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**Governance Issues and Other Matters Arising from
the United Nations Economic Commission for Europe,
the Economic and Social Council and
other United Nations bodies and Conferences****Circular Economy and Sustainable Inland Transport:
Stocktaking of the Committee's Actions and
Accomplishments****Note by the secretariat**

The high-level segment of the sixty-ninth session of the Economic Commission for Europe (ECE) was held under the theme “Promoting circular economy and the sustainable use of natural resources in the region of the Economic Commission for Europe”. Related issues have been prominent areas of the Committee’s work for many years and have yielded a rich body of instruments and knowledge products of the transport subprogramme.

This document takes stock of progress and achievements by the Committee and its Working Parties in promoting circular economy regionally and globally, in support of member States and contracting parties’ efforts to develop more circular, and therefore sustainable, transport systems and/or embrace related principles in their transport policy planning and economic practices.

I. Introduction

1. The high-level segment of the sixty-ninth session of the Economic Commission for Europe (ECE) was held under the theme “Promoting circular economy and the sustainable use of natural resources in the region of the Economic Commission for Europe”.
2. Related issues have been prominent areas of the Committee’s work for many years and have yielded a rich body of instruments and knowledge products of the transport subprogramme.
3. Through normative and policy work, and analytical and capacity-building activities, the Inland Transport Committee (ITC) contributes considerably to key aspects of the regional and global economy by creating the desired “loop” that optimizes the use of resources in a circular economy. All four pillars of the Inland Transport Committee Strategy until 2030, adopted by the Committee at its eighty-second session (ECE/TRANS/288/Add.2), include elements of the circular economy and help to accelerate the transition to sustainable inland transport.
4. The Committee during its eighty-fourth plenary session welcomed Commission-related decisions on strengthening the work of sectoral committees in the area of circular economy and invited its Working Parties to enhance and expand their work on the specific aspects of circular economy in transport, as appropriate.
5. This document takes stock of progress and achievements by the Committee and its Working Parties in promoting circular economy regionally and globally, in support of member State and contracting parties’ efforts to develop more circular, and therefore sustainable, transport systems and/or embrace related principles in their transport policy planning and economic practices.

II. ECE Transport-Related Instruments and Achievements Related to the Circular Economy

6. The table in annex I summarizes key instruments and achievements by the Committee and its subsidiary bodies supporting member States and contracting parties in their efforts to transition to a more circular economy and/or embrace related principles in their transport policy planning and economic practices. The entries in the table provide a brief description of the scope and impact of related instruments. To facilitate access to additional information, further materials are hyperlinked. For ease of reference, each tool is categorized either as legal framework, policy analysis document, or good practice guidance.

A. Inland Transport Committee

7. Recent developments at the level of ITC on circular economy covered the following categories:
 - Revised ITC Terms of reference (in force since 16 February 2022)
 - Ministerial resolution preambular and operative clauses
 - Decisions of ITC on Terms of reference of Working Parties (on circular economy)
 - Other decisions of ITC of directive nature towards its Working Parties
8. These are outlined in more detail in annex II to this document.

B. Vehicle Regulations

9. The World Forum for the Harmonization of Vehicle Regulations (WP.29) provides a regulatory framework for technological innovations of vehicles to make them safer and more environmentally sound. WP.29 activities are mainly based on three multilateral United Nations Agreements, allowing contracting parties (member countries) attending the WP.29

sessions to establish regulatory instruments concerning motor vehicles and motor vehicle equipment through UN Regulations (1958 Agreement), United Nations Global Technical Regulations UN GTRs (1998 Agreement) and UN Rules (1997 Agreement).

10. Circular economy related practices (repair, reuse, remanufacture, etc.) may require continuously addressing the “circularity” through WP.29 activities to support building trust, e.g. in replacement parts or remanufactured parts, or by developing performance requirement, supporting updates and retrofit to extend the lifetime of those automotive products, that have an obsolescence, influenced by software or low quality material and production processes.

