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White Paper on efficient and sustainable
inland water transport in Europe

# Pan-European vision for efficient and sustainable inland water transport

Note by the secretariat

#### I. Introduction

- 1. Presented below is the draft concluding Chapter IV on the Pan-European vision for efficient and sustainable inland water transport in Europe to be included in the forthcoming United Nations Economic for Europe (UNECE) White Paper on efficient and sustainable inland water transport in Europe. The draft was prepared by the secretariat in accordance with the decision of the fifty-third session of the Working Party (ECE/TRANS/SC.3/183, para. 22).
- 2. The Working Party on Inland Water Transport (SC.3) may wish to consider in particular the policy recommendations proposed in the present draft and provide further guidance on the finalization of the UNECE White Paper. In doing so, the Working Party may wish to take into account draft Chapter I on the current state of the European network of inland waterways of international importance (ECE/TRANS/SC.3/2010/2) and draft Chapters II and III on the institutional framework of inland navigation and regulatory architecture for inland navigation (ECE/TRANS/SC.3/2010/3).

## II. Potential and challenges of inland water transport in the UNECE region

3. In 1996, the UNECE White Paper on Trends in and Development of Inland Navigation and its Infrastructure (hereafter, the 1996 UNECE White Paper) highlighted the advantages of inland water transport (IWT) in comparison with other modes of inland

transport, identified a number of IWT shortcomings and put forward several policy recommendations to further utilize its potential.

4. Using the 1996 UNECE White Paper as a benchmark and based on the analysis provided in draft Chapters I to III (ECE/TRANS/SC.3/2010/2 and ECE/TRANS/SC.3/2010/3), this concluding chapter of the draft UNECE White Paper reviews the potential and challenges for IWT development and offers six policy recommendations that could be part of a pan-European vision towards efficient and sustainable inland water transport.

#### A. Inland Water Transport: Safe, Reliable, Efficient and Environmentfriendly Transport Mode

- 5. The 1996 White Paper highlighted the advantages of IWT in comparison with other modes of inland transport, pointing out that:
  - Inland navigation is the most economical inland transport mode in respect of uncovered external and infrastructural costs;
  - Inland navigation is friendly to the environment and contributes to the improvement of quality of life;
  - Inland navigation is safe.
- 6. More recent analyses confirm these major advantages in terms of safety, costefficiency and sustainability. These studies also emphasize that the traditional shortcomings
  of IWT, in particular, its limited reliability due to weather and hydrological conditions, are
  mitigated by the growing congestion challenges faced by other modes of transport. Indeed,
  while "all other hinterland transport infrastructures are running close to full capacity in and
  around seaports across Europe, the waterways still have potential for further growth".
  Recently, the NAIADES programme of the European Union (EU) advanced ten reasons to
  use IWT, including: safety, lowest environmental costs, time reliability, lower
  infrastructure costs, high carrying capacity, high potential for intermodal networking, large
  amount of available capacity, suitability for transporting abnormal loads, possibilities for
  tailor-made transportation and efficient information and communications technology with
  the implementation of river information services.
- 7. Taking account recent research and operating requirements, the advantages of freight transport on inland waterways can be summarized as follows:

Superior safety	IWT operates away from populations and traffic. It is more than 50 times safer than road, more than 5 times safer than rail (in persons killed per tonne-km).
High versatility	IWT offers tailor-made services suitable for dry/liquid bulky, heavy and dangerous goods, containers and roll on/roll off services.

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See reports from Inland Navigation Europe (INE), from the European Framework for Inland Navigation (EFIN) Group and the report on the prospects of inland navigation within the enlarged Europe (PINE).

<sup>&</sup>lt;sup>2</sup> EU/CCNR, "Inland Navigation in Europe: Market Observation", 2008–1, Special Report: Barge transport in Europe: status quo and new perspectives, page 6.

