Twinning Project
"Strengthening of the National Statistical System of Armenia – Phase II"

Activity 6.1
Assessment of the current status on water statistics and water accounts

Current state of the art

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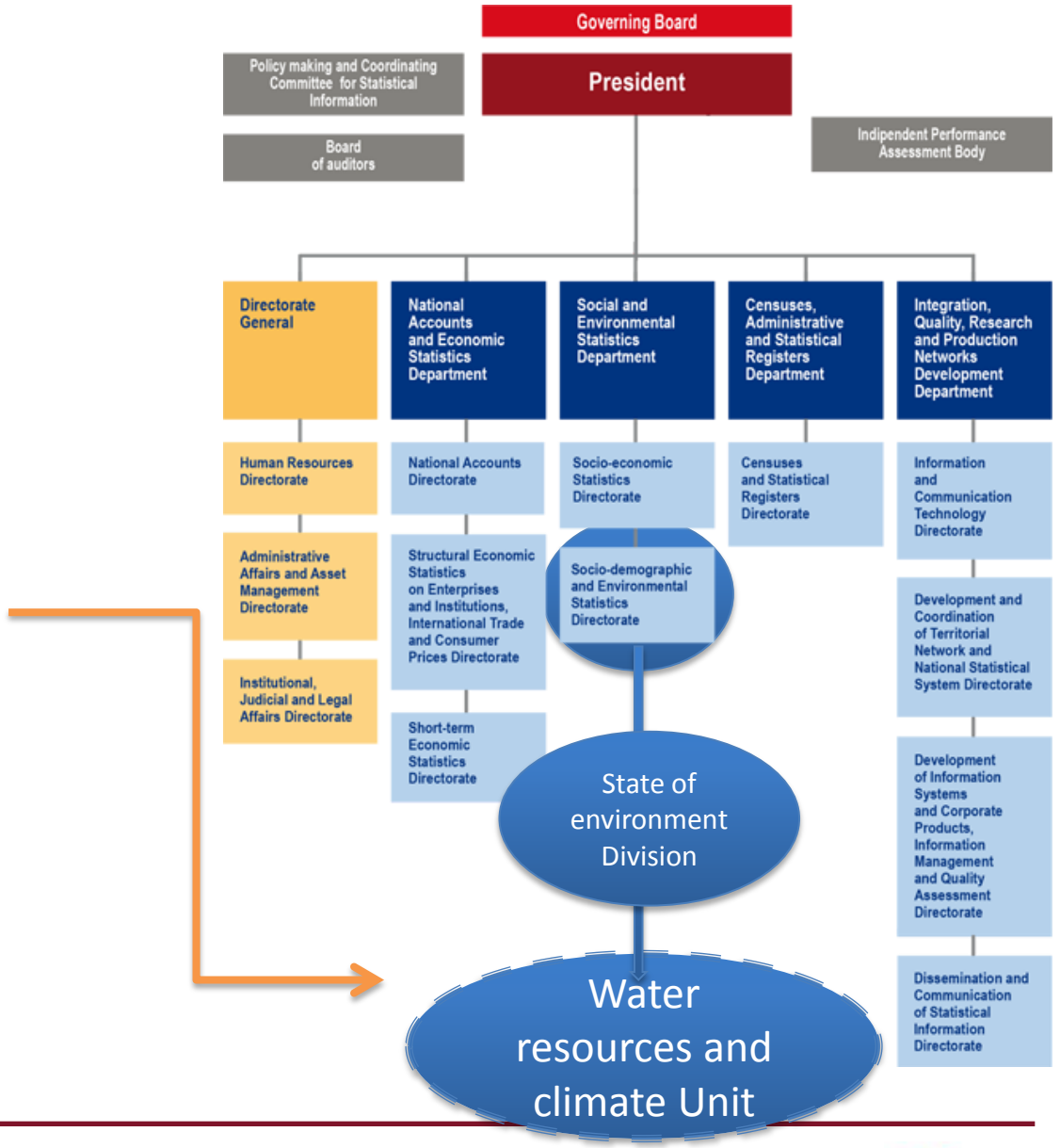

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List of Istat main activities on Water Resources

MAIN PROJECTS IN THE NATIONAL STATISTICAL PROGRAMME

- **METEO-CLIMATIC AND HYDROLOGICAL DATA**
  - *Evaluation of natural water resources - Hydrological balance*
  - *Extreme events*
  - *Climate change indicators*
- **URBAN WATER CENSUS**
  - *Integrated information basis of all the urban water sector, from abstraction to wastewater treatment*
- **USE OF WATER RESOURCES**
  - *Agriculture*
  - *Industry*
  - *Energy production*

