UNITED NATIONS
ECONOMIC COMMISSION
FOR EUROPE

FOR A STRONGER AND GREENER ECONOMY
UNECE

Barriers to environmental data

… and how to overcome them

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Types of barriers

Technical

Economic

Legal

Institutional

Technical Barriers

- No measurements exist (resources)
- Data format is not suitable for data exchange
- Considered not reliable enough to exchange
- Technology for data exchange does not exist
- Technology for data exchange exists but is not used

→ Technical barriers can be solved by communication, priorisation, funding and standardisation !

Potential solutions:

- Improvement in networks (resources)
- Adoption of agreed data transfer standards
- Interoperability of systems
- Data rescue projects
- Adoption of a Quality Management Framework
- Capacity building, including training
- Availability of equipment
- Communication between users and producers

Economic Barriers

- Extracting value from the investment in the data collected
- No funding for data collection
- Donor organizations do not normally require public or other access to the data produced through their funding

→ The best way to get value from data is to give it away!

Potential solutions:

- Establish open-access policies
- Demonstrate the value of data availability, broad access to and use of environmental data for the economic, social and scientific progress
- Awareness raising to policy makers and funding institutions that data and dissemination are a well-justified public good
- Make the case to donor organizations that they need to be more proactive regarding data policy and management

Legal Barriers

- Intellectual property (IP)
- Other economic proprietary protection
- National security protection
- No existing legal framework for institutional data sharing

→ Data of government entities are funded at taxpayer expense and thus a public good!

Potential solutions:

- National government and its environmental and research agencies should review their IP policies and remove legal constraints as much as possible
- Agencies that assert national security restrictions should be subject to a formal process that balances other national economic and social interests
- Establishment of an overall legal background for data sharing and/or bilateral agreements between institutions

Institutional Barriers

- Competition among ministries and their agencies
- Lack of incentives or mechanisms to communicate effectively across countries, institutions, sectors and disciplines
- Lack of authority to enforce data access
- Making data collected in different contexts useful to others

→ High-level interagency committees or councils are needed to develop jointly approved plans and programs!

Potential solutions:

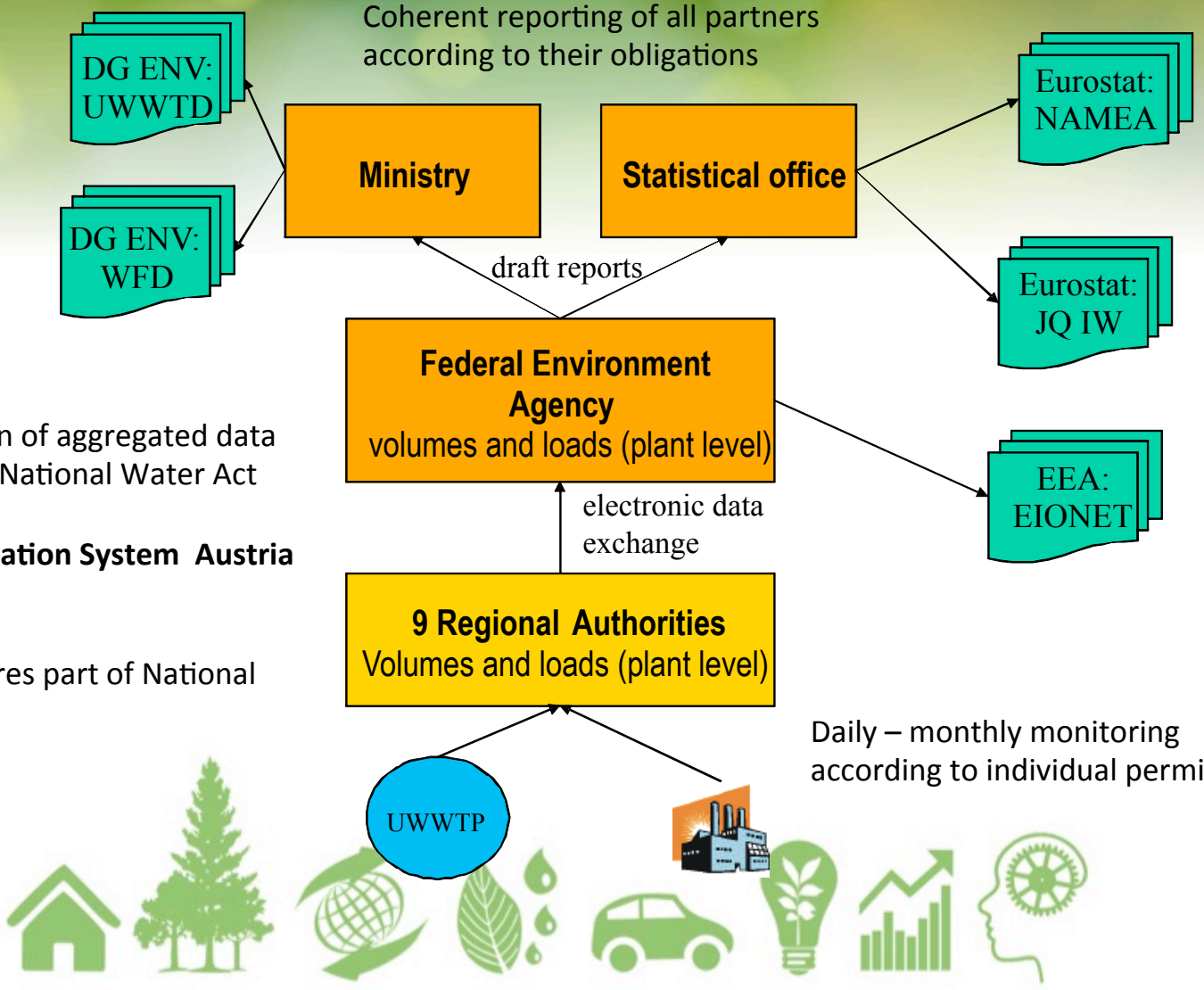
- Establish high-level interagency committees or councils
- Provide budget incentives
- Develop formal mechanisms to enhance compliance among participating institutions
- Engage policy makers and other users in the kinds of data that are needed to be collected and how they can be most effectively presented and provided to others

