



NATIONAL WORKSHOP ON ENVIRONMENTAL INFORMATION SYSTEMS AND ENVIRONMENTAL STATISTICS FOR THE SUSTAINABLE DEVELOPMENT GOALS

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SHARED WATER INFORMATION IN AUSTRIA STEPHAN NEMETZ

11-14 JUNE 2018, BISHKEK, KYRGYZ

| Shared Water Information in Austria

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Content

- Introduction
- Institutional setup in Austria
- Concept of WISA
- Different levels of data management
- Recommendations

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Why



- Under the SDG-6 goals, Member States of the United Nations have committed to *“ensure availability and sustainable management of water and sanitation for all by 2030”*.
- In February 2017, the HLPW released the World Water Data Initiative Roadmap¹². The stated objective of this initiative is *“To improve cost-effective access to and use of water and hydro-meteorological data by governments, societies and the private sector through policy, innovation and harmonisation”*.
- Water data can be used to detect environmental problems and to set best suitable and most cost efficient measures
- Water data shall be the basis for water management and decisions in the water sector

Code SDG-6 Global Indicator

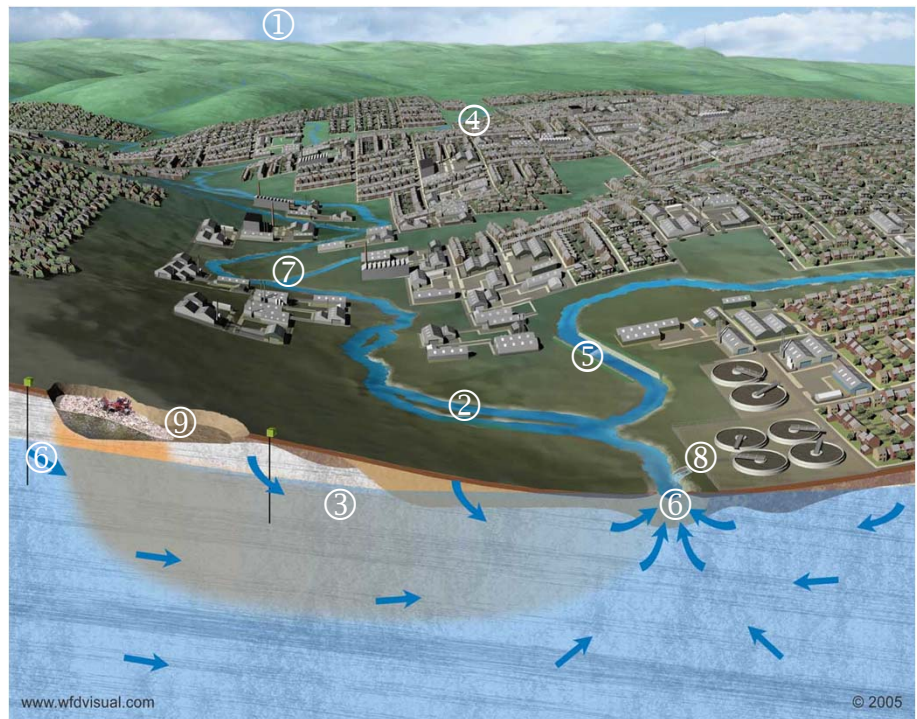
6.1.1	Proportion of population using safely managed drinking water services
6.2.1	Proportion of population using safely managed sanitation services, including a handwashing facility with soap and water
6.3.1	Proportion of wastewater safely treated
6.3.2	Proportion of bodies of water with good ambient water quality
6.4.1	Change in water use efficiency over time
6.4.2	Level of water stress; freshwater withdrawal as a proportion of available freshwater resources
6.5.1	Degree of integrated water resources management implementation
6.5.2	Proportion of transboundary basin area with an operational arrangement for water cooperation
6.6.1	Change in the extent of water-related ecosystems over time
6.a.1	Amount of water- and sanitation-related official development assistance that is part of a government coordinated spending plan
6.b.1	Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management

