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**Economic Commission for Europe****Inland Transport Committee****Working Party on Inland Water Transport****Working Party on the Standardization of Technical  
and Safety Requirements in Inland Navigation****Sixty-fifth session**

Geneva, 19–21 June 2024

Item 7 of the provisional agenda

**Automation in Inland Navigation and Smart Shipping****Revision of the Road Map for 2020–2024 “Forging  
International Cooperation Towards an International  
Legislative Basis for Smart Shipping”****Note by the secretariat****I. Mandate**

1. This document is submitted in line with the proposed Programme Budget for 2024, part V, Regional cooperation for development, section 20, Economic Development in Europe, Programme 17, Economic Development in Europe (A/78/6 (Sect. 20), table 20.5).
2. At its sixty-fourth session, the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation (SC.3/WP.3) began discussion of the draft road map “Forging international cooperation towards an international legislative basis for automation in inland navigation” for 2025–2028 based on the annex to resolution No. 95 and asked the secretariat to finalize the draft based on the proposed modifications as a working document for its sixty-fifth session (ECE/TRANS/SC.3/128, paragraphs 61 and 62).
3. The finalized draft is contained below. SC.3/WP.3 may wish to consider it and provide further guidance to the secretariat.

**II. Road Map for 2025–2028 “Forging International  
Cooperation Towards an International Legislative Basis for  
Automation and Remote Operation in Inland Navigation”****Action 1: Introduce harmonized definitions of autonomy levels into  
documents of the Economic Commission for Europe**

4. Development of the international legislative framework for (a) automation in general and (b) automation and remote operation of vessels in inland navigation is needed for

enabling testing and use of automated and remotely operated vessels. However, this work cannot be started without harmonized definitions of autonomy levels in inland navigation. A significant step forward is the adoption of the international definition of automation levels by the Central Commission for the Navigation of the Rhine (CCNR) (Edition 2022). Based on the outcome of the ongoing work by CCNR and developments in other transport modes, the definitions should be agreed and introduced in the documents of the Economic Commission for Europe (ECE) as a resolution on this issue to ensure consistency of the terminology at the pan-European level.

## **Action 2: Review resolutions of the Working Party on Inland Water Transport, international conventions and agreements**

5. Evaluation of resolutions of the Working Party on Inland Water Transport (SC.3) should be continued to identify gaps, challenges and bottlenecks that hamper the development of automated navigation and remote operation of inland vessels, including the impact of automation on River Information Services (RIS). Work will be continued on sharing the knowledge and best practices and establishing a harmonized forward-looking approach.

6. The next step will be work on temporary derogations or amendments to the relevant provisions of the European Code for Inland Waterways and other resolutions or developing new documents, in order to enable testing of automated and remotely operated vessels.

7. Evaluation of international conventions and agreements should be continued and the most appropriate way of addressing the operation of automated and remotely operated vessels should be determined. Amendment proposals should be agreed by SC.3. Contracting Parties will be encouraged to transmit the agreed amendments according to the procedure established by the relevant international conventions and agreements.

## **Action 3: Harmonize approaches for creating a basis for the deployment of automated navigation and remote operation of inland vessels**

8. This action includes exchanging the experience and best practice and is aimed to collect and accumulate the experience gained in tests of various types of automated vessels and navigation conditions of testing zones in terms of the waterway parameters, specific infrastructure requirements including traffic signals, weather restrictions, measures to be undertaken to minimize potential risks.

9. SC.3 will continue this activity in 2025–2028.

## **Action 4: Facilitate the exchange of information relevant for automation**

10. This action includes harmonizing approaches and tools on exchanging information and data relevant for automation, that may include digitalization of certificates and documents of vessels and crews, information on pilot projects of automated and remotely operated vessels and other relevant data. Resolutions of SC.3 should be reviewed for identifying provisions which prevent the use of digitized documents or may be affected and therefore may need amendments or clarifications.

## **Action 5: Ensure data protection, cybersecurity, address the liability concerns and other relevant issues**

11. This action includes exchanging best practice in the work of governments and international organizations in introducing data protection and cybersecurity measures, including automated navigation and remote operation of inland vessels.

12. The action also includes exchanging views and experience in the work of governments, international organizations and other stakeholders on determining the responsibility and liability in automated shipping, insurance and related issues.

13. SC.3 will continue this activity in 2025–2028.

**Action 6: Evaluate the social impact of automation, harmonize manning requirements, education and training**

14. This action includes exchanging the experience of social impact of automation on the sector and views on how to prevent or minimize implications and risks. The conclusions should be reflected in ECE documents.

15. Special attention should be paid to new approaches, training and retraining programmes and courses developed and implemented by member States.

16. SC.3 will continue this activity in 2025–2028.

**Action 7: Assist governments, contribute to capacity-building and awareness-raising, organize workshops and round tables on automation in inland navigation and taking part in the United Nations Round Tables on Intelligent Transport Systems and automation of transport**

17. Implementation of automated shipping and preparations for its deployment should be included in the national capacity building support provided by the secretariat to assist member States. Dissemination of information and awareness raising on automation in inland navigation can be realized by (a) organizing workshops and round tables on automation in inland navigation in the ECE framework with the engagement of the key stakeholders and (b) through the participation and contributions of governments, river commissions, international organizations and other stakeholders to the United Nations round table discussions convened under the aegis of ECE on issues related to Intelligent Transport Systems and automation on inland transport held regularly..

18. SC.3 will continue this activity in 2025–2028.

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