INTERNATIONAL ACTIVITIES

- **Eurostat Working Group "Statistics of the Environment" / Sub-Group "Water Statistics"**
  - ✓ **OECD/ Eurostat questionnaire - INLAND WATERS**
  - ✓ **Eurostat questionnaire – REQ REGIONAL ENVIRONMENTAL DATA COLLECTION**
- **Eurostat NAMEA Task Force on Water Accounts**
- **Eurostat Joint Task Force on Water Statistics and Accounts**
- **UNECE Task Force on Climate change related statistics**
- **UNECE Task Force on Measuring extreme events and disasters**

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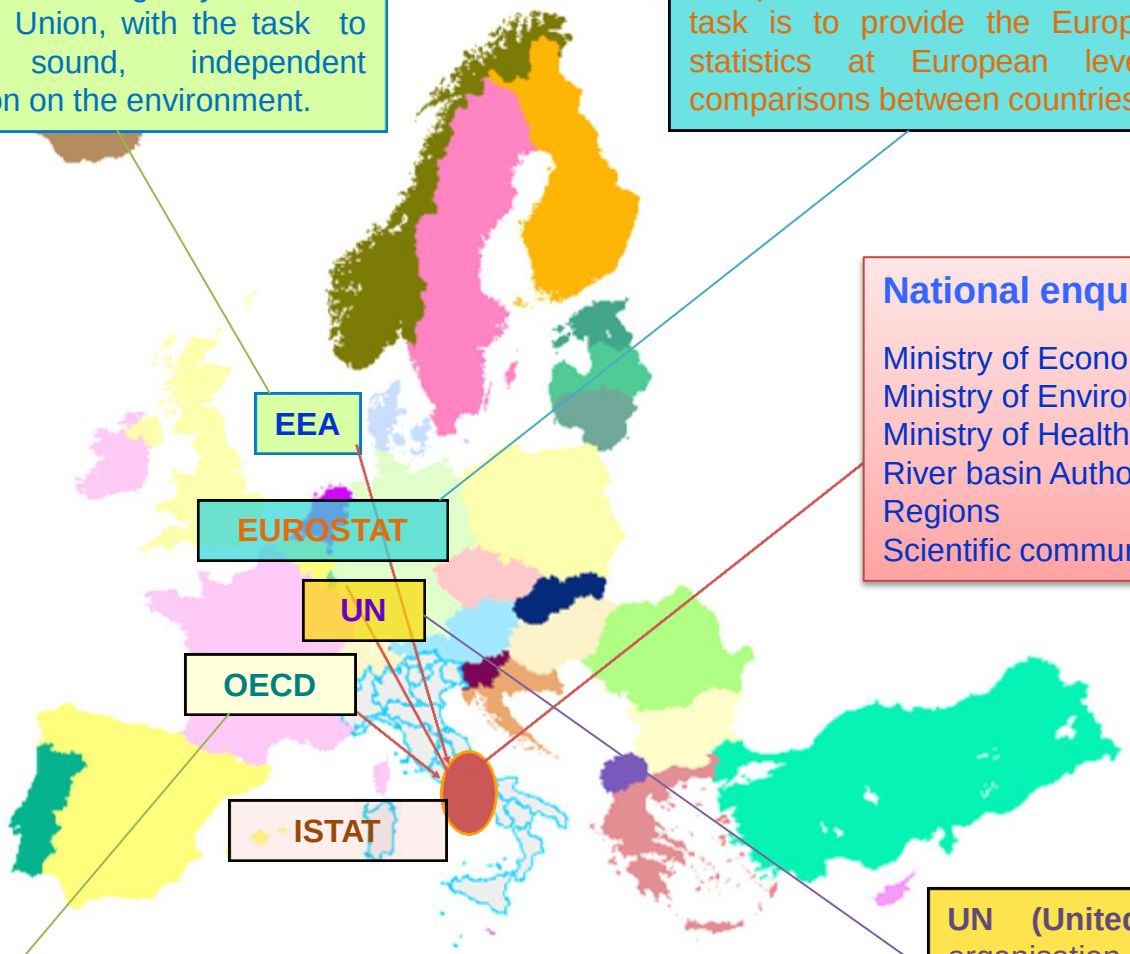
International and national data enquiry on Water Issues

EEA (European Environment Agency): an agency of the European Union, with the task to provide sound, independent information on the environment.