Examples

Austria

Mexico

Sound National Statistics System - Example from Austria: Data flow on emissions data (point sources)

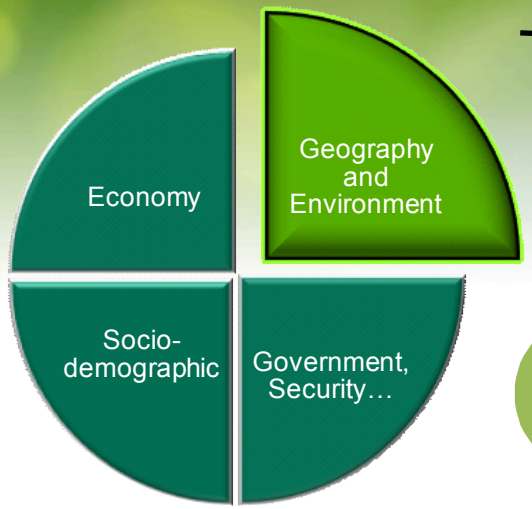


Annual collection of aggregated data
Legal basis: §59 National Water Act

→**Water Information System Austria (WISA)**

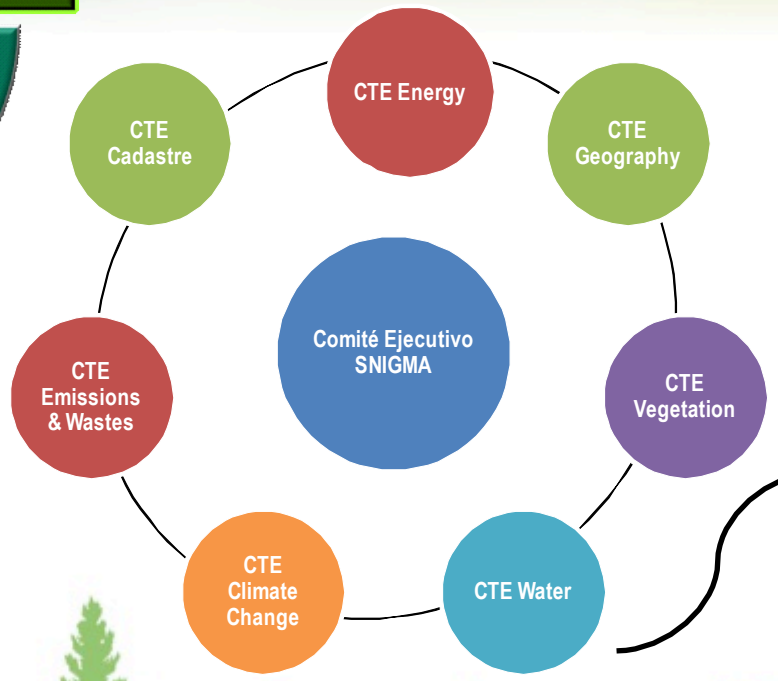
QA/QC procedures part of National Water Act

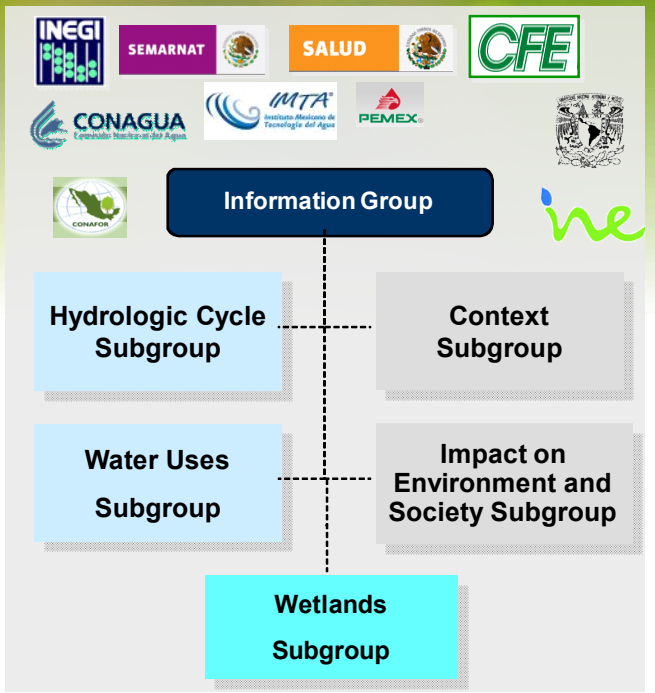
Sound National Statistics System - Example from Mexico: Statistical and Geographical Information System (SNIEG)



SNIEG

CESNI Geographical & Environmental





Working group of the Water Committee

Sources: INEGI and CONAGUA

Conclusion

- Water data is held by many institutions.
- Establishment of national (inter-ministerial) committees and/ or bilateral agreements.
- Legal basis for data collection and institutional cooperation.
- Leading institution needed.
- Data usually generated for other purposes than accounting (planning, surveillance, research, etc.).
- Data often available at local or sub-national level, but difficult to “harvest”.
- In some cases “inaccurate” data (+metainformation) might be better than no data – it creates discussion.
- Estimations, expert judgements, use of research data etc. can be used to fill gaps and to improve the quality of data gradually.
- Metadata about data sources and data quality are extremely important!

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Thank you for your attention!

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