Good reliability	Few unpredictable traffic constraints due to accidents, ice, floods and low waters in Western and South-Eastern Europe.
Low costs	Considerably cheaper than road and rail main haul services (by 30 per cent to 60 per cent, depending on cargo and distance).
High energy- efficiency	For most bulk transport operations, 3–6 times less fuel consumption than road and up to 2 times less than rail.
Good carbon footprint	For most bulk transport operations, 3–6 times less CO <sup>2</sup> emissions than road and up to 2 times less than rail.
Low noise levels	Little noise emissions, mostly away from major populations.
Low infrastructure costs	Low investment and maintenance costs.
Supply chains and logistics	Low cost buffer stock and storage capability.
Good transport supervision	Effective tracking and tracing of vessels and cargo by using river information services (RIS).
No traffic restrictions	Few night, weekend and holiday traffic restrictions.
Dedicated transport network	Little interference with passenger traffic.
Untapped spare capacity	20-100 per cent short-term spare capacity on major corridors.

8. It is hence increasingly recognized that IWT represents a safe, reliable, efficient and environment-friendly mode of transport. As shown in Chapter I,<sup>3</sup> IWT offers still very considerable capacities for freight transport on major European transport corridors. The next section reviews progress in IWT development and identifies the remaining and new challenges in this area.

## B. Assessing (more than) a Decade of Inland Water Transport Policies (1996–2010)

- 9. The 1996 UNECE White Paper observed that "From being one of the very first modes of transport in human history, inland navigation now plays a comparatively modest role in total inland transport performance in European UNECE member countries". Analyzing the barriers to IWT development, the White Paper stressed the negative impact of several factors, including the limited geographic extension of IWT, need for a higher degree of organization of the production/transport chain, slowness and lower reliability than that of other inland modes.
- 10. The UNECE White Paper also noted that there were however good reasons to believe that IWT, similarly to rail transport, has prospects for further development on the European continent, as "the over-proportioned growth of road transport [would give] rise to concern of both the public at large and Governments with regard to negative aspects

<sup>&</sup>lt;sup>3</sup> See ECE/TRANS/SC.3/2010/2, pp. 3–8.

concerning the environment, safety, congestion, etc." In order to utilize the potential of IWT, the 1996 UNECE White Paper contained recommendations to:

- Develop a pan-European network of inland waterways and ports of international importance,
- · Encourage modern methods of navigation,
- Eliminate administrative, technical and legal barriers for navigation by inland waterways of international importance,
- Develop the main principles governing navigation on the network of European inland waterways of international importance and harmonize provisions relating to the access to the international inland navigation market, and
- Promote transport by inland waterways through the use of economic instruments, such as incentives and taxation, and taking into account external costs of the various modes of transport.<sup>4</sup>
- 11. As pointed out in the previous chapters of the present draft of the new UNECE White Paper, considerable progress has been achieved in most of these fields.
- 12. First of all, a consistent and comprehensive pan-European network of inland waterways and ports of international importance is now codified in the European Agreement on Main Inland Waterways of International Importance (AGN). The AGN identifies the current status of the pan-European inland waterway network and facilitates harmonized and coordinated planning of infrastructure projects. Chapter I illustrates and analyses the progress achieved until today.
- 13. Second, as described in Chapter III, use of state-of-the art methods of navigation have become possible through new technical requirements of inland vessels and modern port infrastructures, including the introduction of river information services, which increase safety, reliability and transparency and competitiveness of navigation, especially for the transport of dangerous, heavy and bulky goods.
- 14. Third, the elimination of administrative, technical and legal barriers for inland navigation is also an area where important efforts have been made at national and international levels. In 2005, the UNECE "Inventory of existing legislative obstacles that hamper the establishment of a harmonized and competitive pan-European inland navigation market, and proposals for solutions to overcome them" identified a series of obstacles of legal nature and suggested ways to resolve them.<sup>5</sup> More recently, a detailed Study on Administrative and Regulatory Barriers in the Field of Inland Waterway Transport, carried out for the European Commission, identified around 180 regulatory and administrative obstacles faced by shippers, skippers and barge operators and proposed general directions for solutions. The follow-up to this study will be carried out under the auspices of the PLATINA platform and most of the possible solutions might require joint action of the European Union, River Commissions and UNECE.
- 15. Fourth, as shown in the chapter on the regulatory framework for inland navigation,<sup>6</sup> while there is no single comprehensive institutional and regulatory framework applicable to all E waterways listed in the AGN Agreement, progress has been made towards harmonized pan-European rules for the transport of dangerous goods and in the field of civil liability for the carriage of goods by inland waterways.

