



Water Accounts and Statistics for Sustainable Development Goal 6

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Outline

- Information Needs for Sustainable Development
- The FDES and SEEA
 - Strengthening Environment Statistics
 - SEEA-Water - an information system for policy
- UNSD Work
 - SEEA Implementation
 - Environment Statistics - data collection and dissemination



Sustainable Development: Policy

Increasing recognition that Sustainable Development Policy should:

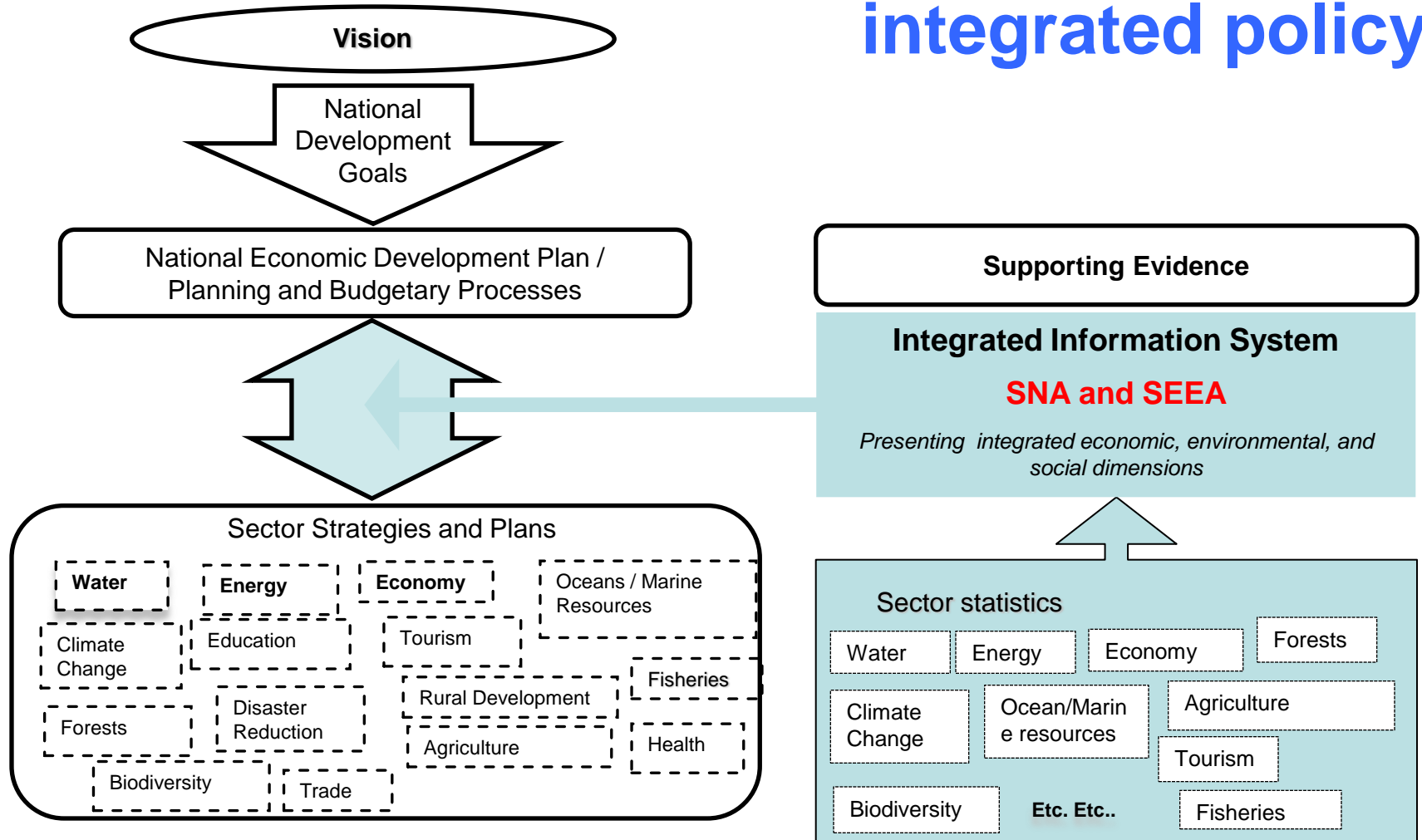
1. **Be based on Evidence:** Policy should, to the greatest extent possible, be informed by rigorously established evidence
2. **Take an Integrated Approach:** Policy should be based on a better understanding of interactions and tradeoffs between the different realms of sustainability