11. At its 86th session, the Working Party on Pollution and Energy (GRPE) agreed to create a dedicated Informal Working Group (IWG) on Life Cycle Assessment (LCA) aiming to develop a globally harmonized methodology to determine the carbon footprint of vehicles over their complete life cycle, including manufacturing, use and end-of-life phases. Such globally harmonized methodology would provide a basis to increase circularity of material use in vehicle and to lower the carbon footprint of vehicles. The first meeting of the IWG on LCA took place in Japan at the end of October to decide on a leadership team and finalized Terms of References for the activities of the IWG. Intended timeline for delivery of the GRPE carbon LCA methodology is intended to be finalized in 2025. This activity is therefore not reflected in annex I.

12. In the course of 2021-2022, a joint project between the Sustainable Energy and Sustainable Transport Divisions aiming at (a) improving knowledge of Ukrainian stakeholders on existing policies and best practices supporting the circular economy in e-mobility and sustainable resource management using a nexus approach of Mobility and Resource as a Service model (M-RaaS), and (b) improving capacity to develop Ukraine’s own policy framework based on policy recommendations to progress towards a circular economy in e-mobility and sustainable resource management using a nexus approach of M-RaaS. Given the situation in Ukraine at the beginning of 2022, the project was delivered with a delay and follow-up activities have been paused.

13. The Working Party on Automated/Autonomous and Connected Vehicles (GRVA) sets a milestone related to digitalisation of vehicles involved in road transport that enable the circularity of vehicles with the adoption of UN Regulation No. 156 and “Proposal for Recommendations on uniform provisions concerning cyber security and software updates” (ECE/TRANS/WP.29/2022/60), adopted by WP.29 in June 2020. The regulation sets the requirements for vehicle manufacturers to proof the implementation of a safe process for software updates and ensuring safety performance oversight during the whole lifecycle of the vehicle to create the possibility of new functionalities in vehicles that are already in use on the market.

C. Transport of Dangerous Goods

14. Work is ongoing in the Working Party on the Transport of Dangerous Goods (WP.15) to more efficiently cover engines and propulsion systems in the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) and allow for the safe use of alternative energy sources, including biofuels and batteries. ADR provisions address the safe transport of batteries and fuel cells for recycling or disposal, including when used or damaged. During the last biennium, WP.15 also adopted new provisions to allow the use of electrified vehicles to carry certain dangerous goods. These new provisions will enter into force on 1 January 2023.

15. At the 110th session of WP.15 (8-12 November 2021), the Chair of WP.15 confirmed that the Working Party was prepared to set aside time in its work to deal with those subjects of general interest as long as they were related to its mandate. In 2022, WP.15 kept on its agenda a specific item on “Circular economy and sustainable use of natural resources” and delegations were invited to present information on the subject.

16. At its 111th session (9 to 13 May 2022), WP.15 pointed out that provisions related to the circular economy included in ADR, such as those concerning packaging, used batteries or transport of waste, were the result of the work of the Joint Meeting of the RID Committee

of Experts and the Working Party on the Transport of Dangerous Goods, including the work done to harmonize with the United Nations Recommendations on the Transport of Dangerous Goods, Model Regulations, developed under the auspices of the Economic and Social Council (ECOSOC). It was agreed that in the future, discussions on the subject should take place primarily in the Joint Meeting. As a first step and to provide basis for future discussions in the Joint Meeting, WP.15 hosted a panel discussion on circular economy from the perspective of multimodal transport of dangerous goods at its 112th session (8 to 11 November 2022). Speakers included representatives of the waste and the chemical industry and representatives of the road, railway and inland waterways sectors. The panellists and the participants recognized that the work of United Nations bodies on the transport of dangerous goods was already having an impact, direct or indirect, on the development of the circular economy and the Sustainable Development Goals and that it was now important to better identify the links between those areas. WP.15 stressed the importance of continuing to consider its work in the light of goals related to the circular economy and the sustainable use of natural resources, while reconciling those issues with expected safety objectives.

17. Likewise, for inland waterways transport of dangerous goods, the European agreement concerning the international carriage of dangerous goods by inland waterways (ADN) and the ADN Safety and Administrative Committees that administers ADN have direct influence on product and containment designs, reuse and recycling of packagings and movement of waste classified as dangerous. As for ADR, those provisions were the result of the work of the Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods.

