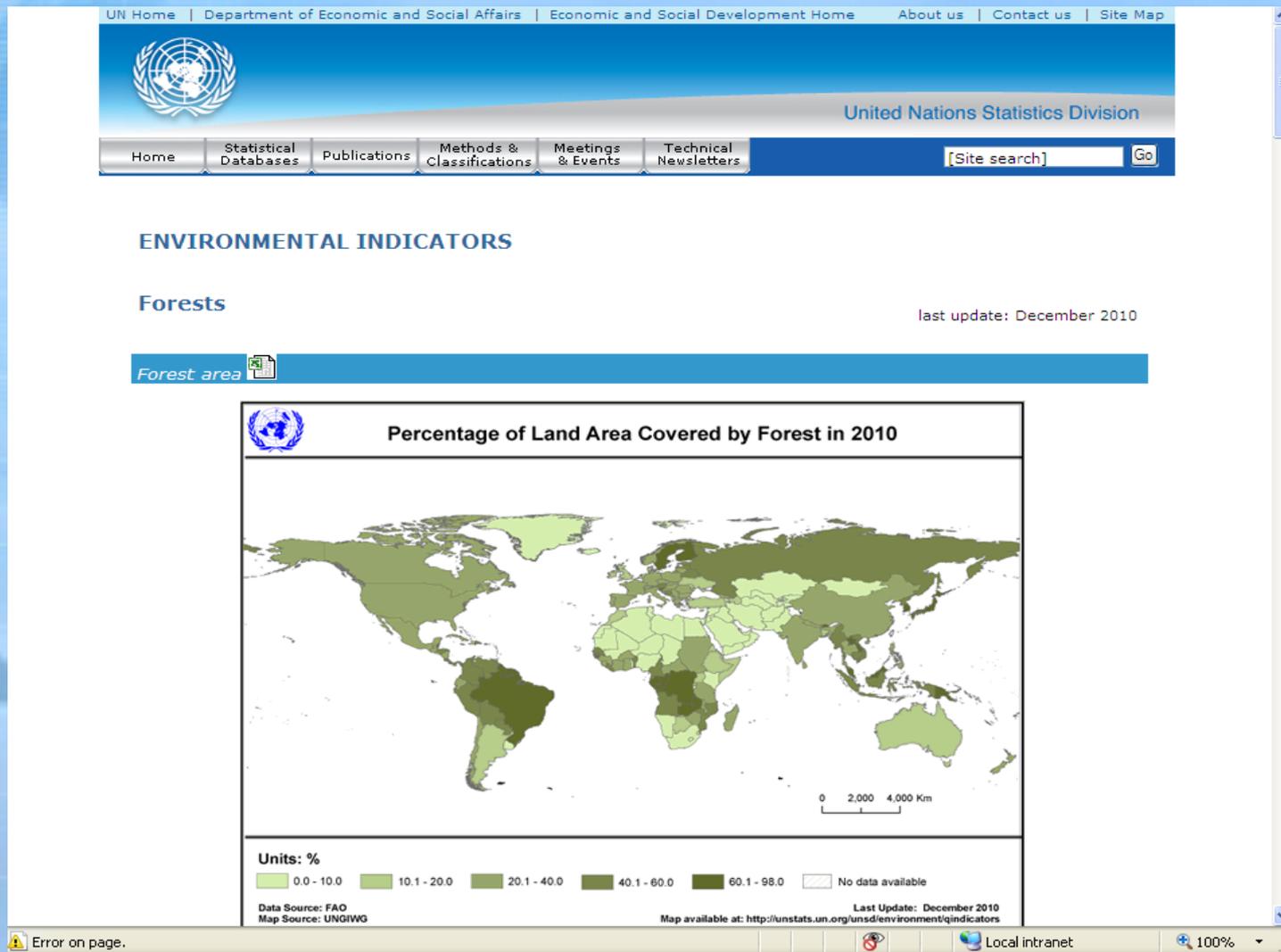
UNSD Environmental Indicators disseminate global environment statistics on ten indicator themes compiled from a wide range of data sources. The themes and indicator tables were selected based on the current demands for international environmental statistics and the availability of internationally comparable data. Indicator tables, charts and maps with relatively good quality and coverage across countries, as well as links to other international sources, are provided under each theme.

Statistics on Water and Waste are based on official statistics supplied by national statistical offices and/or ministries of environment (or equivalent institutions) in response to the biennial UNSD/UNEP Questionnaire on Environment Statistics, complemented with comparable statistics from OECD and Eurostat, and water resources data from FAO Aquastat. Statistics on other themes were compiled by UNSD from other international sources. In a few cases, UNSD has made some calculations in order to derive the indicators. However, generally no adjustments have been made to the values received from the source. UNSD is not responsible for the quality, completeness/availability, and validity of the data.