Implication: An **information system** is needed to support policy analysis and decisions, which provides information on;

- The multiple issues relevant to sustainable development
- The interconnections between these issues

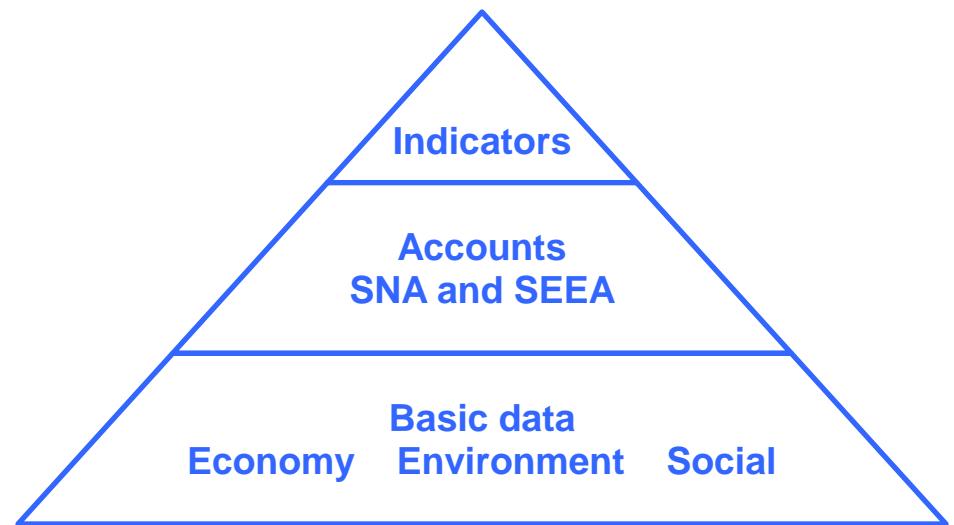
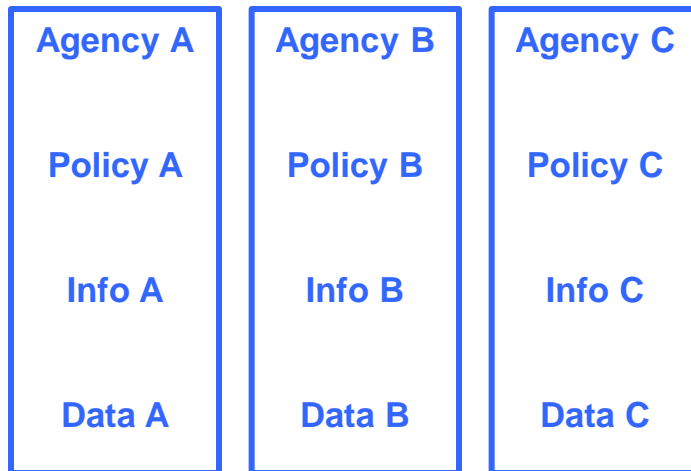


An information system to support integrated policy





Silo Approach → Integrated Statistics



Accounts to integrate statistics:

- Integrated statistical production process/chain and services
- Consistency between basic data, accounts and tables and indicators
- Linking policy needs and statistics



FDES and SEEA

- **Framework for the Development of Environment Statistics (FDES):** A conceptual framework to define the scope of environment statistics and strengthen environment statistics programmes in countries.
 - Endorsed by the UNSC in 2013
- **System of Environmental Economic Accounting (SEEA):** An accounting framework to bring the environment into a system of information on par with that used for the economy
 - Central Framework adopted as an international statistical standard by the UNSC in 2012
 - Experimental Ecosystem Accounting will add the link to well-being

