

Work Group B

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International
Commission
for the Protection
of the Danube River

Internationale
Kommission
zum Schutz
der Donau

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

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Joint Statement on Development of Inland Navigation and Environmental Sustainability in the Danube River Basin

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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

The logos for the International Commission for the Protection of the Danube River (ICPDR) and the Internationale Kommission zum Schutz der Donau (IKSD) are positioned in the top right corner. The ICPDR logo includes the text 'International Commission for the Protection of the Danube River' and the IKSd logo includes 'Internationale Kommission zum Schutz der Donau'. A blue curved line graphic is located below the logos.

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)

Navigation Needs	Navigation Measures	General Effects	Pressures/ Effects on Ecology	Ecological Needs	Environmental Measures
Minimum water depth	Transformation of the shipping way towards outer bank and deep water sections, low water regulation, dredging and refilling of material	Increase of water level at low flows	River channelization due to low water regulation, reduction of morphodynamics	Minimization of river engineering measures	River restoration (esp. river banks and floodplains)
Minimization of lateral flow velocity	Improvements of the flow field at confluences with tributaries and reconnected side channels by river engineering	Low cross sectional flow velocities	Reduced morphodynamics of confluences, less cross sectional flow velocity	No restriction to river bank and side channel dynamics	Side channel reconnection and restoration of tributary confluences

Navigation Needs	Navigation Measures	General Effects	Pressures/ Effects on Ecology	Ecological Needs	Environmental Measures
No sudden changes in flow field, flow velocity	Limitation of flow velocity changes	Low spatial variability of boundary conditions for navigation	Modified flow field compared to more natural conditions	Development of flow field and flow velocities towards Leitbild conditions	Development of river eng. measures to improve flow field variability
Predictable position and geometry of navigation channel	Minimization of sudden sedimentation by use of groins, dredging and refilling	Less interruption / disturbance for navigation	Modified sediment transport / river morphology, habitat alteration	Variable water depths, flow widths, grain sizes, low lateral river bed gradients	Restoration measures leading to high var. of water depth, channel widths etc.
No extreme trend towards river bed aggradation / degr. of the	E.g. groins (aggr.), dredging and refilling of material, / river bed widening, (degr.)	Dynamic river bed stability	Also a need for ecology as the pressure is not resulting from the	No extreme trend towards river bed aggr. / degradation of the main	Specific groins, dredging and refilling of material, / river bed

Ecological Needs

Environmental Measures

Channel morphodynamics

Preservation or improvement of river morphology: no river bed pavement, keeping of morphodynamics, specific groin forms to improve morphodynamics, avoiding of groin fields

River bank morphodynamics

Initiation of more nature-like river banks: river bank restoration, removal of bank protection, side erosion, declinant groins to enhance side erosion

Lateral connectivity

Floodplain / wetland / sidearm reconnection, more water in the floodplain/alluvial area, improvement of habitats