EUROSTAT: the statistical office of the European Union situated in Luxembourg. Its task is to provide the European Union with statistics at European level that enable comparisons between countries and regions.



National enquiry:

Ministry of Economic Development
Ministry of Environment
Ministry of Health
River basin Authorities
Regions
Scientific community

UN (United Nations): an intergovernmental organisation to promote international co-operation. In particular UNECE (United Nations Economic Commission for Europe) and FAO (Food and Agriculture Organization).

OECD (Organisation for Economic Co-operation and Development): an international economic organisation with the aim to promote policies that will improve the economic and social well-being of people around the world.

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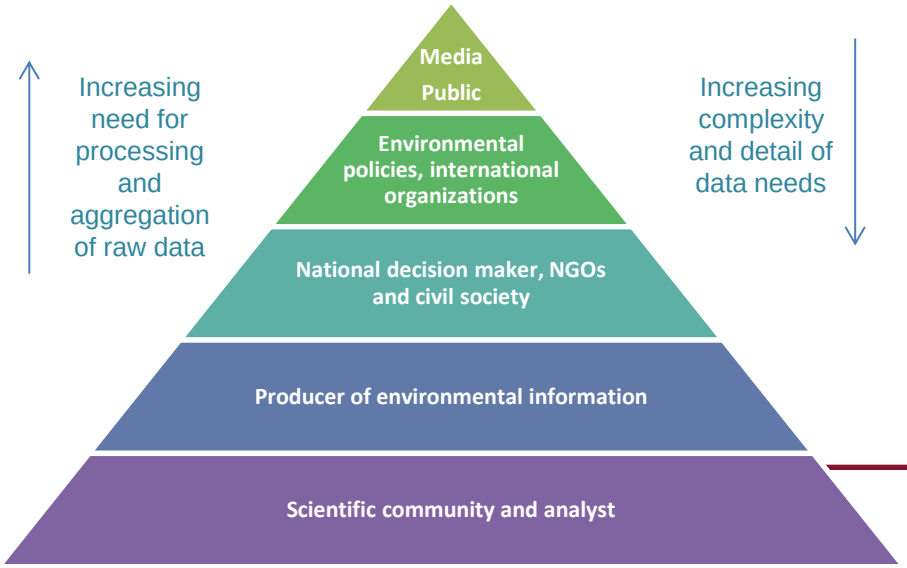
Background

- There's an **urgent need of information** to understand interconnections between Human System and Nature
- Statistical information is essential for understanding our complex and rapidly changing world
- **National Statistical Offices are called to enhance their role** to satisfy the increasing demand of Official Statistics at national and local level and in a global perspective on environmental issues
- **Meet users needs, fill data gaps**



Key concepts:

- Reference international framework
- International indicators
- Comparability, Quality
- National Statistical System, NSOs
- Several Data providers
- Guidelines & Recommendations
- Cooperation, coordination
- Standardization of terminology, definitions, methodologies
- Integration, multidimensional approach

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The right way: towards a common reading/language

Referenced International Statistical Frameworks

to provide guidelines, definitions, standardization

to define internationally comparable set of key statistics

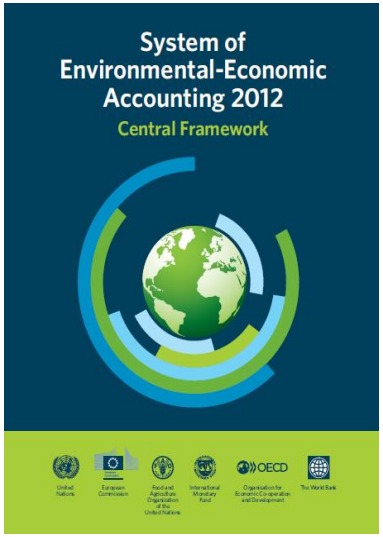
- **Framework for the Development of Environment Statistics FDES 2013 - UNSD**
- **System of Environmental-Economic Accounting (SEEA-CF 2012)**

Role of National Statistical Offices

Especially for environmental statistics, the availability of a large amount of unprocessed observations and measurements from ***different sources and from different data producers*** *calls for strongest* ***coordination, collaboration, cooperation***

