Work Group B

How to plan current and future IWT and environmental measures in an integrated way

Helmut Habersack
Content

- Joint planning process
- Environmental Impact Assessment
- Measures
General introduction

• Development of navigation is important (10 countries, connection to the sea)
• Equally important are the ecological needs, conditions
  • Methods are essential, taking into consideration all scientific knowledge to achieve aims, e.g. new ships, sturgeons
• See navigation and ecology as equal partners
Recommendations for a new planning approach

Suggestion for work of group B
For all projects:
• Comparing Leitbild - current situation
• Early involvement of all stakeholders
• Common understanding of problems, needs, pressures and measures
• Benchmarks?
Parts of new planning approach (1)

General and esp. in specific projects:

• Integration of various themes (e.g. navigation, ecology, flood protection) in the planning phase (synergies...) from the beginning

• Include international experts viewing projects as they are developing

• Sava commission: all three themes are included
Parts of new planning approach (2)

• Participation is important, including navigation….NGOs, involve stakeholders very early (responsibility for member states and for international commissions), at different levels, be transparent in the process.

• Organisational questions: different commissions had a certain historic commitment, have now to include more than political obstacles (how to enlarge the group of partners?)
Parts of new planning approach (3)

- In the WFD implementation national measures programs and an overall program on a basin scale are developed (aiming for a good ecological status) which have to be treated in a participation process
- Also navigation has to be included
- The opportunities that WFD offers should be fully exploited for participation
Parts of new planning approach (4)

• BEFORE Environmental Impact assessment (EIA) is performed a discussion on alternatives should be done to reach integrated measures

• Agree on some harmonized procedures and criteria on evaluating possible consequences of measures (binding), EIA national and/or internationally for every project, view single measures within a basin view / framework
Parts of new planning approach (5)

• Integration of ecology and navigation should be done early, not only when the EIA is performed

• Information of all relevant projects within and across the Danube river basin countries, impacts etc, there is necessity for member states to report to the commissions, to notify…
Parts of new planning approach (6)

Criteria for projects

• Does a project interrupt migration? Sturgeons? There should be also a clarification about this, improving the knowledge; should be also done for other knowledge gaps

• Does an intervention have downstream and/or upstream impacts on water quality?

• Are non-structural measures considered?

• Have alternatives been analysed / evaluated?
Environmental impact assessment

- Early in the process (all groups should be involved from the very beginning)
- Wide range of alternatives (including boundary conditions, open discussion)
- Ev. Advisory board from internationally recognised experts
- Public participation – information e.g. via commissions, both international and national
Environmental impact assessment

- How to deal with uncertainty (before EIA)
  - If consequences are not clear / known measures should not be realised, develop knowledge asap
  - Adaptive management should be applied, including monitoring to react on uncertainty
  - Find measures that can cope best with uncertainty, start with less impacting measures
Measures

• Navigation measures – e.g. depth/width should be variables to optimize the measures (regarding safety etc.), overview where are optimal options / problem areas, where one way traffic etc. (Danube commission provides bottleneck overview before Oct. 07)

• minimum engineering intervention,

• design criteria should be inline with river sections boundary conditions
Measures

• Ecological measures - eg lateral connectivity critical areas, habitats etc. should be identified, ICPDR and NGOs will/should prepare a list (including areas which have to be protected and areas where improvement is necessary)

• Mitigation measures - see list (should be checked and reported back to ICPDR office until 15th July 2007)
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<tbody>
<tr>
<td>Minimum water depth</td>
<td>Transformation of the shipping way towards outer bank and deep water sections, low water regulation, dredging and refilling of material</td>
<td>Increase of water level at low flows</td>
<td>River channelization due to low water regulation, reduction of morphodynamics</td>
<td>Minimization of river engineering measures</td>
<td>River restoration (esp. river banks and floodplains)</td>
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<td>Minimization of lateral flow velocity</td>
<td>Improvements of the flow field at confluences with tributaries and reconnected side channels by river engineering</td>
<td>Low cross sectional flow velocities</td>
<td>Reduced morphodynamics of confluences, less cross sectional flow velocity</td>
<td>No restriction to river bank and side channel dynamics</td>
<td>Side channel reconnection and restoration of tributary confluences</td>
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<td>No sudden changes in flow field, flow velocity</td>
<td>Limitation of flow velocity changes</td>
<td>Low spatial variability of boundary conditions for navigation</td>
<td>Modified flow field compared to more natural conditions</td>
<td>Development of flow field and flow velocities towards Leitbild conditions</td>
<td>Development of river eng. measures to improve flow field variability</td>
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<td>Predictable position and geometry of navigation channel</td>
<td>Minimization of sudden sedimentation by use of groins, dredging and refilling</td>
<td>Less interruption / disturbance for navigation</td>
<td>Modified sediment transport / river morphology, habitat alteration</td>
<td>Variable water depths, flow widths, grain sizes, low lateral river bed gradients</td>
<td>Restoration measures leading to high var. of water depth, channel widths etc.</td>
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<td>No extreme trend towards river bed aggradation / degr. of the</td>
<td>E.g. groins (aggr.), dredging and refilling of material, / river bed widening, (degr.)</td>
<td>Dynamic river bed stability</td>
<td>Also a need for ecology as the pressure is not resulting from the</td>
<td>No extreme trend towards river bed aggr. / degradation of the main</td>
<td>Specific groins, dredging and refilling of material, / river bed</td>
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<td>Ecological Needs</td>
<td>Environmental Measures</td>
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<tr>
<td>Channel morphodynamics</td>
<td>Preservation or improvement of river morphology: no river bed pavement, keeping of morphodynamics, specific groin forms to improve morphodynamics, avoiding of groin fields</td>
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<td>River bank morphodynamics</td>
<td>Initiation of more nature-like river banks: river bank restoration, removal of bank protection, side erosion, declinant groins to enhance side erosion</td>
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<td>Lateral connectivity</td>
<td>Floodplain / wetland / sidearm reconnection, more water in the floodplain/alluvial area, improvement of habitats</td>
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