Environment statistics is still in an early stage of development in many countries, and data are often sparse. The indicators selected here are those of relatively good quality and geographic coverage. Information on data quality and comparability is given at the end of each table together with other important metadata.

- ✚ Air and Climate
- ✚ Biodiversity
- ✚ Energy and Minerals
- ✚ Forests
- ✚ Governance
- ✚ Inland Water Resources
- ✚ Land and Agriculture
- ✚ Marine and Coastal Areas
- ✚ Natural Disasters
- ✚ Waste

Environmental Indicators – Forest area



Mauritius



Air and climate

Emissions of:		Year
SO ₂ (1000t)	11	2006
SO ₂ per capita (kg)	9	2006
NO _x (1000t)	15	2006
NO _x per capita (kg)	12	2006
CO ₂ (million tonnes)	4	2009
CO ₂ per capita (tonnes)	3	2009
GHG (million tonnes CO ₂ eq.)	5	2006
GHG per capita (tonnes CO ₂ eq.)	4	2006
Consumption of ozone depleting CFCs (ODP t)	0	2009

Biodiversity

Proportion of terrestrial and marine areas protected (%)		Year
1	2010	
Number of threatened species	224	2011
Fish catch (tonnes)	7 786	2010
Change in fish catch from previous year (%)	1	2010

Economy

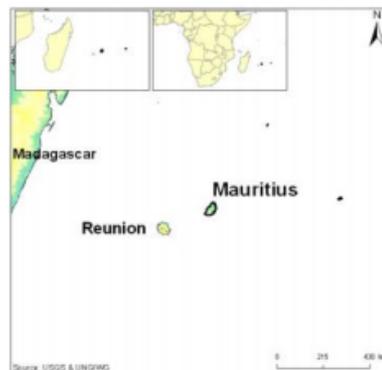
GDP growth rate from previous year (%)	4	2011
GDP per capita (at current prices - \$US)	8 659	2011
% Value added: agriculture, hunting, forestry, fishing	4	2011
% Value added: mining, manufacturing, utilities	20	2011

Energy

Energy consumption (1000t oil eq.)	1 174	2009
Energy consumption per capita (kg oil eq.)	909	2009
Energy use intensity (kg oil eq.) per \$1,000 GDP (Constant 2005 PPP\$)	86	2007
Renewable electricity production (%)	5	2009

Land and agriculture

Total area (sq km)	1 969	2011
Agricultural land (sq km)	890	2011
Arable land (% of agric. land)	0	2011
Permanent crops (% of agric. land)	4	2011



Note: The boundaries, the names shown, and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

		Year
Permanent meadows and pastures (% of agric. land)	8	2011
Change in agricultural land area since 1990 (%)	-20	2011
Forest area (sq km)	350	2011
Change in forest area since 1990 (%)	-10	2011
Population		
Population (1000)	1 299	2010
Population growth rate from previous year (%)	1	2010
Waste		
Total population served by municipal waste collection (%)	98	2009
Municipal waste collected (1000t)	408	2009
Hazardous waste generated (1000t)	4	2008
Water and sanitation		
Long-term average renewable freshwater resources (mio m ³ /yr)	2 590	N / A
Urban population with access to improved drinking water source (%)	100	2010
Rural population with access to improved drinking water source (%)	99	2010
Urban population with access to improved sanitation (%)	91	2010
Rural population with access to improved sanitation (%)	88	2010

Country Snapshot – Mauritius

http://unstats.un.org/unsd/environment/Questionnaires/country_snapshots.htm

Snapshot – Mauritius

Environment Statistics Country Snapshot

Last updated: February 2013

These snapshots provide data about the environment and other related statistics at a point in time that will allow comparison between countries. For up to date data, time series, downloadable data, and additional information, please visit original sources. UNSD is not responsible for the quality, completeness / availability, and validity of data obtained from other data providers. Original sources should be cited when Environment Statistics Country Snapshot data are referenced. A list of sources and corresponding URLs are shown below.

Data Sources

Food and Agriculture Organization of the United Nations (FAO) Database

Fish catch, Change in fish catch from previous year, Agricultural land, Arable land, Permanent crops, Permanent meadows and pastures, Change in agricultural land area since 1990, Forest area, Change in forest area since 1990, and some of Long-term average renewable freshwater resources data are extracted from FAO.

FAOSTAT: <http://faostat.fao.org/>

AQUASTAT: <http://www.fao.org/nr/water/aquastat/dbase/index.stm>

International Union for Conservation of Nature (IUCN)

Number of threatened species data are extracted from the IUCN.

<http://www.iucnredlist.org/>

UNdata

GDP growth rate from previous year, and GDP per capita (at current prices) data are retrieved from the UNdata portal. UNdata was launched by the United Nations Statistics Division (UNSD) of the Department of Economic and Social Affairs (DESA). It brings the various UN statistical databases within easy reach of users through a single entry point. Users can search and download a variety of statistical resources provided by the UN System.

