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Matters arising from the 5th meeting of the Working Group on the Trans-Asian Railway Network

Update on the matters arising from the 5th meeting of the Working Group on the Trans-Asian Railway Network

Note by the secretariat

Summary

The draft framework for enhancing efficiency of railway border crossings along the Trans-Asian Railway network and beyond was prepared by the secretariat based on the recommendation of the Working Group on the Trans-Asian Railway Network at its 5th meeting held in Busan, Republic of Korea, in June 2017. The draft framework was considered by the Committee on Transport at its fifth session, in Bangkok in November 2018.

Based on the recommendation of the Committee to develop a common understanding of the issues identified in the framework, the present document contains a brief explanation of the four issues identified in the framework: (a) electronic information exchange between railways and among railways and control agencies; (b) harmonizing customs formalities for transit by rail through appropriate arrangement among the member countries; (c) dealing efficiently with break of gauge; and (d) developing comprehensive indicators and methodological tools to deal with the performance of railway border crossings.

The present document also includes suggestions to implement the recommendations contained in the draft framework, particularly on harmonizing the various initiatives on electronic information exchange among railways and other stakeholders, which are being pursued by railways in the region through the formalization of an appropriate arrangement on electronic information exchange for the facilitation of international railway transport in the region.

I. Introduction

1. At the 5th meeting of the Working Group on the Trans-Asian Railway Network, held in Busan, Republic of Korea, in June 2017, it was underscored that the operational readiness of the Trans-Asian Railway network would improve if measures were taken to ease customs clearance procedures at the railway border crossings, including through efficient electronic data interchange between railways as well as between railways and other stakeholders, such as customs and logistics service providers. In this regard,

* ESCAP/TARN/WG/2019/L.1.

the Working Group recognized the need for a common regulatory framework to govern movement of freight across borders (E/ESCAP/TARN/WG (5)/6, para. 16).

2. Accordingly, the secretariat, working within the ambit of the project on the Harmonization of the Rules and Regulations for Facilitation of International Railway Transport, developed a draft framework for enhancing efficiency of railway border crossings along the Trans-Asian Railway network and beyond (ESCAP/CTR/2018/3). The draft framework was discussed at the two Expert Group Meetings on the Harmonization of the Rules and Regulations for Facilitation of International Railway Transport, in Bangkok in September 2017 and in Ankara in May 2018. Based on the recommendations of the Regional Meeting on the Harmonization of Rules and Regulations for Facilitation of International Railway Transport, held in Astana in December 2017, the draft framework was submitted to the Committee on Transport at its fifth session, in Bangkok in November 2018.

3. The Committee welcomed the development of the draft framework to address inefficiencies in railway border crossing procedures along the Trans-Asian Railway network and beyond. The Committee recalled that rail transport facilitation was crucial for increasing railways' share in the international transport of goods, which would not only facilitate intraregional trade but also help to reduce the carbon emissions of freight transport (ESCAP/CTR/2018/8, para. 28).

4. The Committee took note of the four key areas for action identified in the draft framework, including (a) electronic information exchange between railways and among railways and control agencies, (b) harmonizing customs formalities for transit by rail through appropriate arrangement among the member countries, (c) dealing efficiently with the break of gauge and (d) developing comprehensive indicators and methodological tools to deal with the performance of railway border crossings. The Committee considered that a common understanding of the main issues to be addressed in those four areas would be instrumental in ironing out inefficiencies in international rail transport (ESCAP/CTR/2018/8, para. 29).

5. As a ready reference, the four key issues identified in the draft framework are revisited and briefly explained in the following section.

II. Main issues affecting efficient movement of freight across borders

A. Electronic information exchange between railways

6. Regulators and railways require information to initiate and complete formalities at the border crossings. Accordingly, the way information flows and is shared with relevant stakeholders has a significant effect on the efficiency of railway border crossings. This information includes but is not limited to information on goods, rolling stock and crew.

7. Electronic exchange of information among railways can significantly enhance the efficiency of formalities at border crossings by ensuring availability of pre-arrival information, thereby streamlining processes and information-sharing among various stakeholders and increasing the reliability and speed of information exchange. To date, many countries in Europe are harnessing the advantages of electronic interchange of data among railway undertakings.

8. The European Commission issued regulations on Telematics Application for Freight – Technical Specifications for Interoperability, which require electronic data interchange among the railway undertakings, infrastructure managers, customs and, in certain cases, with other government agencies.

9. Many members of the Economic and Social Commission of Asia and the Pacific (ESCAP) are also taking steps to introduce electronic interchange of data and enhance the efficiency of their international railway operations. The railways of the Russian Federation have developed advanced solutions for electronic information interchange among many railways. Other countries in the region are also developing electronic exchange of railway data with partner railways.