18. In addition, the ADN Safety Committee agreed to contribute to the development of effective and measurable solutions that promote a circular economy and a sustainable use of natural resources in view of the achievement of the goals of the 2030 Agenda for Sustainable Development, as long as they were related to its mandate. Delegations were invited to present information on that subject. It was also recommended that delegates add in the justification part of their future proposals the interlinkage to circular economy and the sustainable use of natural resources, when applicable.

(Reference ECE/TRANS/WP.15/255, annex I; ECE/TRANS/256 and Add.1; ECE/TRANS/WP.15/258; ECE/TRANS/WP.15/259 and Add.1, ECE/TRANS/WP.15/260; ECE/TRANS/WP.15/AC.2/80 and ECE/TRANS/WP.15/AC.2/82; ECE/TRANS/WP.15/AC.1/166, paragraphs 47 and 48)

D. Inland Water Transport

19. The relevance of a circular economy for inland water transport and its importance for realizing the topical issues for the sector were acknowledged by the Working Party on Inland Water Transport (SC.3) in 2020 and, since then, this item is regularly addressed at sessions of SC.3. At the workshop “Circular economy in inland water transport” held at the sixty-fourth session of SC.3 in 2020 (ECE/TRANS/SC.3/213, paragraph 30), it was noted that the following activities were directly linked to the circular economy principles:

- Greening of the inland fleet, use of sustainable fuels and decarbonization
- Waste management
- Digitalization and transition to renewable energy
- Green supply chain management
- Improving of environmental performance of inland water transport
- Building up a future-proof infrastructure compatible with digital and automation developments and resilient to climate change
- Role of ports as essential elements of the circular economy.

20. At its sixty-fifth session in November 2021, SC.3 continued discussion on the circular economy principles. The participants mentioned the following recommendations that could facilitate the introduction of circular economy principles in the sector:

- Improving the waste management onboard vessels, in particular the development of an appropriate classification of waste with due regard of direct re-use and re-design of waste components that could be recycled
- Planning and organizing of navigation so as to prevent or minimize waste generation by minimizing waste-generating products and resources and facilitating the use of green and renewable energy on vessels
- Supporting the green port initiative
- Considering possibilities for sharing resources during navigation.

21. SC.3 decided to keep circular economy on the agenda of its future sessions and agreed to add this item to its revised Terms of Reference adopted by the Inland Transport Committee in February 2022 (ECE/TRANS/2022/6, annex III).

22. In 2022, SC.3 and its subsidiary body, the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation (SC.3/WP.3) addressed issues related to circular economy at the following workshops: (a) Prevention of pollution from inland waterway vessels and greening of the inland water transport sector (16 February 2022), (b) Towards a modern, sustainable and resilient E Waterway Network (29 June 2022), and (c) Innovative materials, equipment and technologies in inland water transport (13 October 2022), aimed to highlight progress by member States, best practices and initiatives for improving the ecological safety of navigation, greening of inland waterways infrastructure and introducing innovations to reduce emissions from vessels. Work will continue on investigating the existing approaches in this area and possible steps towards a wider application of circular economy in inland water transport.

E. Road Transport

23. At its 116th session in October 2021, as part of its regular agenda item on digital/smart road infrastructure, the Working Party on Road Transport (SC.1) received a presentation from Liechtenstein on managing a vehicle's life cycle with blockchain technology. SC.1 discussed the applicability of the model/approach to other countries and various aspects of transport logistics.

Annex I

Toolbox of ITC Instruments and Activities Promoting A Circular Economy and Sustainable Inland Transport