<http://data.un.org/>

United Nations, Department of Economic and Social Affairs, Population Division, World Population Prospects

All 'per capita' variables use population data obtained from this source. *Population and Population growth rate from previous year* data are also retrieved from this source.

<http://www.un.org/esa/population/>

United Nations Framework Convention on Climate Change (UNFCCC) Secretariat

SO₂ emissions, SO₂ per capita emissions, NO_x emissions, NO_x per capita emissions, GHG emissions and GHG per capita are obtained from the UNFCCC Greenhouse Gas Emissions Database.

http://unfccc.int/ghg_emissions_data/items/3800.php

United Nations Statistics Division (UNSD) Demographic Statistics Yearbook

Total area data are extracted from this source.

<http://unstats.un.org/unsd/demographic/products/dyb/default.htm>

United Nations Statistics Division (UNSD) Energy Statistics Database

Energy consumption, Energy consumption per capita, and Renewable electricity production figures are extracted from the UNSD Energy Statistics Database.

<http://unstats.un.org/unsd/energy/default.htm>

United Nations Statistics Division (UNSD) Environment Statistics Database

Total population served by municipal waste collection, Municipal waste collected, Hazardous waste generated and some of Long-term average renewable freshwater resources data are extracted from the UNSD Environment Statistics Database (note: database also includes data from OECD and Eurostat).

<http://unstats.un.org/unsd/environment/qindicators.htm>

United Nations Statistics Division (UNSD) Millennium Development Goals (MDG) Indicator Database

Proportion of terrestrial and marine areas protected, CO₂ emissions, CO₂ emissions per capita, Consumption of ozone-depleting CFCs, Energy use intensity (kg oil eq.) per \$1,000 (PPP) GDP, Urban population with access to improved drinking water source, Rural population with access to improved drinking water source, Urban population with access to improved sanitation, and Rural population with access to improved sanitation data are extracted from the MDG database.

<http://mdgs.un.org/unsd/mdg/Data.aspx>

United Nations Statistics Division (UNSD) National Accounts Database

% value added - agriculture, hunting, forestry, fishing; and % value added - mining, manufacturing, utilities are obtained from the National Accounts Main Aggregates Database, according to the International Standard Industrial Classification of All Economic Activities (ISIC).

<http://unstats.un.org/unsd/sna/sna.html#introduction.asp>

Environment statistics - UN Data



Data Glossary Metadata API More

34 databases - 60 million records  Update calendar

Databases	Updates	Country data services
Crime <ul style="list-style-type: none">UNODC Homicide Statistics 2012, UNODC Education <ul style="list-style-type: none">UIS Data Centre, UNESCO UIS 	@undata 24 Oct The World Tourism Data table in @UNdata was updated with available stats as of mid-Oct 2014: bit.ly/1yulpAm ; thanks @UNWTO	Afghanistan  Albania  Algeria  Andorra  Angola 

 **Monthly Bulletin of Statistics and other UNSD data resources**

▶ Popular searches

▶ Feedback and reviews   



Main findings

- Environment statistics is still a relatively new domain which relates to the environmental pillar being the weakest of the 3 pillars in sustainable development in terms of monitoring and measurability.
- Issue of data completeness and data quality remain a challenge (in particular for developing countries).
- National capacity constraints (financial, human, technical) continue to be a concern.
- Inadequate institutional set-up and collaboration in environment statistics.

Conclusions

- Environment statistics are multi-purpose and serve many fundamental needs and uses, including environmental indicators (MDG, SDG indicators) and env.-econ. accounts so we must persevere.
- Capacity building is key to improving environment statistics and Env. Statistics Section is assisting countries in strengthening their statistical capacity through training workshops and direct country assistance.
- Focus should be given to developing/strengthening underlying or basic environment statistics before expanding further.
- More emphasis on the implementation of the FDES 2013 endorsed by 44th session of the Statistical Commission in 2013 as the framework for strengthening environment statistics programmes in countries. The Commission also recognized the FDES 2013 as a useful tool in the context of SDGs and the post-2015 development agenda.

Thanks for your attention!



Please contact us:
Environment Statistics Section of the United Nations Statistics Division
E-mail: envstats@un.org
website: <http://unstats.un.org/unsd/ENVIRONMENT/>



The Framework for the Development of Environment Statistics (FDES) 2013, including the Core Set of Environment Statistics, as well as an Action Plan for putting the FDES to work, were endorsed by the 44th session of the Statistical Commission (New York, 26 February-1 March 2013)

Environment statistics for policymaking

The demand for environment statistics is increasing in step with the continued environmental challenges faced by modern society. The recognition that human well-being depends on the environment has led to an increasing emphasis on environmental and sustainability concerns on which decisions and actions need to be taken. Paramount to these actions is the regular production of environment statistics of the highest possible quality to support evidence-based policymaking by enabling the identification of environmental policy issues and allowing their objective quantification.