Purpose of water data management

- Water assessment: characterisation of rivers, lakes, groundwater, river basins
- Water evaluation: e.g. water quality for status evaluation
- Water foresighting: prediction of impacts
- Water related measures: planning and implementation
- Water accountability: for water statistics, generation of SDGs
- Water education: information and education of the public

Types of water data

- ① Meteorological data: rainfall, humidity, temperature,...
- ② River Data: water level, discharge (low/medium/bankfull)
- ③ Groundwater data: water level, aquifer thickness, groundwater age
- ④ Water storage data: storage volume, storage inflow/outflow, offtakes,...
- ⑤ Water use data: water abstraction from rivers, groundwater and storages, water demand, available water,...
- ⑥ Water quality data: Electrical conductivity, temperature, pH, oxygen, biological quality elements, hydromorphological data,...
- ⑦ Water pollutant data: concentrations of plant protection products, pharmaceuticals, heavy metals,...
- ⑧ Waste water data: discharge point, emission load,...
- ⑨ Water rights data: Water ownership, water permits,...



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Administrative Structure of Austria

- Federal level: Federal Ministry for Sustainability and Tourism – responsible authority for the implementation of WISA
- 9 Provinces – Provincial Authorities
 - ~ 100 District Authorities
 - ~ Around 2300 Municipalities (Majors)



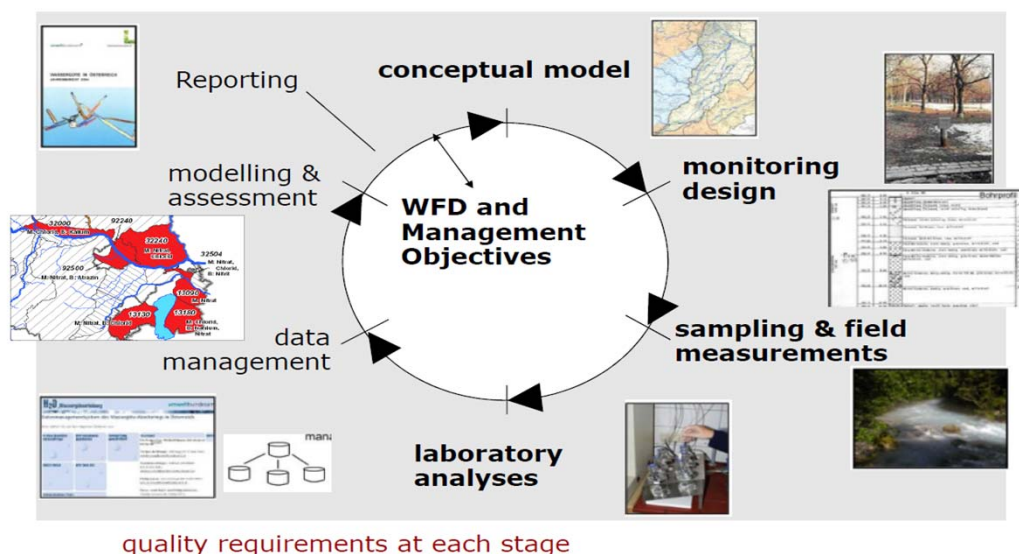
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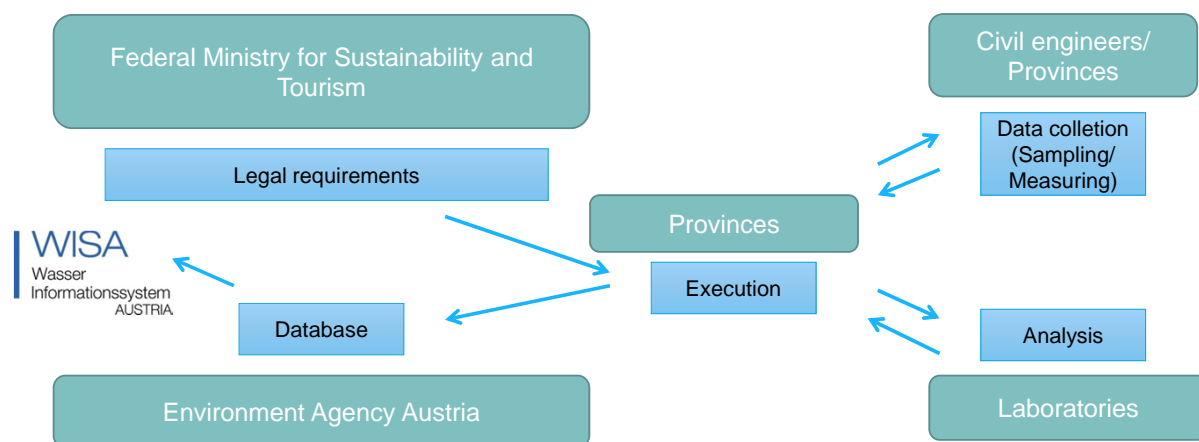
Legal Background

