EMERGING ENVIRONMENTAL ISSUES,
AUSTRIAN PERSPECTIVE

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A LOT ACHIEVED!

1. RBMP 2009-2015

Deterioration stopped

Point source pollution significantly reduced due to wastewater treatment and adaptation of industrial processes

Ecological minimum flow (basic flow)
  \(~ 200\) river stretches

Restoration of river continuity
  (ca. 1.000 migration barriers)

\(~ 250\) morphological restoration measures
SIGNIFICANT WATER MANAGEMENT ISSUES

River - Hydromorphology:
53% of rivers not in good status/potential

- Flood protection
- Hydropower production

200-years constructions can’t be removed at once

Groundwater - Pollution due to Nitrogen/Pesticides

- Highly related to areas of agricultural production; Austrian wide programmes in place

Long renewal rates of groundwaters

Migration barriers: 33,000 (1/km)
ca. 10% due to hydropower

!!! Remaining challenges beyond 2027 !!!
EMERGING CONTAMINANTS AND HAZARDOUS SUBSTANCES

Hazardous substances

- Ubiquitous substances (e.g. bad status due to Hg); no solution from water sector or Austria alone
- How to deal with new contaminants (Non-target-analysis)?

Micropollutants and pharmaceuticals

- Prioritize measures at source, as far as possible
- No Austrian-wide end of pipe solutions like 4th treatment stages in UWWTPs.

Antibiotic resistances

- Are urban wastewater treatment plants multipliers for antibiotic resistance of faecal bacteria like Escherichia coli and Enterococci spec?
- Currently not part of the monitoring programmes in rivers
Plastics/Microplastics

- Plastics should not be part of the environment;
- More **research is needed**, if and how this **marine issue** (MSFD marine litter) is also **relevant for freshwater environment**.
- Awareness raising: Austrian study on microplastics in the Danube River, 2015
- **Austrian cooperation** and information exchange with „marine countries“ in River Protection Commissions (ICPDR, ICPR, IKSE).
- **Measures at source**: Minister agreement with Chemical Industry on „Zero-pellet-loss“, ban of plastic bags
- Enforcement of common monitoring standards on EU level
CIRCULAR ECONOMY

Nutrient recovery

- Phosphorous recovery from urban wastewater or from sewage sludge
- New concept in cooperation with waste sector

Water re-use

- Important in water scarce countries but not relevant for all EU MS.
- In Austria no reuse of urban wastewater, while reuse of industrial processwater is state of the art.
- EC proposal for Regulation on minimum standards for wastewater reuse expected.
CLIMATE CHANGE - DROUGHTS

• Austria on average abundant of water, but regions with low precipitation (<500mm/a)
• Currently only 3% of available water resources used → no water scarcity
• **Droughts increasing?** Dry years **2003, 2013, 2015, 2017** (summer) with different regional and sectoral intensity of effects, 2 examples:

  **Public water supply secured**
  • In 2015 effectiveness of measures introduced after 2003 drought proofed (e.g. regional service networks; multiple resource use as basis for supply security)

  **More need for agricultural irrigation**
  • Only 5% of water uses for agricultural irrigation (special cultures: wine, fruits, vegetables)
  • Increasing need for irrigation in dry season and to avoid frost damages in blooming-period
Environment out of political focus

EC letter of intent from 13 September 2017 (Juncker/Timmermans)

- Environment not explicitly mentioned!
- Circular Economy package to boost innovation, jobs and growth, including: [...] a proposal for a Regulation on Waste Water Reuse; a revision of the Drinking Water Directive;

Trio Precidency Programme of EE, BG and AT from 2 June 2017

- One main objective: A union for jobs, growth and competitiveness
- Environmental sustainability at least mentioned

Lesson learnt: Environmental protection plays a quite subordinate role and shall support the economy ➔ Find the right arguments!
COOPERATION OF PARTNERS

Integration of measures – Cooperation of partners

• OECD Water Governance Initiative
• Trust and engagement of users and stakeholders one of the 3 pillars
• Principles on Water Governance (2015) and Indicator Framework (end 2017)

Example: More room for rivers

• In Austria highest rate of ground-sealing: 20 ha per day (= 30 soccer fields) are covered due to construction of buildings, infrastructure, …
• Loss of agricultural land, but also loss of water retention areas
• Issue of better coordination of spatial planning, floods protection and river restoration (multifunctional approach); pilot projects are in place;
Thank you for your attention!

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