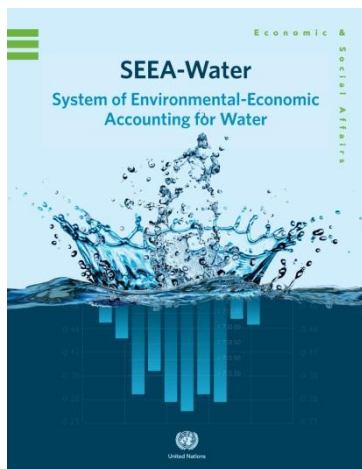
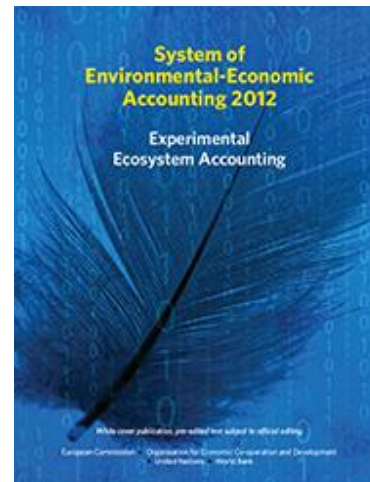
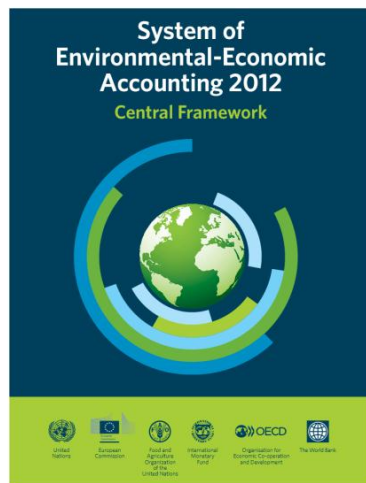
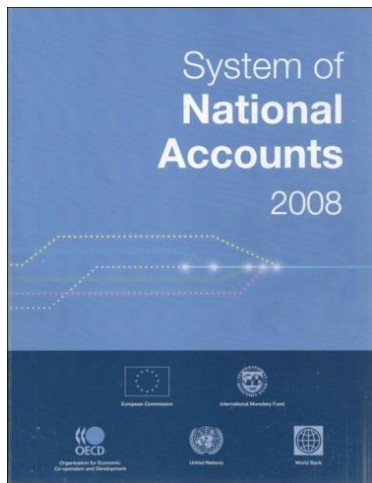


Framework for the Development of Environment Statistics (FDES 2013)

- The FDES is the framework for strengthening environment statistics programmes in countries.
 - Flexible, multi-purpose conceptual and statistical framework
 - Enables and facilitates the collection, compilation and production of environment statistics, including water related statistics
 - It is broad, comprehensive and integrative, covering aspects of the environment that are relevant for policy analysis and decision making and can be applied to cross-cutting issues such as water (Chapter 5).
- The FDES and its supporting methodological tools are based on definitions and classifications that are consistent with those of the SEEA and the IRWS, where relevant.



The SEEA: Systems of coherent information:



**SEEA-
Energy**

(forthcoming)

**SEEA-
Agriculture,
Forestry and
Fisheries**

(forthcoming)

Others

(forthcoming)



SEEA-Water: An information System

- The SEEA-Water is a conceptual framework for organizing hydrological and economic information in a coherent manner
- It can provide an information system for water policy by bringing together and organizing information relevant to four main quadrants of water policy
- Main accounts in SEEA-Water provide information on;
 1. Flows of water between the environment and economy
 2. Stocks of water resources (and changes in stocks)
 3. Environmental pressures on water stocks from economy
 4. The water economy

I. IMPROVING WATER SUPPLY AND SANITATION SERVICES

Policies that aim to ensure the population has access to safe water as well as to means of disposing wastewater (Targets 6.1, 6.2 and 6.3 (partial))

INFORMATION ON WATER AND PEOPLE

Information on the provision of drinking water and sanitation to the population;

- Amount of water supplied and wastewater collected
- Quality and affordability of services
- Costs and financing of providing the services
- Efficient operation of water utilities, including losses

II. MANAGING WATER SUPPLY AND DEMAND

Policies that aim to improve water allocation to satisfy societal needs without compromising the needs of future generations or the environment (Targets 6.3, 6.4 and 6.5)

INFORMATION ON WATER AND THE ECONOMY

Information on the water cycle in nature and the economy including;

- Amount of water allocated for different uses and losses
- Trade-offs in the allocation of water
- Sustainability of water use by the economy
- Financial resources water supply
- Investments and financing of infrastructure

WATER
SECURITY

III. IMPROVING THE STATE OF THE ENVIRONMENT AND WATER RESOURCES

Policies that aim to preserve/improve the quality of water resources and aquatic ecosystems (Targets 6.3 and 6.6)

INFORMATION ON WATER AND THE ENVIRONMENT

Biophysical information on water related ecosystems, the services they provide and the factors affecting them;