- Water Act (Federal legal gazette No. 215/1959 – in the current version) = legal basis for water management in Austria
 - WISA §59: purpose, content, stakeholder
 - River Basin Management Plan §55h (RBMP)
 - Flood Risk Management Plan §55i (FRMP)
- Complemented by Ordinances e.g.
 - Emission register
 - Water quality monitoring
 - Water quantity monitoring

Monitoring cycle



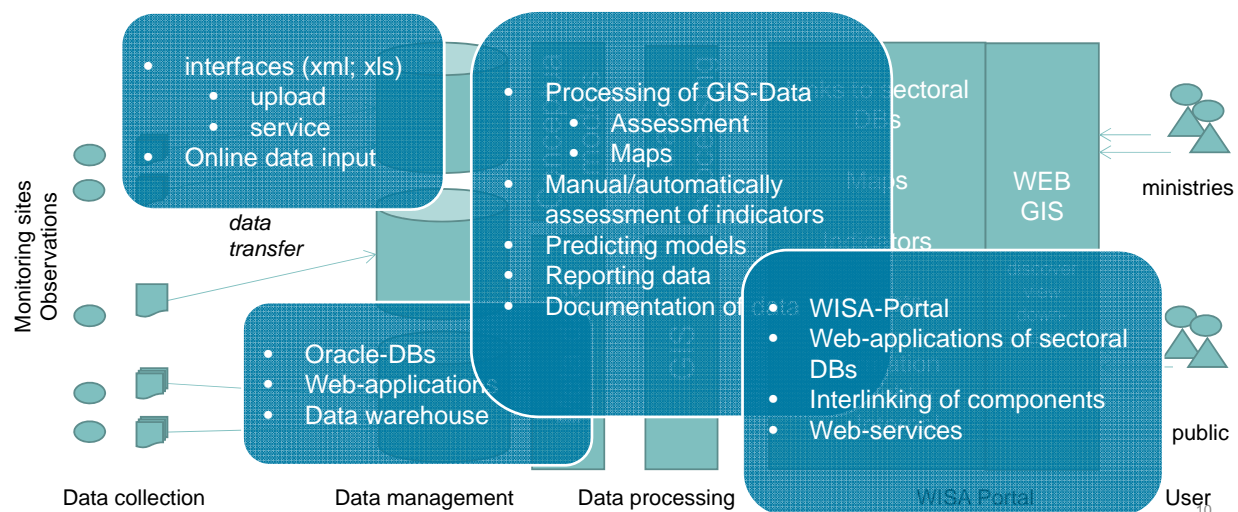
Organisation & dataflow (generalized)



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Concept of WISA



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Levels of data exchange

- European Commission (European level)
 - Water Information System Europe (WISE)
 - State of environment (SOE)
 - Compliance check
 - Revision of European water policy
- International river basin commissions
 - Bilateral and transboundary coordination
- Federal State of Austria (National level)
 - National River Basin Plan (RBMP; FRMP)
 - Water Information System Austria (WISA)
 - Reporting to EC/EEA
- 9 Provinces of Austria (Provincial level)
 - Have their own competencies according to the Water Act (data collection, permitting water rights)
 - Water information systems of the Provinces
 - Reporting to the Federal State