10. However, many challenges remain to harness the full potential of electronic exchange of information along the international railway corridors. The electronic exchange solutions have been historically determined by the legal requirements and principles relating to the functioning of 1,435- and 1,520-mm railway gauges and the corresponding business demands.

11. Harmonization of railway electronic information exchange is already being supported by the Organisation for Co-operation between Railways, as described in its relevant leaflets; the Convention concerning International Carriage by Rail and the Uniform Technical Prescription on Telematics Application for Freight, equivalent to the Telematics Application for Freight – Technical Specifications for Interoperability; and initiatives on the introduction of a common electronic consignment note under the Convention concerning International Carriage by Rail/Uniform Rules Concerning the Contract of International Carriage of Goods by Rail (CIM) and the Agreement on International Goods Transport by Rail (SMGS), namely the CIM-SMGS consignment note, by the International Rail Transport Committee.

12. Many countries of the Asia-Pacific region are neither members of the Organisation for Co-operation between Railways nor parties to the Convention concerning International Carriage by Rail, but most are expanding their international railway transport. Aligning their systems and message exchanges for operation of freight trains in the wider railway networks would ensure that information among railways and control authorities flows efficiently for the adequate completion of border crossing formalities. To support the railways of those countries, guiding principles for electronic information exchange between railways and among railways and control agencies, particularly for countries that are neither members of the Organisation for Co-operation between Railways nor parties to the Convention concerning International Carriage by Rail, could be developed.

13. Depending on the priorities and the level of development of electronic information exchange systems in the railways of countries, a gradual approach should be used to implement such systems. Those principles could be implemented on a voluntary basis. However, an agreement on electronic exchange of information between railways of interested ESCAP members could also be considered.

B. Customs and other government agencies formalities

14. Completion of regulatory formalities is a major activity carried out at railway border crossings. These include the formalities required by customs and other government agencies regarding matters such as border security guards, immigration, sanitary issues, food safety, veterinary information and

phytosanitary issues. With paper documentation, the formalities begin when the authorities receive the documents physically, which slows the process of completing the controls as no advance decision on goods can be taken. In countries where an electronic information system does not exist, lack of linkages between the electronic information systems of railways and control authorities inhibits sharing of information and the use of new technologies when completing control measures.

15. To support the increase in volume of goods transported by railways, the benefits of new technologies need to be fully exploited, including, in particular, the electronic exchange of information, to make regulatory controls more efficient.

16. In this regard, countries could consider an appropriate arrangement for the harmonization of customs formalities for international railway transport. The instrument could draw from the good practices that are currently scattered in various other agreements or conventions related to railways and customs. Moreover, considering the different stages of development of electronic systems of railways and control agencies in the countries, the implementation of such systems should be staggered and in conjunction with the existing paper-based systems.

17. Harmonization of customs formalities supported by electronic exchange of information between railways, customs and other government agencies would result in the efficient organization of border crossing formalities. The following issues need to be considered in developing a regional arrangement for harmonizing customs formalities for international railway transport supported by a railway electronic transit transport system: submission of electronic pre-arrival intimation; reduced guarantees for transit by rail; recognition of a railway consignment note as a customs declaration; electronic single window systems for railway transport; using new technologies for efficient completion of control measures: joint controls at the railway border crossings; and standardization and harmonization of information requirements.

1. Submission of electronic pre-arrival intimation

18. Traditionally importers declare goods on their arrival and customs formalities are then initiated. Pre-arrival intimation is now considered a good practice,[1] as it allows customs to make a decision on the level of controls required and thereby expedites the release of the goods. Many customs authorities in the region have introduced pre-arrival intimation requirements in their customs legislation.

19. Similarly, prior information on rolling stock[2] helps adjacent railways to prepare in advance for technical and commercial handovers. Otherwise, those formalities have to be initiated on arrival of the train. In addition, other government agencies also need advance information to better prepare for

[1] Standard 3.25 of the Protocol of Amendment to the International Convention on the Simplification and Harmonization of Customs Procedures urges customs authorities to lodge goods declarations prior to the arrival of goods. Many border crossing facilitation instruments such as the 1982 International Convention on the Harmonization of Frontier Controls of Goods (Harmonization Convention) and the World Trade Organization Agreement on Trade Facilitation encourage prior filing of a declaration.

[2] This provision has been incorporated into article 4.7 of annex 9 to the Harmonization Convention.

required inspections and formalities. Pre-arrival information can be submitted as an electronic message from railways simultaneously to the railways, customs and other government agencies of adjacent countries. The format of a message for pre-arrival intimation, however, needs to be agreed and harmonized among the railways.