- Conditions and provisioning services
- Characteristics of water bodies, such as the amount of pollutants in the water and the quantity of aquatic life
- Flow patterns and quantification of required environmental flows

IV. ADAPTING TO EXTREME HYDRO-METEOROLOGICAL EVENTS

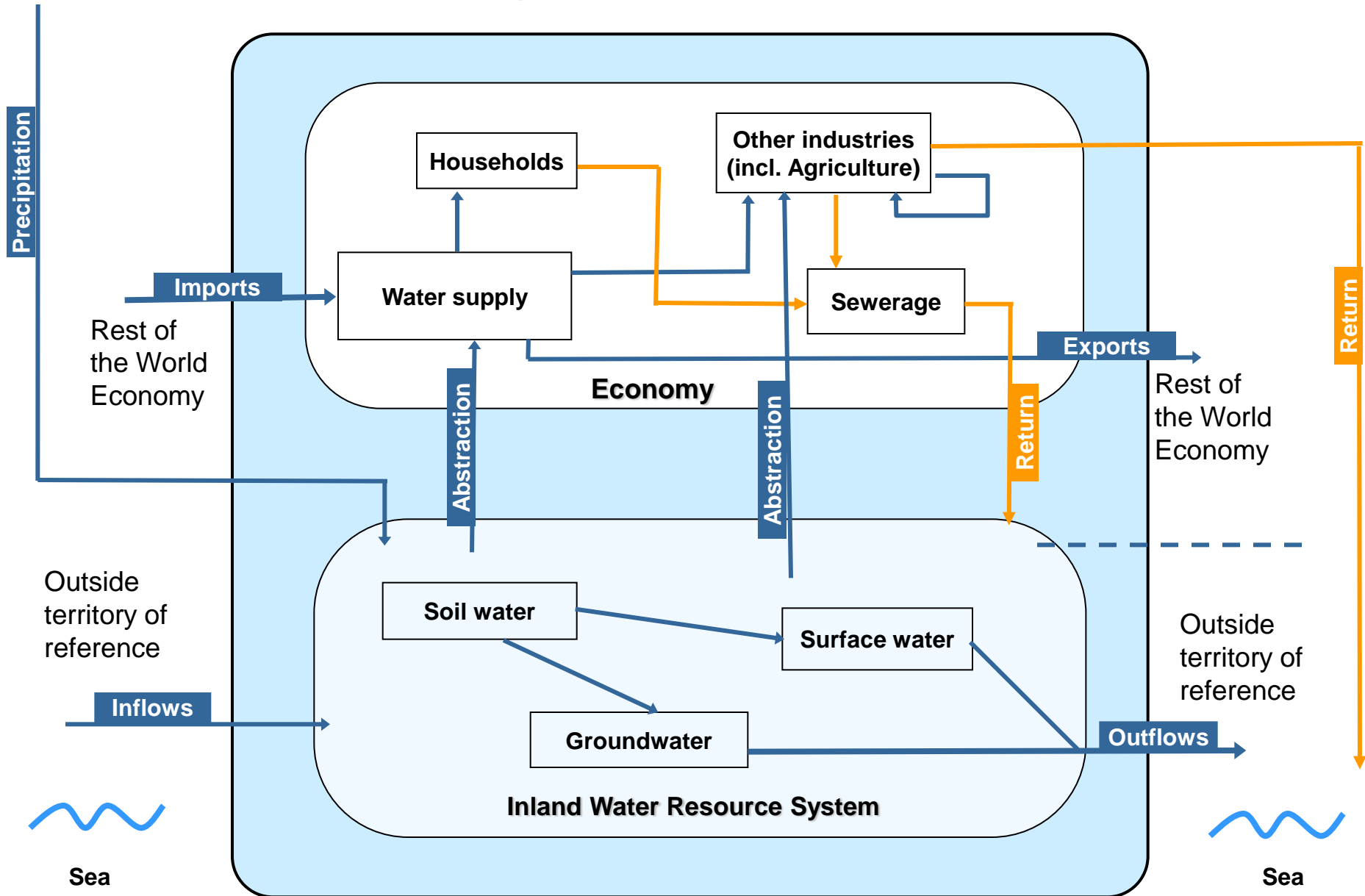
Policies that aim to reduce the socioeconomic impact of water related disasters (Targets 6.5 and 6.6)

INFORMATION ON WATER AND RISKS

Information on extreme events related to water ecosystems and human response ;

- Variability in water availability
- Frequency and magnitude of events and their effects
- The state of natural systems or manmade structures to regulate seasonal and inter-seasonal variations
- Expenditures related to mitigation, adaptation, etc.