<sup>&</sup>lt;sup>4</sup> The 1996 *UNECE White Paper*, pp. 38–40.

<sup>&</sup>lt;sup>5</sup> See ECE/TRANS/SC.3/2005/1.

<sup>&</sup>lt;sup>6</sup> See ECE/TRANS/SC.3/2010/3, pp. 23–68.

- 16. Finally, the issue of promoting transport by inland waterways using economic instruments, such as incentives and taxation taking account of external costs of the various modes of transport, has been addressed in the 2006 Bucharest Ministerial declaration. Transport Ministers considered that in case of establishment of a framework for infrastructure charging and internalization of external costs, such a framework should be applied to all modes on an equal basis allowing a level playing field between transport modes. Also the consequences for traffic flows on inland waterways should be carefully considered in this respect.
- 17. At the same time, while progress has been made in the above areas, IWT still has a lot of spare capacity and a rather modest market share in the UNECE region, apart from the transport corridors along the Rhine. As a result, most of the policy recommendations in the 1996 UNECE White Paper, agreed upon more than a decade ago, are still valid and applicable today.
- 18. Indeed, considerable challenges remain to be addressed by the IWT industry, governments and international organisations, as testified in the latest Ministerial declarations and dedicated studies carried out by experts and policy makers.<sup>7</sup>
- 19. The importance of a harmonized policy and legal framework for the development of IWT at the pan-European level has been underlined repeatedly. At the 2006 Pan-European Conference on Inland Water Transport in Bucharest, Transport Ministers emphasized that "challenges for pan-European inland waterway transport are closely interrelated and need to be structurally considered as a whole by all States engaged or interested in inland navigation whether they are a member of the European Union or not". The 2004 Report on the European Framework for Inland Navigation (EFIN) identified several structural problems in the development of the IWT<sup>8</sup> and argued that these challenges could only be addressed at the pan-European level and, ideally, by a specialized organization. The report on the Prospects of inland navigation within an enlarged Europe (PINE report), also released in 2004, elaborated detailed recommendations in the fields of legislation, infrastructure, ports, information systems, human resources, fleet, market sector and image of IWT and allocated specific roles to the United Nations, the EU, States, River Commissions, professional organizations and national, regional and local administrations.
- 20. Pan-European policies and actions appear to be of particular importance and impact in the following areas:
- (a) Infrastructure development: Chapter I highlighted the new dynamic in UNECE member countries in favour of integrated inland waterway networks embodied in the AGN Agreement. This new dynamic is confirmed by major investment programmes. These efforts remain however modest in relation to the potential capacity of the network. During 1995–2005 investments in transport infrastructure throughout the 15 EU countries amounted to €800 billion, of which 64 per cent forroads, 32 per cent for rail, 3 per cent for ports and only 1.4 per cent for inland waterways. Studies have shown that the increase in IWT and its modal share has been achieved despite inadequate characteristics of the infrastructure. They suggest that a small transfer of available investment funding in favour of inland waterways to address these infrastructure bottlenecks could produce a overproportionate impact on modal split. The challenge is to obtain these results on a pan-

<sup>&</sup>lt;sup>7</sup> See ECE/TRANS/SC.3/2010/3, pp.20–67.

Notably, stagnating investments in inland navigation, increasing constraints linked to the environmental protection, loss of the sector's attractiveness in the eyes of qualified workers and decline of administrative supervision of inland navigation by ministries and operational services in most countries.

European basis and not just in those countries where transport policies have already evolved in this direction.