| <i>Tool/Deliverable</i> | <i>Description</i> | <i>Impact</i> | <i>Legal policy framework</i> | <i>Policy analysis</i> | <i>Good practices</i> |
|--|--|--|-------------------------------|------------------------|-----------------------|
| Subprogramme 2: Sustainable Transport | | | | | |
| UN GTR No. 22 | Regulatory activities to prescribe minimum performance requirements for durability and capacity retention of batteries fitted in electrified vehicles. | Ensure quality batteries are fitted in electrified vehicles to reduce resources needs for batteries over the lifetime of the vehicle and increase consumer trust in electric vehicles. | X | | |
| UN Regulation Nos. 101 and 154 & UN Global Technical Regulation Nos. 15 and 19 | These three regulatory instruments constitute a globally harmonized procedure to measure fuel consumption and tailpipe CO ₂ emissions from cars and vans. | Better use of finite resources and reduced pollution. | X | | |
| UN Regulation Nos. 59, 90, 92, 103, 132 and 143 | These regulations provide the basis for the type approval for replacement parts such as brake parts, silencers and catalyts. | Support repair and remanufacture. In some cases, these regulations were used to retrofit newer technologies in existing vehicles. | X | | |
| UN Regulations Nos. 108 and 109 | Regulatory activities to reduce environmental footprint and lifecycle impact of tyres for private (Regulation 108) and commercial (Regulation 109) vehicles. | Reuse of the carcass of vehicle tyres that amounts to more than 80 per cent of the whole tyre by renewing the tyre's tread and thus providing for a second (third) life of the tyre. | X | | |
| UN Regulation No. 116 | This Regulation was reviewed to introduce provisions for smart keys. | Smart keys are an enabler for car sharing. | X | | |
| UN Regulation No. 133 | Regulatory activities to reduce the environmental footprint and life-cycle impact of vehicle production and disposal. | Regulation covers one quarter of all vehicles sold globally in 2019 for which 85 per cent of the vehicle mass should be reusable/recyclable and 95 per cent reusable/recoverable. | X | | |

| <i>Tool/Deliverable</i> | <i>Description</i> | <i>Impact</i> | <i>Legal policy framework</i> | <i>Policy analysis</i> | <i>Good practices</i> |
|---|--|---|-------------------------------|------------------------|-----------------------|
| UN Regulation No. 156 | Regulatory activities dealing with the management of software versions and requirements for software updates in vehicles, including over the air software updates. | Software updates will limit the premature and aesthetic obsolescence of vehicles. Software updates are means for extending the lifetime of vehicles and supporting the rethinking of business models. | X | | |
| ECE infrastructure agreements on - international railway lines (AGC), - inland waterways (AGN), - traffic arteries (AGR), and - combined transport lines and related installations (AGTC) | The agreements harmonize key parameters for the construction and operation and in some cases maintenance and upgrade of the infrastructure for the inland transport modes, and intermodal transport. | Suitable use of infrastructure that prevents augmented wear for extended lifespan and reduced need for repair. | X | | |
| Inland waterway infrastructure agreement (AGN), Inventory of Main Standards and Parameters of the E Waterway Network, European Code for Inland Waterways, resolution No. 21, revision 2 “Prevention of pollution of inland waterways by vessels” | The agreement/resolutions promote key elements of circular economy in inland water transport. | Prevention of waste generated on vessels from polluting waterways and provisions for separate collection of waste generated onboard vessels and by reception facilities, efficient recycling and reuse. List of reception facilities that provide service on separate collection of recyclable waste. | X | | |
| Policy recommendations by the Transport, Health and Environment Pan-European Programme (THE PEP) on Mobility-as-a-Service and Urban Public Transport | Policy recommendations and studies on the sharing economy and sustainable urban transport, incl. potential green jobs in cycling, the switch to increased public transport and electrification, integrating transport into urban planning, a cycling masterplan, eco-driving guidelines, etc. | Decreased resource demands and environmental impact of urban transport. | | X | |
| Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) and by European Agreement Concerning the International | The agreement addresses the design, construction, use, reuse and repair of containment systems for dangerous goods (boxes, tanks, etc.). Transport of damaged or waste packaging that has contained dangerous goods and of dangerous articles for recycling or disposal are subject to ADR/ADN provisions. | - Transition to cleaner mobility systems with the development of provisions that allow the use of battery, electric and hybrid vehicles for the transport of dangerous goods; | X | | |

