

The Central Commission for the Navigation of the Rhine (CCNR) is firmly committed to addressing environmental and climate challenges in the inland transport sector. Thanks to its intrinsic technical characteristics, inland navigation can already be considered a highly sustainable mode of freight transport: according to the European Environment Agency, inland navigation was thus in 2014 the second best performing mode of transport (after rail) in terms of greenhouse gas emissions, with an average of 50 g of CO<sub>2</sub> emitted per tonne-kilometre transported. By way of comparison, for the same year 2014, CO<sub>2</sub> emissions for maritime and road freight transport amounted respectively to 135 gCO<sub>2</sub>/tkm and 139 gCO<sub>2</sub>/tkm. The good performance of inland navigation in terms of low CO<sub>2</sub> emissions is linked both to the good average energy efficiency of ship engines and to the special capacities of inland waterway vessels : in terms of capacity, an inland waterway vessel thus corresponds on average to no fewer than 100 lorries<sup>1</sup>. Despite this good performance, further improvements in energy efficiency and fuel consumption are still needed for the sector. The CCNR supports the shared objectives/targets and concerted actions for emissions reduction and pollution control in the transport sector, that have been developed by other organisations and stakeholders. At the same time, it is working proactively to complement these common objectives with others tailored more specifically for inland navigation. The Mannheim Declaration<sup>2</sup> of 2018 and the vision for a zero-emission sector reiterated in the CCNR's latest work programme certainly best illustrate the organisation's very strong commitment, even though this same determination can also be observed in the CCNR's day-to-day work on many innovation-related topics. Like the UNECE Inland Transport Committee, the CCNR seeks to encourage innovation by ensuring in particular that legislative and regulatory activities are open/responsive to new technologies, by promoting harmonised and up-to-date regulations and by always striving to create a favourable environment for innovation.

The CCNR works on ecological sustainability to ensure that best practices in the management and reduction of greenhouse gas emissions, air pollution and waste respond to the very specific characteristics of the inland navigation sector and its infrastructure. It makes use of its age-old competence to try and ensure that such objectives are met on time and with the adoption of the best available technologies. To this end, the CCNR is also working on digitalisation and automation, two subjects of paramount importance in the current debates concerning the transport sector. It focuses its attention on the application of innovative practices and technologies to all its areas of interest: vessels, infrastructure and operational aspects of inland navigation. Two major examples of this very close interaction between innovation and CCNR's areas of expertise can be found i) in the work related to waste management in inland navigation in the framework of the CDNI convention<sup>3</sup>, as well as in the development of new digital tools to further improve professional qualifications in inland navigation<sup>4</sup>, in particular with regard to the development of operational and behavioural guidelines for achieving the most energy-efficient navigation possible. In addition, the CCNR is working on the standardisation and definition of levels of automation for inland navigation. In doing so, it is also well aware of the need to collectively seek better complementarity/integration between all modes of transport and to improve intermodal transport and logistics chains in Europe, in order to make the transport sector in general more efficient and sustainable. Inland navigation in Europe still has significant untapped capacity, which could be used for generalised transfers of traffic to more sustainable modes of transport. A greater use of inland waterway transport (IWT) as preferred mode of transport would indeed significantly reduce the exorbitant costs of road freight traffic congestion, estimated at some 70 billion EUR per year in the EU<sup>5</sup>. For all the reasons mentioned above, the CCNR wishes to continue to work together with other organisations and stakeholders to achieve the common objectives of better environmental innovation and practices in the inland waterway transport sector.

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<sup>1</sup> [http://www.inlandnavigation.eu/media/63705/IWT\\_by\\_numbers\\_2016.pdf](http://www.inlandnavigation.eu/media/63705/IWT_by_numbers_2016.pdf)

<sup>2</sup> [https://www.ccr-zkr.org/files/documents/dmannheim/Mannheimer\\_Erklaerung\\_en.pdf](https://www.ccr-zkr.org/files/documents/dmannheim/Mannheimer_Erklaerung_en.pdf)

<sup>3</sup> <https://www.cdni-iwt.org/?lang=en/ecocard/>

<sup>4</sup> E.g. collaboration of the CCNR in the PROMINENT project <http://www.prominent-iwt.eu/>

<sup>5</sup> <https://ec.europa.eu/transport/sites/transport/files/studies/internalisation-handbook-isbn-978-92-79-96917-1.pdf>