SEEA-Water: A systems approach





SEEA-Water: Informing the SDGs

Target Issue	Policy relevant information on SEEA-Water	Accounts
6.1 & 6.2 <i>Access to drinking water and sanitation</i>	<p>Physical: Supply of water to households relative to economy, generation of wastewater by households and water-system characteristics affecting households (e.g. portion lost/treated)</p> <p>Monetary: expenditure on household water supply and sanitation (incl. sources of funding), expenditures by governments and investment in fixed capital for water supply and sanitation</p>	<p>PSUT</p> <p>Combined Presentation</p>
6.3 <i>Water quality, treatment and re-use</i>	<p>Pollution Release: the release of pollutants by different economic activities (i.e. households and industry type) and the pathway of their release</p> <p>Within-economy water cycle: flows of wastewater between economic units and to the environment, including flows for treatment and re-use</p>	<p>Emissions Accounts</p> <p>PSUT</p>
6.4 <i>Water efficiency and sustainable withdrawals</i>	<p>Water Use: Water abstraction and use by economic activity (households and industry sectors)</p> <p>Sustainability of withdrawals: Evolution of water stocks over time and sustainability of current pattern</p>	<p>PSUT</p> <p>Asset Accounts</p>
6.5 <i>IRWM</i>	<p>SEEA-Water is a tool for IRWM by bringing together different types of water information into one framework</p>	
6.6 <i>Water-related ecosystems</i>	<p>Biophysical information: on areas and changes in areas of various types of water-related ecosystems, including their extent, condition and provisions of services.</p>	<p>Ecosystem Accounts</p>



UNSD: Ongoing work

▪ **Water Indicators**

- Process ongoing to develop an indicator set to monitor SDGs

▪ **Water Accounts (SEEA)**

- Implementation Strategy for the SEEA Central Framework
- Experimentation on Ecosystem Accounting
- Core Tables and Accounts

▪ **Water Statistics (FDES)**

- UNSD/UNEP Questionnaire on Environment Statistics
- Country Assistance to strengthen statistical capacity through training workshops and direct technical assistance



UNSD: SEEA Implementation Activities

- **Implementation Strategy:** Incrementally establish national technical capacity for regular reporting on a minimum set of accounts in a flexible and modular approach. Four phases;
 1. Establish national institutional arrangements
 2. Self assessment using diagnostic tool
 3. Data quality assessment
 4. Preparation of strategic development plan
- **Technical Notes and Core Tables:** implementation support for compilers of the accounts including a minimum set of information for eventual national reporting
- **Global Assessment:** to serve as a baseline for accounts
 - Of ~85 responses, 54 countries have a programme on SEEA
 - 19 currently compiling water accounts, with 18 more in planning phase



UNSD: Data Collection for Environment Statistics

■ UNSD/UNEP Questionnaire on Environment Statistics:

- Biennial data collection on water and waste sent to national statistical offices and ministries of environment.
- Consistent and harmonized with the OECD/Eurostat Questionnaire
- 7th round of data collection being finalized
- Questionnaires were sent to 172 countries and 70 countries responded to the water section
- Data completeness and data quality remain a challenge

■ Linked to economic statistics through the use of the International Standard Industrial Classification of all Economic Activities (ISIC Rev. 4) in 3 tables:

- Abstraction and use of freshwater, freshwater supply, and wastewater generated, according to ISIC.

Water Section (5 Tables)	
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
W8	Supplementary information sheet