2. Reduced guarantees for transit by rail

20. Many customs authorities require guarantees equal to the duties involved for the goods in transit. This results in a cumbersome process of assessment of duties and associated delays at the border crossing. Moreover, a lack of mutual recognition of authorized economic operator programmes means that railways are not given guarantee waivers in international railway transit operations. Customs authorities of a transiting country can waive the guarantee requirements for transit by designated railway operators that are mutually recognized as authorized operators through a regional transit transport arrangement by rail.

21. Generally, railways are fully in charge of railway transport operations and the process of handover of goods and rolling stock at the border crossings is organized, supervised and recorded into accounts of railways. Consequently, the possibility of diversion of goods is minimal, justifying low or no guarantee requirements.

3. Recognition of a railway consignment note as a customs declaration

22. National legislation on customs generally requires a transit declaration for goods in transit in a country's territory. Filing a transit declaration involves preparing the information contained in the consignment note of the goods being transported. To avoid duplication in keying in the data, the railway consignment note is increasingly being recognized[3] as a customs document because it contains the information required by customs. This streamlines procedures at railway border crossings, which, in turn, reduces the time and costs for completion of customs formalities.

4. Electronic single window systems for railway transport

23. An electronic single window system for railway transport could be contemplated at railway border crossings using modern technologies. Railways and government agencies require much the same information, documents and certificates to complete their designated formalities. The data collected from multiple sources, such as electronic systems of railways, customs and immigration as well as automatic control equipment and dynamic scanners, could be stored in a neutral platform or the single window system for railway transport. It could then be accessed by control authorities at railway border crossings for completion of regulatory formalities.

24. Linking railway information systems with the systems of other government agencies, national single window facilities and the information systems of the carriers would lead to more efficient information exchange. It would alleviate the need for resubmission of similar information. The

[3] The use of a railway consignment note as a customs transit declaration is provided for in article 9 of annex 9 to the Harmonization Convention; in the Agreement on the Particularities of Customs Transit of Goods Transported by Rail within the Customs Territory of the Customs Union within the Eurasian Economic Community; in the Union Customs Code of the European Union; and in the national customs legislation of some States.

introduction of cross-border electronic information exchange among related government agencies could contribute to a reduction in delays at railway border crossings.

5. Using new technologies for efficient completion of control measures

25. Railway border crossing formalities could become more efficient through the introduction of new technologies[4] and non-intrusive inspections. Use of equipment such as dynamic scanners and scales makes it possible to collect data for the completion of required controls while the train is in motion. Non-intrusive inspections for cargo and transport, such as using X-ray scanners and mobile scanners, could contribute to making the completion of control formalities more efficient.

26. Railways and control authorities could use the inspection facilities and share results. If the inspection systems are installed at a different location from where the clearance takes place, the data collected need to be transmitted to the control centres at the border crossing and, if necessary, to inland customs offices, so that when the train arrives at the station, the railways, customs and other control authorities have the information available in their systems.

6. Joint controls at the railway border crossings

27. The customs formalities between neighbouring countries could be organized at one joint railway border crossing station designated for that purpose. Under this arrangement, the train does not have to stop at both the exit and entry border crossing stations but only at one railway border crossing station. There are various possible options to complete the regulatory requirements. The border agencies from two countries can conduct joint physical inspections of identified goods and rolling stock. Another option is joint inspection by designated lead agencies and thereafter sharing results with other agencies. It is also possible for control agencies of one country to carry out inspections at the entry and share the results with their counterparts in the adjacent country.

28. The second-best option is to have sequential controls under which countries complete controls independently. In that case, all agencies behind the border conduct joint inspections or one agency inspects and shares results with other agencies. Where relevant, customs and other government agencies could conduct an integrated risk assessment to identify goods for joint inspections.

7. Standardization and harmonization of information requirements

29. The introduction of electronic information exchange for railway transport should be preceded by the standardization of the data requirements of the railways and the government agencies responsible for controls at railway border crossings. Excessive documentary requirements hamper efforts to streamline clearances at border crossings.

[4] Other examples of other new technologies that could be used at railway border crossings are individual or multifunctional systems that provide electronic surveillance with video monitoring; automated train and wagon commercial inspection with electronic gate sensors; thermal image technology and video monitoring for checking oversized cargo, correct loading of the goods, cargo fastening elements, and security and safety of cargo; automated recognition and registration of wagons, which detects the number of wagon cars or container numbers; and automated monitoring of radiation and leakage of chemical substances.

30. Development of efficient risk analysis, intelligence gathering and effective post clearance audits can reduce excessive document requirements and related formalities while increasing the quality of controls. Standardized and harmonized data and documents could make it possible to streamline border crossing processes; enhance the efficiency of the electronic exchange of information among stakeholders; introduce an electronic single window system for railway transport; jointly use inspection facilities; and integrate risk analysis and introduce joint controls.

