



ECCONET Final Meeting

Conclusions and Policy Recommendations

Transport & Mobility Leuven (TML)
Development Centre for Ship Technology and Transport Systems
(DST)

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Conclusions: Present situation



- Strengths of IWT:
 - Energy efficient
 - Low cost
 - Capacity to spare
 - Reliable: almost congestion-free
 - Safe
- Challenges for IWT:
 - Vulnerable to changing water level conditions
 - Limited investment capacity

Conclusions: Impacts of Climate Change on IWT



- Annual variability >> Impact of CC
- Impact of CC is greater on low WL than on high WL
- Generally moderate impact on WL in near future
 - Exceptions:
 - Low water on Upper Danube
 - High water on Middle Rhine
- Distinct negative impact on low WL for far future
- Improvement of ice conditions (Danube)

Conclusions: Network effects



- The transport volume of IWT is expected to increase by 2050
 - Rhine: +35% (t) and +49% (tkm)
 - Danube: +119% (t)
- Market share drops for Rhine, but increases for Danube
- Shift to smaller vessels (CEMT III and IV) is likely for a dry scenario
- Cost increases for far future of up to 20%

Conclusion: Adaptation Measures



- Coupled convoys are a simple and flexible way to deal with variable water levels, in the future and the present
- Cost effective vessel adaptation is possible
- Given renewal cycle of ± 50 years, preparations should start now
- If water level prediction can be realised, it is very valuable

Policy recommendations 1



- Continued observation of climate change and its impacts on IWT
- Prepare and develop adaptation measures with regard to infrastructure and prediction of water level, especially for the second half of the century
- Support adaptation and modernization of the fleet for the long-term impacts now.
- Enable waterway administrations to perform state of technology maintenance and river engineering.

Policy recommendations 2



- Strengthen permanent communication/cooperation between waterway administrations, hydrological services and vessel operators.
- Enhance the use of “Smart Waterways” and scope of information available through River Information Services (i.e. water depths on critical sectors).
- Preparation of an incentive scheme for adaptation to climate change effects on IWT.
- Strengthen research to improve innovation and ecological performance of IWT