Thank-you

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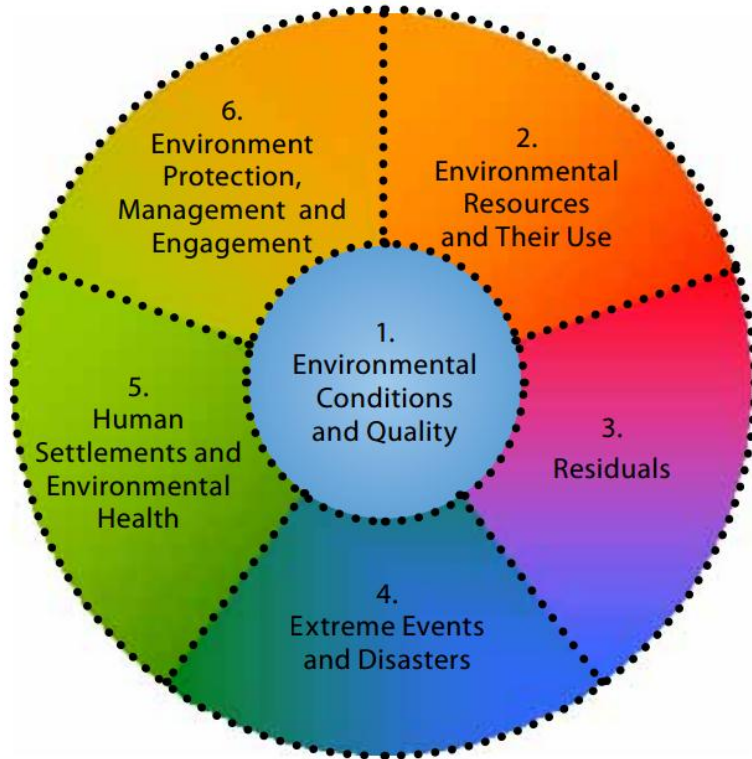
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References and Annex

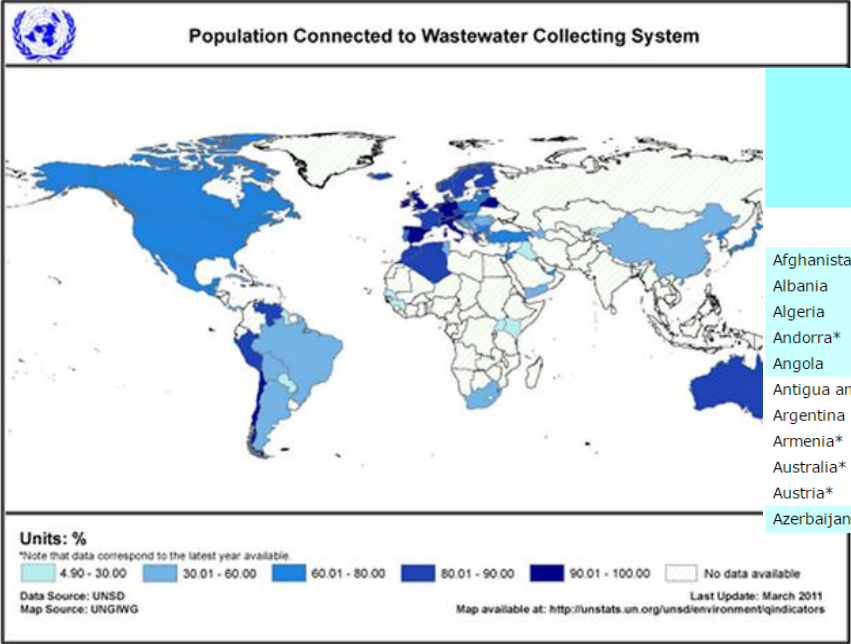
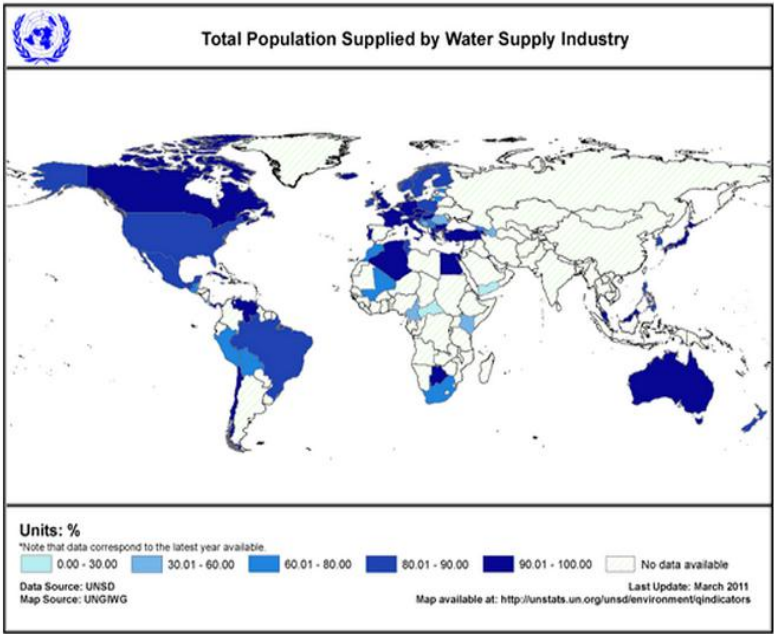
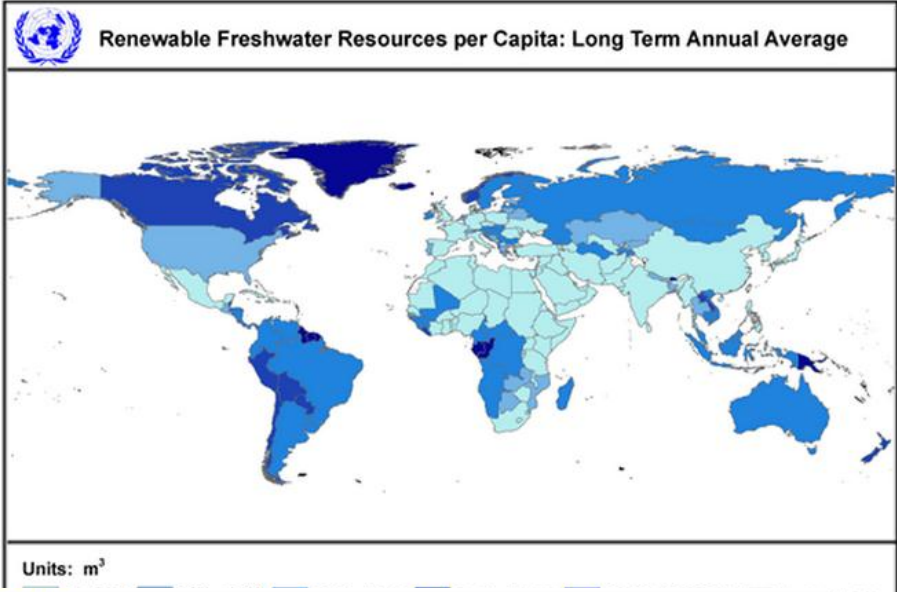
- **UNSD Data Dissemination on Environment Statistics, including water statistics and indicators:**
 - **UNSD Environmental Indicators** (Air and climate, Biodiversity, Energy and minerals, Forests, Governance, **Inland water resources**, Land and agriculture, etc.): <http://unstats.un.org/unsd/environment/qindicators.htm>
 - **Country Files** (access restricted to countries and organizations that participate in 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/>
- **Resources for SEEA-Water:**
 - **SEEA-CF Briefing Note:** <http://unstats.un.org/unsd/envaccounting/SEEA-Brochure-SC-2013.pdf>
 - **SEEA-Water Briefing Note:**
http://unstats.un.org/unsd/envaccounting/WWAP_UNSD_WaterMF.pdf
 - **Other Materials:** <http://unstats.un.org/unsd/envaccounting/water.asp>