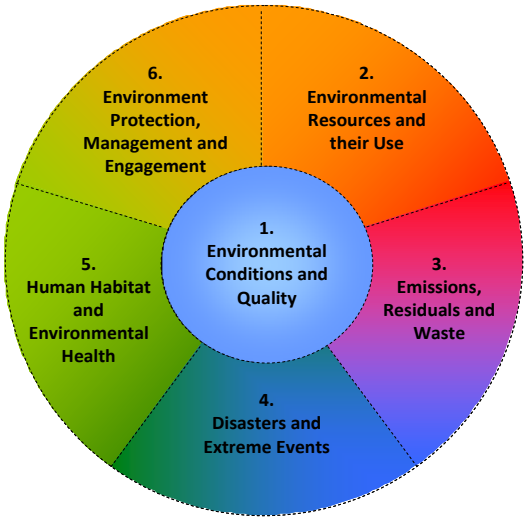
International projects and Task Forces on connected issues:

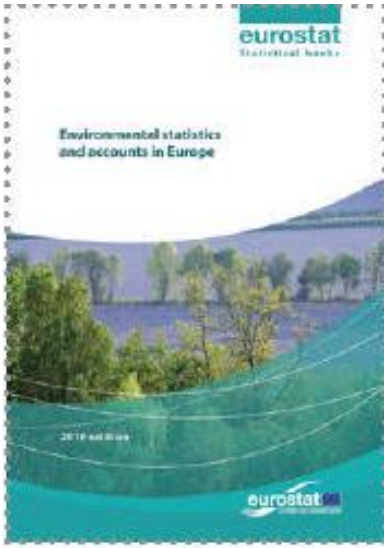
ENVIRONMENTAL STATISTICS - SUSTAINABILITY - CLIMATE CHANGE RELATED STATISTICS - EXTREME EVENTS AND DISASTERS



UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

Conference of European Statisticians Recommendations on
Climate Change-Related Statistics





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It is useful to remember that….

Water is essential for life!

It is a **precondition** for *human, animal and plant life,* an indispensable resource for the *economy*. As known, water also has a central role in the climate regulation cycle.

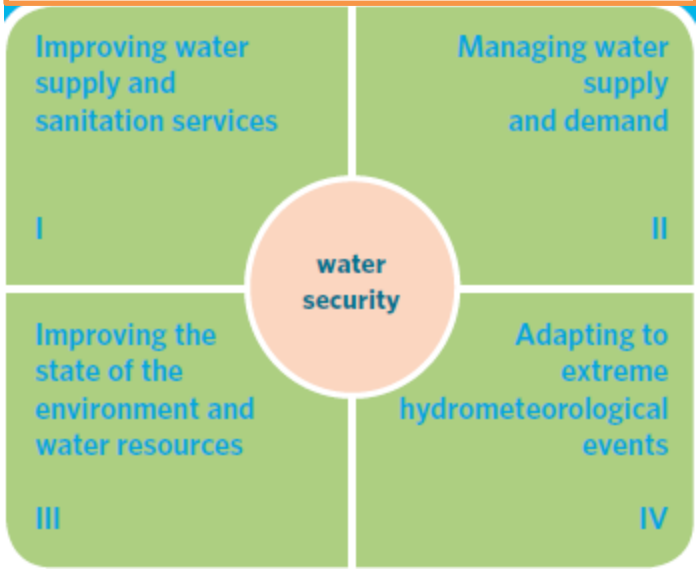
Water is essential for achieving equitable and sustainable social and economic development!

Water is a human right!

The **protection** of water resources is unavoidable, of fresh and salt water ecosystems and of the water we drink and bathe in is therefore one of the cornerstones of environmental protection in Europe.

Water is a scarce resource and should be used sustainably!

What scopes for water policies?



Some relevant questions on Water Resources

What is happening?

Growing pressure on water resources due to:

- Increasing demand of water from all sectors: civil, agriculture, industry, energy, tourism
- Climate Change effects

What we have to do?

- Reduce water stress
- Increase efficient use of water resources
- Reduce water losses
- Improve quality of water resources

What Official Statistics should do?

Provide high quality statistical information:

reliable, consistent, timely,
comparable, accessible, “regional”

How to describe water resources (WR)

WHO?

HOW?

Environmental statisticians, water experts, national accountants, hydrologists, policy-makers need to be able to communicate using a common language…. need to work together in order to make this happen.