- (b) Modernization of the fleet: This is also a major objective, particularly for liquid petroleum and other dangerous cargoes, but also in order to allow more efficient container transport and that of other specialized cargo, along with harmonized safety and technical requirements and commonly accepted rules on the size of inland vessels' crews. There is also an increasing need to improve the environmental performance of inland vessels.
- Market requirements: Transport demand increasingly requires efficient intermodal transhipment terminals to allow seamless road - rail - inland water transport chains. While road and rail transport infrastructures, particularly along major European North-South corridors are increasingly congested, inland water transport still offers untapped capacities in the order of 20 to 100 per cent in many UNECE countries, 24 hours a day, 7 days a week. However, adequate capacity on inland waterways alone is not sufficient to increase its market share and modal split vis-à-vis road and rail transport. In order to capture and stay in growth markets and market niches, such as for biomass, containers, bulky and heavy goods or for waste and recycling materials, the inland water transport industry needs to comply with the increasingly sophisticated needs and requirements of supply chain and distribution managers and must better integrate into seamless door-to-door transport chains, including efficient transhipment operations and terminal hauls. To achieve this double objective of conquering new markets and better integration in intermodal transport and logistic chains, it is of paramount importance to better link IWT with the maritime shipping. Particular challenge relates to reducing the waiting time for loading/unloading goods from inland vessels in the sea ports.<sup>9</sup>
- (d) Labour market challenges: Adequate transport and logistics policies are needed to improve the attractiveness of the profession and intensify continuous training of staff. IWT operators constantly modernize and enlarge boats, develop new transhipment techniques, set up regular container transport lines and make greater use of information technologies to ensure perfect traceability of goods for their customers, etc. In the past decade a marked shift has been in this direction, with barge operators becoming increasingly transport organizers, providing value-added or door-to-door-transport services for complete logistical supply and distribution chains. This however requires skilled human resources and harmonized training standards that are available and applicable on all inland waterways in the pan-European region. Some UNECE member countries struggle with a shortage of skilled personnel which hampers growth where it is most needed. Efforts are made to impart training to younger generations, yet this move has to date been insufficient to counterbalance retirements. Besides, living on board small crafts is not attractive for young couples and a change in boatmen' way of life is required. Accompanying and supporting such change will be one of the challenges of the profession and of State policies.

For example, fast and reliable treatment of barges in seaports (e.g. through dedicated barge terminals) is essential for increasing the role of barge transport in the container traffic. EC/CCNR, Market observation for inland navigation in Europe, 2008-1, "Barge transport in Europe: status quo and new perspectives", page 17.

<sup>&</sup>lt;sup>10</sup> Recent studies of the IWT labour market in the EU, for instance, showed that the current technical developments in terms of larger vessels and investments in vessels with new capacity, as well as the likely increase in transport volume in the long-term, will require additional personnel in all areas covered by inland navigation. At the same time, due to the age structure of the current IWT workforce, a large chunk of the labour force is expected to leave the sector over the next ten to twenty years. (EC/ CCNR, Market observation | for inland navigation in Europe, 2009-1, "Thematic Report: Inland Navigation Labour Market", page 8).

Furthermore, while using the foreign workforce is one of the solutions for the labour shortage on the market which is increasingly used in many UNECE countries, this practice creates an additional challenge for maintaining the attractiveness of the sector by providing an opportunity to undermine the social protection of the skilled workforce.

- (e) Climate change: Global warming and carbon emissions have become a key issue for the future of IWT in Europe. First, because IWT can be one of the solutions towards reducing the carbon footprint of the transport sector through a modal shifts from road transport, wherever possible. However, in order to maintain this competitive edge, efforts are required to ensure that the continuing reduction of CO<sup>2</sup>/t-km (CO<sup>2</sup> intensity) in road transport is paralleled by similar progress in IWT. Second, the disappearance of Alpine glaciers leaves major European rivers, such as the Rhine and Danube at the mercy of dry spells and there is a possibility that IWT will be badly impacted by large variations and a reduction of available water depths.
- (f) Enhancing the institutional and regulatory regime: Chapter II highlighted the multi-layered institutional landscape in the ECE region and analyzed the underlying different legal regimes for inland navigation. While no substantial changes to the institutional landscape of inland navigation in the region are foreseen, permanent and inclusive consultation and coordination mechanisms are essential to enable Governments and others stakeholders to coordinate their policies and regulations and to further harmonize still disparate rules and legal regimes.