| <i>Tool/Deliverable</i> | <i>Description</i> | <i>Impact</i> | <i>Legal policy framework</i> | <i>Policy analysis</i> | <i>Good practices</i> |
|--|---|--|-------------------------------|------------------------|-----------------------|
| Carriage of Dangerous Goods by Inland Waterways (ADN) | | <ul style="list-style-type: none"> - Limitation of the production of disposable packagings and other means of containment with provisions to clean, reuse, recondition, remanufacture and repair those used for the transport of dangerous goods; - Development of provisions to regulate the use of packagings manufactured with recycled plastics materials for the transport of dangerous goods; - Provisions for the design, construction, testing and safe transport of electric storage systems such as batteries and fuel cells including provisions for their collection and transport when used or damaged, for recycling or disposal purposes; - Provisions for the transport of dangerous wastes for disposal or recycling and development and revision of provisions to address the new challenges faced by the waste management industry to further facilitate the disposal or recycling of these wastes in a circular economy pattern with the guarantee of a high level of safety during transport. | | | |
| Legal instruments which contribute to limiting food loss and waste: TIR and eTIR, ATP | TIR provides for faster, more efficient transit through borders for trucks. eTIR renders the process paperless. ATP regulates the carriage of perishable foodstuff. | Limiting food waste through the highest standards of carriage, efficient customs procedures, priority treatment of perishable foodstuffs and the use of green lanes, diminishing wait times at borders and the use of paper documents. | X | | |
| RPTC project “Improving capacity in Ukraine to support the circular economy in e-mobility and sustainable resource management using a nexus approach of Mobility and | Improved capacity in Ukraine for applying the nexus approach in transforming the e-mobility and resource sectors into an engine for sustainable development to support a circular and net-zero economy. The objective of the project will be achieved by implementing the following activities: | Improved knowledge of Ukrainian stakeholders on existing policies and best practices supporting the circular economy in e-mobility and sustainable resource management using a nexus approach of Mobility and Resource as a Service model (M-RaaS). | | X | X |

| <i>Tool/Deliverable</i> | <i>Description</i> | <i>Impact</i> | <i>Legal policy framework</i> | <i>Policy analysis</i> | <i>Good practices</i> |
|---------------------------------------|---|--|-------------------------------|------------------------|-----------------------|
| Resource as a Service model (M-RaaS)” | 1) Development of a report containing best practices and existing policy guidelines on M-RaaS 2) Online training workshop on M-RaaS 3) Development of policy recommendations for implementing the nexus approach of M-RaaS. | Improved capacity to develop Ukraine’s own policy framework based on policy recommendations to progress towards a circular economy in e-mobility and sustainable resource management using a nexus approach of M-RaaS. | | | |

Annex II

Inland Transport Committee Terms of Reference and select Decisions of relevance to the seventieth session of the United Nations Economic Commission for Europe

I. ITC Terms of Reference (endorsed by ECOSOC on 16 February 2022 (E/RES/2022/2))

(...)

(g) The Committee pursues the objective of sustainable transport development by means of promoting both the reduction of the negative impact of transport on the environment and the utilization of environmentally sound modes of transport, including the development of combined transport; (...)

(i) It [*the Committee*] acts as a centre for supporting new technologies and innovations in inland transport, by providing a platform for digitalization, automated driving and intelligent transport systems;

II. Eighty-fourth session of the Inland Transport Committee (ECE/TRANS/316)

A. Ministerial Resolution “Ushering in a decade of delivery for sustainable inland transport and sustainable development” (ECE/TRANS/316, Annex I)

[We, the ministers and other heads of delegation (...)] (...)

Praising the role of the Inland Transport Committee in promoting the sustainable transport of freight and passengers internationally, regionally and nationally, in optimizing the modal mix and in promoting public transport, environmental performance, energy efficiency and the circular economy while catalysing improvements in inland transport safety and security, as well as non-motorized transport infrastructure and efficient service provision in the transport sector,

Acknowledging the key role of the Inland Transport Committee in improving the environmental performance of motorized road transport, in supporting the energy transition in the sector, in accelerating the shift to more environmentally friendly modes of transport and in addressing the increased vulnerability of inland transport infrastructure and mobility (...)

[*Decide:*] (...)

(b) To accelerate the further development and regular updating of the legal instruments of the Inland Transport Committee in order to make the regulatory framework less fragmented and more harmonized, relevant and impactful given the fast-changing strategic landscape by fully integrating and promoting technological changes in all inland transport modes, especially in relation to intelligent transport systems, autonomous and connected vehicles, automated driving and digitalization of transport documents and procedures in international transport; (...)