Environment statistics portray key information about the state of the environment and its most relevant changes through space and time. They strengthen assessments through quantitative techniques, making analyses more robust, timely and progressively harmonized at the international level. Environment statistics are necessary for producing environmental assessments, state of the environment reports, environmental compoas, environmental indicators, indicators of sustainable development, as well as to facilitate environmental-economic accounting.

The member States of the United Nations have addressed this challenging area during the Rio+20 Conference in June 2012. The outcome document, "The Future We Want" contains various references that are relevant to the

work of the United Nations Statistics Division (UNSD) in this regard. This document frequently mentions the importance of data, in particular, environmental data, as well as information and indicators. The Framework for the Development of Environment Statistics (FDES) 2013, including the Core Set of Environment Statistics, provides an appropriate means for addressing these information needs as they relate to the environmental dimension of sustainable development. The FDES has been recognized by the 44th session of the Statistical Commission as a useful tool to adequately respond to the increasing demand for information in the follow up to Rio+20 and the post-2015 development agenda (including Sustainable Development Goals).

The challenge of producing environment statistics

Environment statistics cover a wide range of information and are interdisciplinary in nature. Their sources are dispersed over a variety of data producers, and similarly numerous methods are applied in their compilation. To effectively produce environment statistics, specific statistical and environmental expertise, scientific knowledge, institutional development capabilities, and adequate resources are equally necessary. Many countries still require substantial technical assistance and capacity building. Environment statistics therefore require a proper framework to guide their development, coordination and organization at all levels.

1. The United Nations Statistical Commission is the apex entity of the global statistical system bringing together the Chief Statisticians from member States from around the world. In its highest decision-making body, the International Statistical Conference, it oversees the setting of statistical standards, the development of concepts and methods and their implementation at the national and international level.

Box 1: History of the FDES

The FDES was first published in 1984 by UNCTAD. For almost three decades it has been a useful framework for guiding countries in the development of their environment statistics programmes. However, the combination of lessons learned during its application, along with important scientific knowledge and emerging environmental concerns over the intervening years, strongly suggested that the FDES was ready for revision. The 44th session of the United Nations Statistical Commission endorsed a work programme in February 2010 for UNCTAD to address this revision and develop a Core Set of Environment Statistics with the support of an Expert Group. The revision was based on a review of different conceptual, analytical and indicator frameworks. The revision process involved a great variety of stakeholders represented by producers and users of environment statistics from countries in all regions and at different stages of development, as well as international organizations, specialized agencies and NGOs. As part of the process to develop the Core Set, more than 2,500 environmental indicators and statistics were analyzed. The Core Set was selected in 72 countries, and both the revised FDES and the Core Set were subjected to a Global Consultation process.

What is the FDES?

The FDES is a multi-purpose conceptual and statistical framework that is comprehensive and integrative in nature and marks out the scope of environment statistics. It provides an organizing structure to guide the collection and compilation of environment statistics at the national level. It brings together data from the various relevant subject areas and sources. It is broad and holistic in nature, covering the issues and aspects of the environment that are relevant for policy analysis and decision making by applying it to cross-cutting issues such as climate change.

Though the FDES is relevant to, and recommended for use by countries at any stage of development, its primary objective is to guide countries at early stages in the development of their environment statistics programmes. It can also be used by international and regional institutions, as well as by other users and producers of environment statistics.

The scope and structure of the FDES

The scope of environment statistics covers biophysical aspects of environment and those aspects of its human sub-system that directly influence, or are influenced by, the state and quality of the environment. It includes the interactions within the environment, and among the environment, human activities, and natural events.

The FDES organizes environment statistics in a simple and flexible manner into components, sub-components, statistical topics and individual statistics, using a multi-level approach.

The first level of the structure consists of six components (see Figure 1). The six components of the FDES delineate the scope of environment statistics, and contain and organize the most relevant, specific sets of information in a useful way.

The first component brings together statistics related to the conditions and quality of the environment and their

Box 2: The structure of the FDES

Component 1: Environmental Conditions and Quality

Sub-component 1.2: Land Cover, Ecosystems and Biodiversity

Statistical topic 1.2.3: Biodiversity

1. Five taxonomic levels: terrestrial, freshwater and marine
2. Number of known species by status category (Tier 1)
3. Number of endemic species (Tier 2)
4. Number of invasive alien species (Tier 2)
5. Habitat fragmentation (Tier 3)
6. Fauna statistics - terrestrial, freshwater and marine



Figure 1. The FDES components