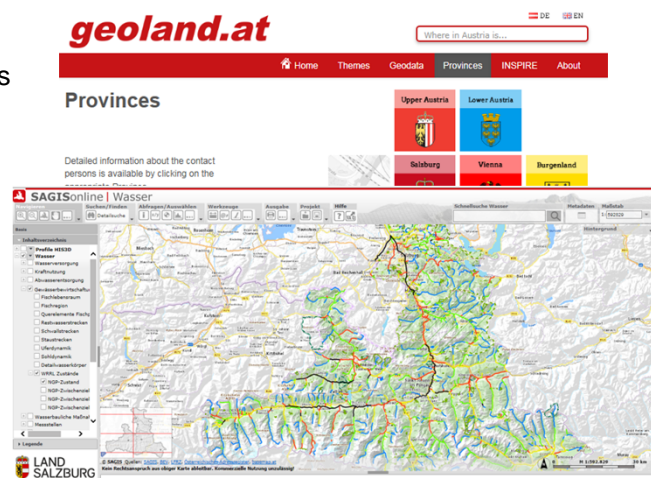


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Austrian water data management – Provincial level

- Water Information Systems of the Provinces
 - Water cadastre: permission of water rights
 - Flood risk maps
 - Water quality data (rivers, lakes, groundwater)
 - Drinking water
 - Water uses
- The systems provide information to the interested citizens and are used by the administrations

<http://www.geoland.at/index.html>



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Austrian water data management – National level

Water applications for data management and data assessment

- Water quality database (Web application & services)
- Biological Databases
 - Fish Database (Web application & services)
 - Benthos Database (Web application & services)
 - Makrophytes Database (Web application & services)
- Austrian Water Graph (GIS)
- Spatial Data Infrastructure (SDI) Water
- Floods Database (Web application & services)
- Hydrographic Yearbook
- Datawarehouse Water

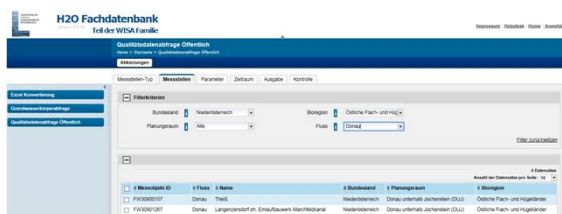
WISA – Portal for Data access and presentation

- Access to Water Applications via links
- Thematical information
- Web-GIS
 - National River Basin Management Plans
 - National Flood Risk Management Plans
 - Thematical interactive maps
- Information about Interfaces

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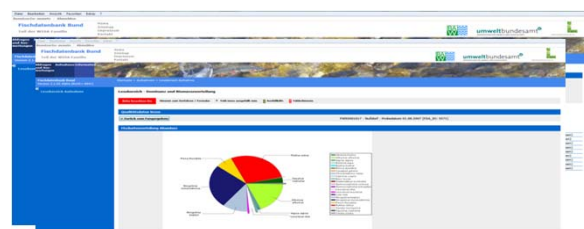
Water applications for Data Management and data assessment in WISA