## III. Towards efficient and sustainable inland water transport in the ECE region

- 21. As in 1996, the present UNECE White Paper identifies and describes a number of policy recommendations that could be part of a pan-European vision for efficient and sustainable inland water transport.
- 22. These recommendations are based on recent studies and policy declarations, such as the Ministerial Declaration adopted by the 2006 Bucharest Pan-European Conference on Inland Waterway Transport (and the follow-up Resolution No. 258 of the UNECE Inland Transport Committee adopted on 7 February 2007, hereafter, ITC Resolution No. 258), as well consultations with the European Commission, River Commissions and competent international and regional organizations.
- 23. The recommendations focus on the six priority areas identified in the previous section, e.g.:
  - (a) Infrastructure development;
  - (b) Fleet modernization;
  - (c) Market requirements;
  - (d) Labour market challenges;
  - (e) Climate change;
  - (f) Institutional and regulatory issues.

#### Policy Recommendation No. 1

### Make full use of pan-European mechanisms to coordinate the development of the E waterway network

- 24. The AGN Agreement provides a strategic tool and coordinated international plan for the development and construction of a network of inland waterways of international importance (E waterway network) which Contracting States intend to undertake as part of national programmes. Administration of the AGN Agreement includes the collection of information about actual and planned parameters of European inland waterways as well as important bottlenecks and missing links. The maintenance of a coherent and comprehensive E waterway network requires that all national, regional and EU infrastructure development plans are duly reflected in the technical annexes to the AGN Agreement with a focus on missing links and strategic bottlenecks that currently hinder the development of IWT operations at the pan-European level.
- 25. Based on the analysis in Chapter I, there exist a number of possible priority projects that could be further reviewed in this respect, such as:
  - Construction of the Seine–Nord Europe Canal and associated activities under the overall Seine–Scheldt TEN–T programme (EU TEN–T priority project 30);
  - Deepening of the Danube Straubing-Vilshofen (EU TEN-T priority project 18);
  - Elbe low-head weir and locks between Děčín and the German border as well as construction of a new lock at Prělouč;
  - Doubling of locks on the Volga–Don canal and other investments planned on routes E 50 and E 90 through the Russian Federation;
  - Improvement of navigability of the free-flowing navigable rivers in Poland and upgrading of the Oder-Vistula waterway as far as technically and environmentally feasible to enhance the value of investments in the Havel-Oder Waterway east of Berlin;
  - Improvement of navigability of the Sava River and other navigable tributaries of the Danube in order to enable these branches to effectively "feed" traffic to the main artery Danube in the way that the Moselle, Main, Neckar provide traffic to the Rhine.
- 26. Of particular importance in the development of the AGN network is the connection between short-sea shipping and the inland waterways. Future infrastructure projects need to address the basic and strategic bottlenecks, missing links and the lack of transhipment infrastructure facilities to provide for seamless transport operations in this field.
- 27. In order to prepare and review freight transport scenarios at the pan-European level and to evaluate potential demand and supply in IWT on the AGN network, ad hoc committees, expert groups or round tables could be convened, as appropriate. <sup>12</sup> Such work could be undertaken by experts from representative groups of UNECE member countries,

This information is regularly published by the UNECE in its Inventory of Main Standards and Parameters of the E Waterway Network ("Blue Book") and the Inventory of most important bottlenecks and missing links in the E Waterway Network (Resolution No. 49),

For instance, the ITC Resolution No. 258 envisaged the economic studies of the Danube–Oder–Elbe Connection and the Dnieper–Vistula–Oder Waterway connection.

including the European Commission, River Commissions and other concerned intergovernmental and non-governmental organizations.

#### **Proposed UNECE actions:**

- (a) Invite the following UNECE member countries that have not yet done so to ratify the AGN Agreement: Belgium, France, Germany and Poland.
- (b) Further strengthen the monitoring mechanism to review and update the development of the AGN network, its inland navigation ports of international importance as well as applicable technical and operational parameters. In particular, strengthen the UNECE work on the maintenance of its Inventory of Main Standards and Parameters of the E Waterway Network ("Blue Book") and the Inventory of most important bottlenecks and missing links in the E Waterway Network (Resolution No. 49) by coordinating this work with relevant IWT infrastructure related programmes, such as the Trans-European Transport Network (TEN-T) of the European Union;
- (c) Invite SC.3 to provide a forum, as appropriate, for ad hoc committees, expert groups or round tables to further coordinate the development of the E waterway network. Invite UNECE countries to support this work by nominating ad hoc or permanent national experts to take part in such work.

