
General statements by experts in response to the discussion paper

The Mannheim Convention (Revised Convention for Rhine Navigation) forms the supranational legal basis for the already existing good navigation status for the Rhine. The CCNR has established a legal basis for developing and maintaining a good navigation status, incl. vessel classification beyond CEMT Class IV and has established sufficient procedures. It can be assumed that the current navigation status for the Rhine exceeds the requirements for the future GNS according to EU Regulation 1315/2003.

The existing parameters for the Rhine do not contradict but are in line with those suggested in EU Regulation 1315/2003:

- Waterway profile Rhine developed by CCNR equivalent to GNS core navigability standards (= GNS “hard” components). Additional waterway parameters for Rhine developed by CCNR equivalent to GNS “soft” components.
- The procedure for laying down the conditions and requirements for structures along the Rhine are equivalent to GNS minimum standard;

There are inherent limitations (natural, economical, social) to the development of the waterway Rhine and waterways in general. For example, the availability of inland waterways in general is below 100%. Aiming for a 365 days/year availability of 2.5m draught is not realistic. It shall be noted that the CEMT classification of waterways is based on the horizontal dimensions (beam and length of the vessel), not on the vertical dimensions (draught) and does not cover standards for inland waterway infrastructure.

Develop waterways with nature, not against. Sustainability (ecologic, economic) must be at heart of GNS activities for waterway maintenance/development to be affordable and acceptable for society in the long run.

Rhine area: rivers and canals

The meeting focuses on the river Rhine, but the entire waterway area including Scheldt, Meuse and canals should be taken into account.

There is a strong need to make a distinction between types of waterways: natural rivers and canals. There are three types of waterways:

- Canals: permanent status;
- Regulated rivers;
- Free flowing rivers.

For the Rhine it needs to be highlighted, that different sections have different characteristics, for example canalized section, regulated section and the free-flowing sections. For the free-flowing sections, distinctions need to be made between different sections (Basel - Kembs, Iffezheim - Bingen, Bingen - St. Goar, St. Goar- Koblenz, Koblenz – Netherlands)

In Germany, for instance, the waterway system is made up for 75% by rivers and 25% by canals. The Dutch Rijkswaterstaat Guidelines for Waterways apply to canals, not to rivers because rivers

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are free-flowing or regulated to a certain extent, multi-functional and dynamic. They require a tailor made approach; no general rules can apply for rivers because of geography and water supply, especially water supply dictates the possibility to navigate. The same principles apply for international rivers, but these require international agreements. The CCNR provides such trans-national coordination.

Reference water levels for rivers

The CCNR ensures an agreed management of navigable channel, bridge height, fairway width and infrastructure along the Rhine:

- A sophisticated reference water level (OLR/GLW, equivalent water level) guarantees minimum standards for navigability 345 days/year in free-flowing section as stipulated in the “Waterway profile for the Rhine”. For the Rhine, the focus is on low water level as orientation for waterway management. After analysing the long term history, there are annual variations, but overall there is no hydrological deterioration, nor is there an effect from climate change observed yet. A reference low water level is therefore already established (last GLW stipulated by CCNR in 2012, will be updated in 2022);
- Minimum air clearance is provided at the highest navigable water level. Reference high water levels are already elaborated by member states for the different sections of the Rhine. Minimum bridge clearance of 7 m + X or 9.10 m required for profitable container shipping.

Most waterway parameters of GNS “hard” components are permanent (infrastructure related), but the draught of vessel depends on payload and the available water level. At present, it is economical to build vessels with higher draught while using less draught depending on dynamics in transport demand and water levels. This flexibility provides economic benefits. Moreover, the average beam and length of a vessel increased significantly in the last decades, resulting in much more payload that can be transported, also at a draught less than 2.5m. Furthermore, the sector can exploit at the same time the provided capacity at higher water levels although not available all year around.

This flexible approach proves to work well as the Rhine is Europe’s most used waterway for inland navigation in Europe. Ports of Rotterdam, Antwerp and Amsterdam, economic centres in Germany, France and Switzerland rely heavily on Rhine navigation and have been successful thanks to the efficient transport provided on the river.

Experts warn for:

- No downgrading of existing standards: 5.25m minimum height under bridges instead of required 7 m + X or 9.10 m at highest navigation water level; Moreover, 5.25 m minimum height under bridges is linked to transporting 2 layers of containers, but to achieve a competitive position for IWT compared with road and rail, at least 3 layers of containers is recommended.
- No taking into account of nature and physics of rivers: fixed required depth on 365 days per year instead of taking into account OLR/GLW systematics;
- Canal thinking: we need more river thinking (maximising and flexibility of use) than canal thinking (fixed dimensions).