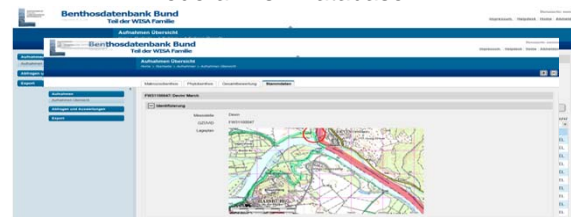
Waterquality Database



Floods Database



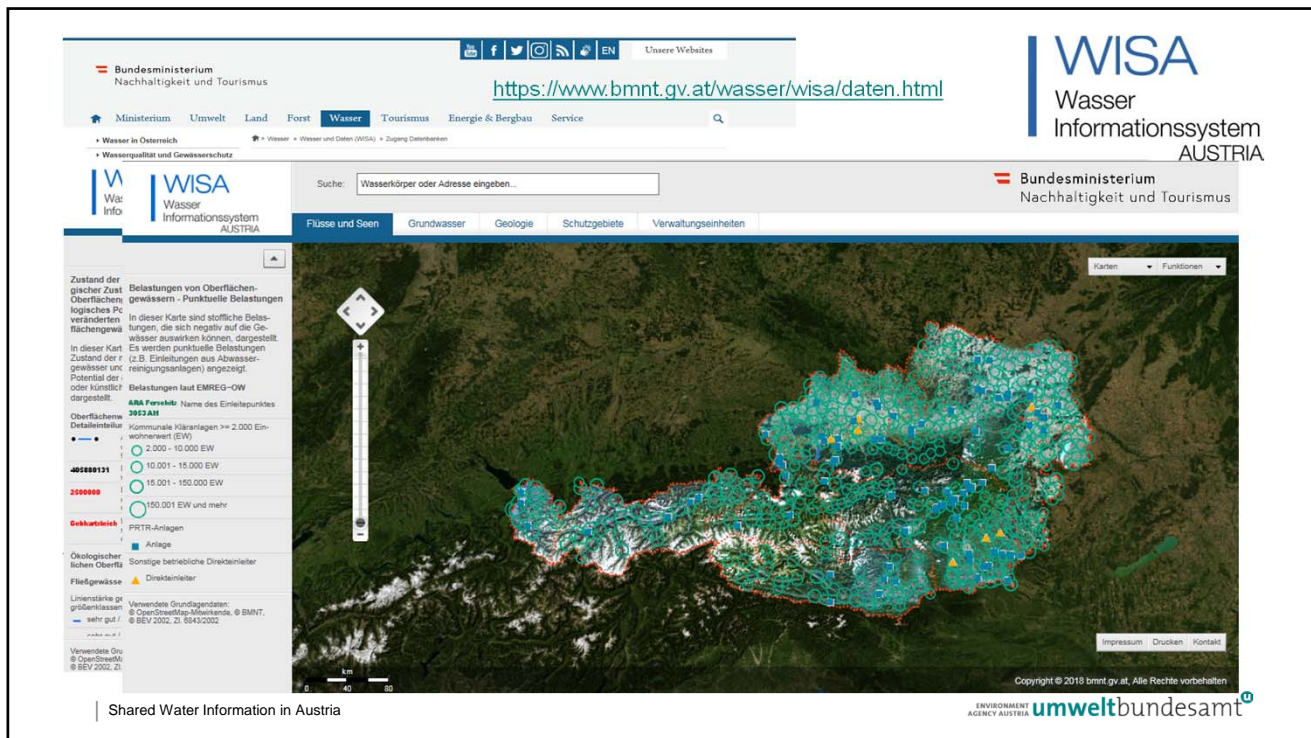
Federal Fish Database



Federal Benthos Database

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EU data reporting – European level

WISE was launched for public use as a web-based service on 22 March (World Water Day) 2007 providing a web-portal entry to water related information ranging from inland waters to marine. The web-portal is now grouped into sections for

- EU water policies (directives, implementation reports and supporting activities..)
- Data and themes (reported datasets, interactive maps, statistics, indicators,..)
- Modelling (now - and forecasting services across Europe..)
- Projects and research (inventory for links to recently completed and ongoing water related projects and research activities..)

For users from EU institutions or other environmental administrations WISE provides input to thematic assessments in the context of EU water related policies. For water professionals and scientists WISE facilitates access to reference documents and thematic data, which can be downloaded for further analyses. For the general public, WISE illustrates a wide span of water related information by visualisations on interactive maps, graphs and indicators.

WISE
WATER INFORMATION
SYSTEM FOR EUROPE



Recommendations for water data management

- Data should be collected only once and should be kept where it can be maintained most effectively
- Share the data with many users and applications
- Use the water data for different purposes (collect once and use more than once)
- Establish common interfaces – combine data from different sources - harmonisation of data
- It should be possible for information collected at one level to be shared with all levels;
 - detailed for thorough investigations, general for strategic purposes
- Interlink your information systems

SDGs in Austria

- Based on existing reporting for the European Commission, a consistent reporting for the SDG's can be established
- Additional SDG indicators are defined by Statistics Austria – supported by the Federal Ministry for Sustainability and Tourism and Environment Agency Austria
- Possibility to adapt general methods to regional conditions

Thank you for your attention!

Department Surface Waters
DI Stephan Nemetz
Tel.: +43-(0)1-31304/3570
stephan.nemetz@umweltbundesamt.at

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