Water Statistics and the FDES



Component	Water related statistics
Component 1: Environmental conditions & quality	Meteorology, climate Hydrographic conditions Ecosystems, biodiversity Water quality
Component 2: Environmental resources & use	Water resources and use Aquatic resources and use
Component 3: Residuals	Wastewater generation and management
Component 4: Extreme events & disasters	Water related disasters
Component 5: Human settlements & environmental health	Water and sanitation Water borne diseases
Component 6: Environment protection & engagement	Water protection expenditure Water related regulations and policies

UNSD Environmental Indicators: maps, tables, etc



	Precipitation	Internal flow	Inflow of surface and ground waters	Renewable freshwater resources	Renewable freshwater resources per capita
	map	map	map	map	map
	<i>mio m³</i>	<i>mio m³</i>	<i>mio m³</i>	<i>mio m³</i>	<i>m³</i>
Afghanistan	213 429	55 000	10 000	65 000	2 389
Albania	42 700	26 900	14 800	41 700	13 266
Algeria	211 499	13 900	420	14 320	417
Andorra*	466 ¹	263	0	263	3 116
Angola	1 258 793	184 000	0	184 000	10 210
Antigua and Barbuda	500	52	0	52	600
Argentina	1 642 104	276 000	538 000	814 000	20 410
Armenia*	17 640	6 317	940	7 257	2 358
Australia*	3 630 635	387 184	0	387 184	18 372
Austria*	98 000	55 000	29 000	84 000	10 075
Azerbaijan*	36 978	10 330	20 573	30 903	3 540