(l) To leverage urgently the relevant regulatory and policy recommendation functions of the Inland Transport Committee to reduce harmful emissions and energy consumption, especially in road transport, to promote intermodality and harmonized solutions to climate issues and environmental degradation and to optimize the modal combination for the transport of passengers and goods, in order to enhance the inland

transport sector's contribution to the achievement of the goals and objectives of the United Nations Framework Convention on Climate Change and the Paris Agreement, while paying particular attention to the needs of small island developing States, the least developed countries and landlocked developing countries in achieving their sustainable low-emission transport objectives; (...)

(n) To enhance the regulatory framework for sustainable intermodal transport by promoting rail, inland waterway, intermodal and logistics legal and policy solutions with the aim of reducing the environmental impact of transport, increasing accessibility and improving efficiency;

(o) To also enhance cross-cutting activities within the framework of the legal instruments of the Inland Transport Committee and with other Economic Commission for Europe sectoral committees, to further develop deliverables supporting the circular economy, in line with decisions taken at the sixty-ninth session of the Economic Commission for Europe, and highlighted circularity as a growing overarching issue where new or revamped legal instruments would add significant value;

B. Inland Transport Committee Decisions (ECE/TRANS/316)

12. The Committee **welcomed and endorsed** the ITC Resolution on Ushering in a decade of delivery for sustainable inland transport and sustainable development (...).

16. The Committee **was also informed** by the secretariat about recent matters arising from activities of the Commission of interest to the Committee, including about:

(a) Commission-related decisions on strengthening the work of sectoral committees in the area of circular economy; and

(b) Further development of ECE-wide nexus areas, i.e. intersectoral (horizontal) coordination workstreams in ECE, as part of aligning the work of ECE to the Sustainable Development Goals.

17. The Committee **welcomed** Commission-related decisions on strengthening the work of sectoral committees in the area of circular economy and **invited** its Working Parties to enhance and expand their work on the specific aspects of circular economy in transport, as appropriate.

27. The Committee also **adopted** the revised Terms of Reference of the Working Party on Inland Water Transport (SC.3), contained in Annex III of ECE/TRANS/2022/6¹, as requested by SC.3 (ECE/TRANS/SC.3/215).

28. The Committee **approved** the establishment of a new Group of Experts on the operationalization of the e-CMR procedure for two years, as requested by SC.1 (ECE/TRANS/SC.1/416) on the basis of its Terms of Reference as contained in Annex IV of ECE/TRANS/2022/6.

47. The Committee **requested** the Secretariat, in close cooperation with the Bureau, to prepare for the next Committee session an overview of current activities in the field of information and computerization technologies and intelligent transport systems carried out by Working Parties of ITC and link it, where appropriate, with the 70th ECE central theme in 2023 which will be on "Digital and green transformations for sustainable development in the UNECE region".

¹ ECE/TRANS/2022/6, Annex III, para 5(d) refers.

III. Eighty-third session of the Inland Transport Committee (ECE/TRANS/304)

A. Ministerial resolution “Enhancing resilient inland transport connectivity in emergency situations: an urgent call for concerted action” (ECE/TRANS/304, Annex I)

[We, the ministers and other heads of delegation (...)] (...)

Considering that new technologies in the areas of digitalization, automation and intelligent transport systems may enhance the above-mentioned capabilities and contribute to global efforts for a swift and sustainable recovery, (...)

[Decide] (...)

(c) To contribute, as a response to epidemiological outbreaks, to the promotion of digital technical and technological solutions on transport, including the further digitalization of United Nations legal instruments on transport, in particular those relating to transport facilitation and paperless trade;

B. Inland Transport Committee Decisions (ECE/TRANS/304)

13. The Committee **welcomed and endorsed** the ITC Resolution on “Enhancing resilient inland transport connectivity in emergency situations: an urgent call for concerted action (...).

117. The Committee **took note** of (a) the main findings of the workshop on the Sustainable Development Goals and how they can be achieved in inland waterways, held on 12 February 2020 at the fifty-sixth session of SC.3/WP.3, (b) the outcome of the workshop Circular economy in inland water transport held at the sixty-fourth session of SC.3 and (c) the progress in automated and smart shipping on inland waterways.

119. The Committee **took note** of the progress made by SC.3 and its subsidiary bodies, **expressed its support** to the activities of the secretariat in the field of the implementation of circular economy in inland water transport and **encouraged** other Working Parties to do so.