Water statistics (WS) and Water accounts (WA) are part of an integrated programme where WS provide the list of variables and indicators related to water and WA measure the interactions between the hydrological system and the economy

PROMOTE THE USE OF ENVIRONMENTAL ACCOUNTING AS A KEY ELEMENT OF ENVIRONMENTAL ASSESSMENT AND POLICY SUPPORT

Having a structured informative system to describe WR with good quality data is unavoidable for further elaborations and in-depth analysis….
WA are a strictly consequence of WS
WS are at the base of WA

From Water statistics to Water accounts

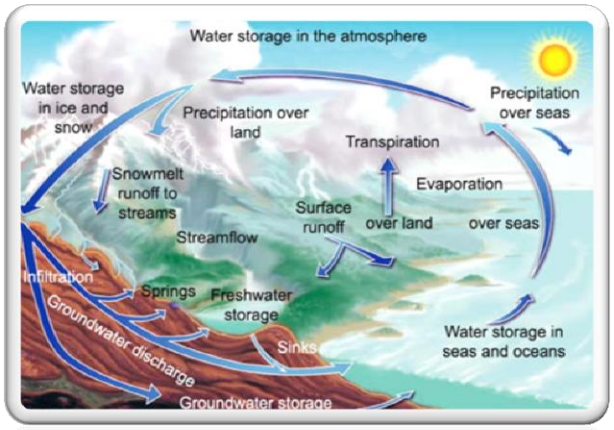
1970 Many countries started compiling **environmental statistics** as early as 1970s and OECD started data collection activities through questionnaires in the 1980s.

1990 **Environmental-economic accounting** is a much newer area of statistics which has come to the attention of statisticians in the early 1990s.

Whereas **WS** provide different sets of data about specific topics, **WA** has the aim to integrate the various parts and provide a coherent 'image', emphasizing the relationships between the different elements of a complex system.

The main purpose of compiling WA and WS is to identify areas of social, economic or environmental stress and to monitor relevant policies

And then, what data do we need?



Starting from physical data…

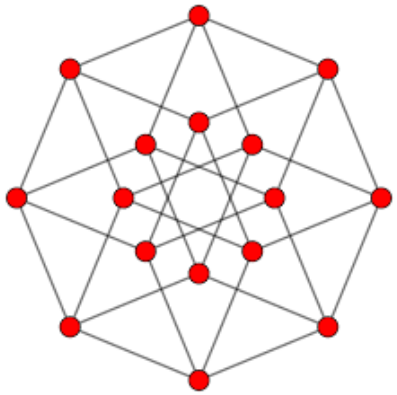
Hydrometeorological data have been traditionally collected for several scopes related to Water resources.

Eurostat together with OECD have been collecting data on Water Statistics through a Joint Questionnaire on Inland Waters (JQ-IW).

But they are only a subset of the data required to understand today's water issues. Data from many other fields of expertise are necessary to understand the complex interrelationships of water with aspects of human well-being.

…moving towards a multidimensional approach

Data must be integrated, analyzed and converted into useful information for policy-makers, the general public, managers and researchers. It needs a comprehensive conceptual framework to guide the process of data integration and its transformation into policy relevant information.
For this purpose, the United Nations adopted SEEA-Water (System of Environmental-Economic Accounting) as conceptual framework. Eurostat adopted PWFA (Physical water flow accounts), very close to the SEEA-CF.



WS&WA: it is happening that…

- The European Strategy for Environmental Accounting (ESEA) approved in 2003 and revised in 2008, recommended water supply and use accounts as a priority area for development.
- Eurostat together with OECD have been collecting data on WS through a Joint Questionnaire on Inland Waters (JQ-IW).
- In November 2012 the DIMESA endorsed the proposal to launch a Joint Task Force on Water Statistics and Accounts to conceptualize and design the architecture of a joint reporting vehicle for WS and WA.
- Eurostat is in the process of reviewing (streamlining, simplifying) its WS and setting up WA. The development of WA is part of the ESEA for 2014-2018.
- In Europe, many countries have still not developed WA.
- Even in Italy a WA system is not yet structured …. We are starting now!! Focus about water resources assessment and water for civil use were prepared by Istat.
- In Europe data availability (Water Statistics) is insufficient to “populate” set of PWFA-tables (for Physical Water Flow Accounts)

Conclusion: better water statistics needed!

Italy and Armenia are working together with the aim to organize and fine-tune the Armenian production of WS and the development of WA
……..It will not be easy but it’s worth it!!!

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