Raab/Rába Basin
The second Assessment of transboundary rivers, lakes and groundwaters in Western and Central Europe

Workshop
Ministry of Rural Development

West-Transdanubian
Environmental and Water Directorate

Péter Somogyi

Budapest, February 8-10th 2011.
Topics of the presentation

Concept of presentation, scope and background of data

- main information about the Hungarian part
- source of information from RBMP or A-HU Water Committee

1. About Rába catchment - general presentation
   based on Hungarian Rába RBMP

2. Transboundary characteristics in A-HU border region
   based on A-HU Water Committee, RBMP compliance

3. Major common transboundary issues
   Rába action program
Hungarian Rába in nature close status;
significant flood in the valley;
significant flood protection tasks;
small time-gap to flood measures;
Hungarian Rába catchment
Main tributaries

Répce, Marcal floods
backing-effect of Danube
Dikes along the river
(height deficit in 32,635 km lenght)
flood reservoir

Q_{1\%} = 957 \text{ m}^3/\text{s}
Hungarian Rába catchment
Protection tasks

- Forecast, alerting, operational monitoring, giving information
- Protection of settlements (with dikes)
- Management of power plants, dams
- Management of protection structures
- Management of flood reservoirs
- Implementation of task in connection with valley flooding
- Tasks of water-damage prevention Planning and modelling
Hungarian Rába catchment
Units of River Basin Management Planning (RBMP)

Small landscapes in the sub-unit: Kőszegi mountain, Pinka plain, Rába terracing plain, Rába valley, Gyöngyös plain, Vasi Hegyhát, Vas mountain és Kőszeghegyalja, Alsó- és Felső-Kemeneshát, Upper-Őrség, Csornai plain
Hungarian Rába basin
General significant water management problems

Rivers
1. Regulation of the rivers
   • Reservoir with barrage, bed dams, bed thresholds
   • Structured channel form, longitudinal regulation, inadequate maintenance
   • Lack of proper zonation
2. Load of nutrients and organic substances
   • Municipal and illegal waste water inlet
   • Municipal landfills and livestock farms
   • Discharge from fish ponds and reservoirs
   • Diffuse pollution from agricultural and urban areas
3. Salinity and heat stress (thermal water inlet)
4. Hazardous materials (transferring effect from upper watershed)

Groundwater
1. Problems in connection with nitrate and ammonium pollution
   Diffuse pollution from agricultural and urban areas
   Affected water type by pollution: shallow groundwater
2. Other pollution
   Diffuse agricultural pesticide pollution
   Affected water type by pollution: shallow groundwater
The status of water bodies

Rivers - total 30 pcs waterbody
  2 pcs are good 19 pcs are not good out of these, 9 pcs can’t be determined because of lack of data

Lakes - there is no stagnant water body in the sub-unit (over 50 ha)

Groundwater - total 5 pcs waterbodies
  No quantitative problem, 1 pcs waterbody isn’t in good status based on chemical qualification
Hungarian Rába basin
Main groups of measures

1. Reduction of loads of nutrients and organic matters
2. Solving other pollution related problems
3. Improvement of hydromorphological status of rivers and lakes
4. Implementation of sustainable water use, improvement of quantitative status of waters
5. Ensure adequate quality of drinking water
6. Specific measures for protected areas
7. Comprehensive measures for aquatic environmental problems
# Hungarian Rába basin

## Schedule of measures in order to reach good target status

<table>
<thead>
<tr>
<th></th>
<th>Total waterbody (waterbody pcs)</th>
<th>Waterbodies affected by the measures</th>
<th>Maximum expected impact of the measures applied for water bodies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Until 2015 (waterbody pcs)</td>
<td>Until 2021 (waterbody pcs)</td>
</tr>
<tr>
<td><strong>Rivers and lakes:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rába: 30</td>
<td></td>
<td>23</td>
<td>29</td>
</tr>
<tr>
<td><strong>Groundwaters:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rába: 5</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Notes:**
- Total waterbody (waterbody pcs): 30
- Maximum expected impact of the measures applied for water bodies:
  - Until 2015 (waterbody pcs): 1
  - Until 2021 (waterbody pcs): 29
  - Until 2027 or later (waterbody pcs): 1
A-HU border region
Rabnitz/Répce cross-border river

Measures
A:    - improving morphology
HU: - forming and maintenance of water protection buffer stripe along the river,
- reduce regulation of conditions on the river and its basin,
- protecting and rehabilitation of damaged ecosystems which depend on water,
- additional water supply for flood plain and oxbows

<table>
<thead>
<tr>
<th>STATUS</th>
<th>Ecological status/ecological potential</th>
<th>Chemical status (EU regulated pollutants)</th>
<th>Total status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Répce</td>
<td>moderate</td>
<td>good</td>
<td>moderate</td>
</tr>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Répce-upper</td>
<td>poor</td>
<td>good</td>
<td>poor</td>
</tr>
<tr>
<td>H</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Waterbody name
Country
A = Austria
H = Hungary
A-H = forming the boundary
**A-HU border region**