#### Policy Recommendation No. 2

#### Coordinate and support measures to modernize the inland water fleet at the pan-European level

- 28. As shown in Chapter I, there is a particular need to modernize the inland water fleet on inland waterways in the Danube basin and on the Eastern interconnected network. Modernization requirements arise generally for reasons of newly emerging technologies, such as river information systems, efficiency and sustainability of IWT as well as regulatory action by UNECE member States and River Commissions.
- 29. The current work of the EU (under its NAIADES programme), UNECE and the River Commissions in this field needs to be continued and, if possible, intensified. The pan-European dialogue on harmonization of technical requirements for inland vessels is crucial and innovative solutions should be explored. In particular, the models for joint working groups, such as the EU/ Central Commission for the Navigation of the Rhine (CCNR) joint working group on technical prescriptions for inland vessels and the UNECE/CCNR joint working group on the transport of dangerous goods could be used and extended in terms of substance and geographic coverage to involve all stakeholders at the pan-European level.
- 30. Particular support should be provided to further developing and implementing river information services which play a crucial role in ensuring safety and reliability of inland navigation. Moreover, there is a strong need to address the question of the financial burden of fleet modernization, as the lack of capital represents a serious handicap for modernization and environmental improvement of the inland fleet.

#### **Proposed UNECE actions:**

(a) Strengthen the UNECE work on maintaining pan-Europeans norms on technical requirements to inland vessels, taking due account and contributing, to the extent possible, to the work of the EU/CCNR joint working group on technical prescriptions for inland vessels;

- (b) Promote the EU and River Commissions studies on the European inland fleet and consider Europe-wide specific studies on fleet modernization and enhancing of its efficiency;
- (c) Support the current efforts within the EU to set up an international hull data base that, in order to effective, requires inclusion and maintenance of data of non EU-inland vessels and invite the UNECE secretariat to play a constructive role in the establishment of such a system as of 2012;
- (d) Support a pan-European dialogue on the implementation and further development of river information services.

#### Policy Recommendation No. 3

#### Respond effectively to new market requirements

- 31. The boom in container traffic on the Rhine shows that inland waterways could play an important role in the transport of high-value manufactured goods and could thus contribute to a reduction of congestion on major European transport corridors. Europe's network of inland waterways links the maritime ports with virtually all of its economic centres. This should provide ample opportunities for cost-effective and sustainable IWT hinterland transport solutions to inland hubs as part of global and regional supply chains that reduce the need for precious port space as well as costly investments in new road and rail transport infrastructures in port hinterlands.
- 32. Governments have an important role to make this happen. Logistical processes optimized by the private sectors do not necessarily constitute optimal solutions for the society and economy as a whole. Apart from planning and providing adequate infrastructures, Governments have to develop and supervise the institutional framework as well as the rules of the game to ensure a level playing field between all modes of transport. This also includes the relationship between inland water and maritime transport. Governments also have to safeguard that freight transport does not interfere overly with passenger mobility and is in line with economic, social, environmental and spatial policies, rules and regulations applicable at local, national and regional levels.

#### Proposed UNECE action:

- (a) Continue raising awareness of the IWT advantages in comparison with other modes of transport at the occasion of high-level policy events, such as the annual sessions of the UNECE Inland Transport Committee;
- (b) Improve cooperation between IWT, rail and road operators through joint meetings and other activities of the UNECE Working Party on Inland Water Transport with those of other UNECE bodies and organs dealing with road, rail and intermodal transport and logistics;
- (c) Support all initiatives aiming to improve the role of IWT as an efficient intermediary between hinterland and sea ports;
- (d) Promote the dissemination of best practices and "success stories" to enhance IWT competitiveness in the UNECE member countries and beyond.