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Waiting times and lock management

The objective of GNS is to use IWT better. The question is whether waiting time at locks is the proper KPI to indicate the reliability of a voyage. From discussions with users, it became clear that the key issue is to have a reliable estimated time of arrival (ETA). The waiting time at locks is just one of the elements in the calculation of the total voyage time to make individual voyages predictable and reliable. If voyage time is made more predictable, this implies communication when vessel will be locked, affecting energy consumption as well. So waiting time shifts to travel time.

Soft components shall address therefore also information technology. It may be more effective to focus on the GNS study on providing guidance on this topic rather than further elaboration of the KPI on waiting time under the hard components. A new project for the German Danube elaborates a lock planning application for the Danube considering a chain of locks. If there is much traffic, lots of parameters have to be considered by lock operators to minimise waiting time. The project aims at optimization via an algorithm considering the best overall voyage time to avoid an accumulation of waiting times. The notification of the locking time will be provided by AIS messages.

From GNS point, RIS is therefore very relevant. It was noted that the current RIS directive does provide the basic technical specifications but doesn't provide legal requirements on developing value added services such as for example lock planning, corridor traffic management or information to better integrate IWT in logistics. As a follow-up of the CORISMA project, the recently started COMEX project (funded by CEF) will enable implementation based on corridor management among waterway managers and will be useful for further alignment, so no duplication is required. The GNS guidelines shall make the references to these projects as examples of good practices.

Exemption criteria

The TEN-T regulation article on exemptions requires further legal clarification.

There are inherent limitations (natural, economic, social) to the development of the waterway Rhine, so the 2.5m over 365 days cannot be guaranteed. UNECE referred in resolution number 30 to 240 days per year availability. Developing waterway with nature, not against, enables minimum standards at reference water level. On 345 days per year minimum parameters for navigable channel are guaranteed. The CCNR manages exemptions in a rational way with least bureaucratic burden.

It was stated that administrative approval would only be useful for a limited number of sections and issues. Existing physical parameters for the Rhine like fairway depth would not require exemptions. Temporary shortcomings in maintaining guaranteed fairway parameters due to natural processes like sedimentation or erosion should not trigger a formal exemption procedure.

Instead of man-made and natural causes as yardstick for availability of infrastructure/closures of waterway, unpredictable/force majeure or predictable/manageable would be preferred criteria. It is important to distinguish between exogenous factors and factors that can be influenced by means of efforts or measures as regards waterway or traffic management to prevent or mitigate the restrictions for navigation.

The examples quoted in the consortium slides are considered by the experts as deviations rather than exemptions.

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TENtec monitoring and definition of critical sections

Experts question the relevance of monitoring every waterway section and are concerned about the feasibility to collect the required data and the involved administrative burden. More information is needed on the level of detail as regards the foreseen TENtec sectioning. According to experts, the focus should lie on the critical sections of the waterway. Critical sections vary with changing water levels. The EC could insist to obtain information on those sections that waterway managers consider critical for international voyages. This may also include waterways that have a class higher than CEMT IV, since the classification is only done on the horizontal dimensions and they may still be regarded as critical because of the (dynamic) vertical parameters (e.g. draught limitations) as well as closures of waterway sections.

Good practices

It was stated that in general the CCNR procedures and working methods can be regarded as a good practice, e.g. the experience and process on the reference values such as GIW for the Rhine and also the coordination on infrastructure works on the Rhine within CCNR.

Concerned member States and CCNR have also established procedures for coordination of lock closures on upper Rhine: Lock coordination takes place across borders with a dedicated process of coordination. Concerned member states DE-FR-CH plan annually for lock closures on the Rhine in consultation with the industry. A comprehensive plan is put together and put forward for confirmation. If confirmed, the CCNR takes note in formal procedure.

Inclusion of ecological aspects and synergies: The objectives of the WFD and the TEN-T regulation are not per se contradictory. It depends on the measures whether they are contradictory or not. The hydrological regime, river continuity and morphological regime support biological diversity. It is important that stakeholders work together in multidisciplinary approach. Stakeholders can learn from each other. In the presentation of Laura Gangi (ICPR) some specific examples are provided.

It was confirmed that the foreseen Good Practice Guideline document on GNS will be kept focussed on the key topics as presented in the slides by the consortium, mainly targeting the maintenance and management of waterways (including locks, bridges, etc.).

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