**Güns/Gyöngyös cross-border watercourse**

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### Measures

A:  - not necessary

HU:  - forming and maintenance of water protection buffer stripe along the river,
- reduce regulation of conditions on the river and its basin,
- surveying of state of ecosystems, defining the reason of damages, making protection and maintenance plans for that system which depends on water

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### STATUS

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<tr>
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<th>Country</th>
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<th>Chemical status (EU regulated pollutants)</th>
<th>Total status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Güns_UL</td>
<td>A-H</td>
<td>good</td>
<td>good</td>
<td>good</td>
</tr>
<tr>
<td>Gyöngyös páatak</td>
<td>H</td>
<td>moderate</td>
<td>good</td>
<td>moderate</td>
</tr>
</tbody>
</table>
# A-HU border region

**Pinka, Strém cross-border rivers**

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**Measures**

**A:** - reducing the input of nutrient and organic substances

**HU:** - forming and maintenance of water protection buffer stripe along the river,
- reduce regulation of conditions on the river and its basin,
- modifying the operation of barrages,
- constructing bypass-channel for the fish,
- using a good fishing practice.

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</tr>
</thead>
<tbody>
<tr>
<td>Pinka_Burger canyon A-H</td>
<td>good</td>
<td>good</td>
<td>good</td>
</tr>
<tr>
<td>Pinka H</td>
<td>poor</td>
<td>no or less data</td>
<td>poor</td>
</tr>
<tr>
<td>Pinka Dt. Schützen A-H</td>
<td>poor</td>
<td>good</td>
<td>poor</td>
</tr>
<tr>
<td>Pinka_Bildein, Eberau A</td>
<td>poor</td>
<td>good</td>
<td>poor</td>
</tr>
<tr>
<td>Pinka_Gaas, Moschendorf A</td>
<td>poor</td>
<td>good</td>
<td>poor</td>
</tr>
<tr>
<td>Pinka_Luising A-H</td>
<td>good</td>
<td>good</td>
<td>good</td>
</tr>
<tr>
<td>Pinka_Entlastung A</td>
<td>good</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Strém border section A-H</td>
<td>moderate</td>
<td>good</td>
<td>moderate</td>
</tr>
<tr>
<td>Strém H</td>
<td>poor</td>
<td>no or less data</td>
<td>poor</td>
</tr>
</tbody>
</table>
A-HU border region
Raab/Rába, Lafnitz/Lapincs cross-border rivers

Measures
A:  - using a common program to reduce the load of nitrate
    - improving the damming zones of river
HU:  - forming and maintenance of water protection buffer stripe along the river,
    - reduce regulation of conditions on the river and its basin,
    - modifying the operation of barrages,
    - constructing bypass-channel for the fish,
    - using a good fishing practice.
    - supplying additional water for the oxbow and ecosystems which depend on water

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<thead>
<tr>
<th>Waterbody name</th>
<th>Country</th>
<th>Chemical status (EU regulated pollutants)</th>
<th>Ecological status/ ecological potentiality</th>
<th>Total status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lapincs_UL</td>
<td>A</td>
<td>good</td>
<td>good</td>
<td>good</td>
</tr>
<tr>
<td>Lapincs</td>
<td>H</td>
<td>moderate</td>
<td>good</td>
<td>moderate</td>
</tr>
<tr>
<td>Raab_Neumarkt</td>
<td>A</td>
<td>moderate</td>
<td>good</td>
<td>moderate</td>
</tr>
<tr>
<td>Raab_border section</td>
<td>A-H</td>
<td>moderate</td>
<td>good</td>
<td>moderate</td>
</tr>
<tr>
<td>Rába (from border)</td>
<td>H</td>
<td>moderate</td>
<td>not good</td>
<td>moderate</td>
</tr>
</tbody>
</table>
A-HU border region

Significant types of groundwaters

Porous shallow and deep waterbodies

Carstic waterbody (cold-warm)

No qualitative problem

Only one qualitative problem

• In the shallow porous waterbody

Porous thermal waterbody
Transboundary, significant common issues
Problems, measures

3 main water quality problems in the border region:
• River Raab was foaming because of Austrian loads
• High salt load on the Raab due to emission of the Austrian leather factories
• High salt load on Lapincs due to thermal water inlet

Handling of the problems:
• Working-out of Raab Action Programme on the agreement of the ministers (2007)

Implementation:
• Raab ad hoc Working Group (in the frame of the Austrian-Hungarian Water Committee)

Goals:
• Introduction of lower environmental limit values – done!
• Increased control of emissions and imissions – done!
• Introduction of improved cleaning in 3 leather factories – done in 2!
• Stop of thermal water inlet on Lapincs – done!
• Common plan for ecological rehabilitation of river Raab – ongoing!
Thank you for your attention!