#### Policy Recommendation No. 4

#### Address the labour market challenge at the pan-European level

- 33. It is crucial to follow-up on the 2006 Bucharest Ministerial Declaration, which called for facilitating the free movement of crew members Europe-wide as well as the mutual recognition of boatmasters' licenses. In this declaration, Ministers also stressed the importance of specific knowledge and experience needed for navigation on certain river stretches, the harmonization of job descriptions and the need for creation of a European network that facilitates the exchanges on national educational programmes and vocational training.
- 34. As shown in Chapter III, UNECE as well as the EU and the River Commissions address these issues. As a result, important achievements have been reached in this field in the past decade. The River Commissions have in particular intensified their work on the mutual recognition of the boatmasters' certificates and other crew documents and have made progress in facilitating the circulation of crew members. Specific working time arrangements for the IWT sector, job profiles, the manning requirements, improvement of the on-board working and living conditions, as well as social dumping and unfair competition is currently under consideration under the framework of the EU European Sectoral Social Dialogue. The jobs and skills component of the EU NAIADES programme seeks to make IWT more attractive to the workforce and increase investments in human capital. However, further efforts at the pan-European level are required to cope with the predicted shortage of skill labour in IWT and to identify remaining obstacles and devise strategies for their resolve.

#### **Proposed UNECE actions:**

- (a) Support and promote the ongoing work carried out by the EU and River Commissions to address labour market challenges and strengthen the image of IWT, with the particular emphasis on social, economic and safety implications of the current labour practices, such as the use of the foreign workforce;
- (b) Continue work on the harmonization of requirements for issuances of certificates for boatmaters and crew members, as well as the manning requirements for inland vessels based on relevant SC.3 resolutions and consider the establishment of a pan-European legal regime in these areas;
- (c) Monitor and support the process of opening up national inland waterways of some UNECE countries, particularly the Russian Federation and the Ukraine, to vessels flying foreign flags and support all activities of these countries to promote and implement Pan-European rules of navigation on their waterways.

#### Policy Recommendation No. 5

#### Tackle environmental challenges and the carbon footprint

35. The environmental aspect of the inland navigation needs to be vigorously addressed at the pan-European level. In this area, building on the work of the River Commissions for navigation and environment of the Danube, the Rhine and the Sava, pan-European guidelines, recommendations or standard procedures to measure the environmental impact of IWT should be developed and could possibly be enshrined at a later stage into existing international agreements.

- 36. Moreover, the results of regional studies and meetings on the impact of climate change on IWT infrastructure, such as the studies and conferences organized by CCNR, should be widely disseminated.
- 37. Finally, the short and long-term consequences of national, regional or EU environmental legislation should be analyzed well in advance to evaluate its impact on IWT and to allow the sector to keep its competitive edge as an environmentally-friendly mode of transport. Dialogue and cooperation between national and regional navigation authorities and the river protections commissions should be strengthened to identify possibilities for joint studies and other actions.

#### **Proposed UNECE actions:**

- (a) Encourage active participation of UNECE member countries in the global United Nations Development Account project "Facilitating Climate Change Mitigation in Transport through Addressing its Energy–Environment Linkage", making use of the expertize available in UNECE member countries, River Commissions, inter-governmental and non-governmental organizations;
- (b) Maintain a register of pertinent studies and events in cooperation with the EU, River Commissions, river protection commissions and other international competent bodies;
- (c) Continue to support the activities of UNECE and the River Commissions in waste management, reduction of pollution by inland vessels and other environment related issues.

#### Policy Recommendation No. 6

#### Reinforce the institutional and regulatory framework at pan-European level

- 38. As illustrated in Chapter II and, despite what may be perceived as a complex institutional framework and regulatory architecture governing IWT in Europe, significant progress has been made in the harmonization and simplification of the European regulatory regime for inland navigation.
- 39. In particular, since the publication of the 1996 UNECE White Paper, pan-European rules for the transport of dangerous goods and civil liability in inland water transport operations have been established. Good communication and cooperation between the existing institutions and its international expert groups, working under the auspices of the United Nations, EU, River Commissions and regional and national administrations, have been key factors in this fruitful progress towards an unified and transparent regime for inland navigation in the ECE region.
- 40. Building on these experiences, continuing efforts are required to further harmonize or unify rules and regulations, streamline procedures and establish mechanisms that allow an efficient maintenance and updating of the regulatory framework governing IWT at the pan-European level in line with market requirements, safety and environmental considerations.
- 41. Several models could be used as examples and best practices for adequate pan-European rules and procedures for IWT. Such models are already in place for many years in the field of air and maritime transport at global level based on the international treaties applicable in all States that have ratified them. Also, international road transport is governed by global agreements governing rules of the road, road safety and the construction of vehicles as well as by pan-European regulations, such as the Convention on

the Contract for the International Carriage of Goods by Road, establishing standard and transparent contractual provisions of civil liability.

- 42. Similarly, international rail transport is ruled by two major international agreements (Convention concerning International Transport by Rail and Agreement on International Railway Freight Communications). Work is underway within UNECE to harmonize and possibly unify these railway regimes through the preparation of contractual model provisions providing for seamless international rail transport from the Atlantic to the Pacific. Also, model rules and regulations govern the transport of dangerous goods by all modes of transport at the global level, while implementation at national and EU level is ensured through modal conventions, such as ADN for inland water transport.
- 43. These examples might be used to develop a vision and strategy to reinforce and further develop the regulatory framework for IWT at the pan-European level and to establish a level playing field with other transport modes. Given the complexity of national, subregional (EU) and river rules and regulations in IWT, priority should be given to advance solutions in fields where harmonization is already widely achieved and where it is important to establish mechanisms to ensure a continuity of harmonized maintenance and implementation.
- 44. Inland navigation rules could possibly be a good starting point, as the European Code for Inland Navigation (CEVNI) developed on the basis of applicable River Commissions regulations, provides already a common regulatory framework in this field at the pan-European level. In order to ensure continued relevance and applicability of CEVNI and to reduce parallel work, it has been proposed to discuss whether CEVNI could be upgraded to an internationally legal instrument. However, as SC.3 recently noted, the goal of promoting the harmonized rules of navigation could also be achieved through other, more flexible, mechanisms.<sup>13</sup>
- 45. One of such mechanisms could be transforming CEVNI into the Model Regulation for pan-European inland water navigation whose general provisions applicable to all inland waterways are transposed and applied by subregional bodies or River Commissions, in line with similar procedures applicable for the construction of vehicles or the transport of dangerous goods. In addition, adequate maintenance solutions need to be put in place that provide efficient "bottom-up" mechanisms for amendment proposals (from Governments, EU and River Commissions) as well as adequate "top-down" and monitoring procedures ensuring harmonized implementation at national, subregional and River basin level. The necessity to complement CEVNI with specific rules on local navigational conditions gives River Commissions a crucial role in ensuring efficiency and safety in inland navigation.
- 46. Another important area of increased coordination and cooperation relates to the 1988 Strasbourg Convention on Limitation of Liability in Inland Navigation (CLNI), originally open for participation of only CCNR member States, but currently revised to enable third countries to join in. The efforts of CCNR in this field could be supported in order to allow this Convention to become of pan-European or even global importance.
- 47. However, to enable the existing IWT institutions to better cooperate and coordinate their activities and reap synergies it is necessary to provide them with adequate resources.

Report of the UNECE Working Party on Inland Water Transport on its fifty-first session, ECE/TRANS/SC.3/178, para. 24.

#### **Proposed UNECE action:**

- (a) Identify, in close cooperation with other stakeholders, in particular the River Commissions, areas for further coordination, cooperation, transparency and harmonization of rules and regulations for IWT at the pan-European level and determine practical measure to streamline and coordinate the activities of the institutions involved;
- (b) In close cooperation with River Commissions, promote CEVNI as the basis for transparent and standard rules for inland water navigation at the pan-European level and develop appropriate mechanisms that ensure streamlined and effective maintenance and monitoring of its provisions;
- (c) Support all efforts to establish a pan-European legal framework for private law aspects of inland navigation, such as the implementation of the 2001 Budapest Convention on the Contract for the Carriage of Goods by Inland Waterway (CMNI) and the revision of the 1988 Strasbourg Convention on Limitation of Liability in Inland Navigation (CLNI);
- (d) Monitor and support, where possible, reforms towards the improved institutional arrangements in inland navigation, such as the revision of the 1948 Belgrade Convention on the regime of navigation on the Danube, as well as advocate for and support any measures aimed at the provision of the adequate human and financial resources to the existing IWT institutions.

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