C. Break of gauge

31. The need to deal with a gauge difference is one of the main factors behind operational delays at railway border crossings. Along the Trans-Asian Railway network, break-of-gauge operations must be organized at railway border crossings, mostly between 1,435- and 1,520-mm gauges. However, there are also border crossings with other gauges.

32. Effective technical solutions are required to deal with the different track gauges. If break of gauge is not handled adequately, there may be significant delays at railway border crossings. Limited reloading capacities, lack of availability of wagons, lengthy trans-shipment operations and inefficient information exchange among railways are some of the factors preventing adequate handling of break of gauge.

33. The Regional Cooperation Framework for the Facilitation of International Railway Transport contains several options for dealing with break of gauge, including trans-shipment, bogie changing, use of wagons with variable-gauge bogies, and provision of dual gauge and conversion of different track gauges to a single-gauge standard.

34. There is no one-size-fits-all solution for dealing with break of gauge. The selection of the option should be based on the characteristics of each railway border crossing and the types and volumes of freight that are moving across the border. Multiple options can be employed at the same railway border crossing.

35. Bogie changing for the wagons and trans-shipment for the containers is the most common way of dealing with break of gauge in the region. Exchange of information between railways would help support efforts aimed at dealing with break of gauge and prevent related delays.

36. For bogie changing, organization of the break-of-gauge activities on either side of the border crossing could be managed efficiently by the rail tracks of both gauges running across the two border crossing stations for movement of rolling stock of both railways. In addition, bogie changing across railway border crossings could be used more effectively with an understanding among neighbouring railways that would allow for adjustments.

37. Furthermore, sufficient and balanced capacity to deal with break of gauge, with a focus on reloading containers and changing bogies for wagons, is required. This includes sufficient capacity to deal with sidetracks, railway yards, container terminals, cranes and lifting equipment, trans-shipment stations, bogie changing systems and sets of jacks.

38. Well-designed facilities and operational procedures organized in parallel can make it possible to deal with the break-of-gauge issue within the time allocated for other railway operations, such as change of locomotives, change of crew, technical inspection for acceptance of wagons, safety

inspection for dangerous goods, and regulatory controls of customs and other government agencies.

39. It is also recommended to have in place clear handover rules and organization of break-of-gauge activities based on bilateral arrangements with inputs for specialized railway organizations. Those issues, including specifics pertaining to a particular border crossing, should be detailed in the standard operational procedures for dealing with break of gauge, which are mutually agreed by neighbouring railways. The draft framework recommends framing standard operating procedures to efficiently deal with break of gauge for different possible situations.

D. Measurement of the performance of railway border crossings

40. Each railway border crossing is unique in terms of challenges and specific issues that need to be addressed. To provide the most optimal solutions, an in-depth analysis of railway border crossing stations between adjacent countries should be conducted using a systematic and methodical approach to deal with the complexities and demands of each station. In this regard, the draft framework suggests a standardized methodology for in-depth analysis of railway border crossings, including information on the following topics:

(a) Current data on and forecast of railway freight traffic along railway border crossings and the type of goods transported;

(b) Review of legal arrangements for railway transport;

(c) Information on the major stakeholders present at railway border crossings and their responsibilities;

(d) Report on the condition of railway border crossing equipment, facilities and infrastructure;

(e) Critical analysis of railway operations and of the formalities of customs and other government agencies, including (i) activities before the arrival of trains, such as submission of pre-arrival information, preparatory activities for the arrival of trains, risk analysis, stopping trains at the border and having them escorted by border guards; (ii) processes after the arrival of trains and during stops at railway border crossings, including technical and commercial handover, technical inspections, checking seals, bogie changes, trans-shipment of containers, customs and other government agencies formalities; and (iii) activities conducted during the departure of trains from railway border crossings (reconfiguration of trains, dispatching operations);

(f) Oversight of the existing arrangements for sharing of information between railways and among railways and control agencies, including documents and information exchanged in paper format and in electronic format, with regard to the differences in data requirements between railways and among railways and control agencies and to the interoperability of existing information and communications technology solutions for railways to railways and railways to customs electronic information exchange;

(g) Present state of cooperation among control agencies for completion of formalities at railway border crossings;

(h) Recommendations.

41. By using the above-mentioned standardized methodology, the operations and formalities at railway border crossings can be evaluated comprehensively. This analysis can be used to identify crucial issues affecting

the efficiency of the operations and formalities and to recommend measures to be implemented in accordance with specific characteristics of railway border crossings.

42. In addition, a comprehensive performance measurement indicator is required to better understand the need for and impact of measures to enhance the efficiency of railway border crossings. To date, several performance measurement and monitoring mechanisms are being used for international freight railway transport and railway border crossings. Among them are the Time/Cost-Distance Methodology; corridor performance measurement and monitoring mechanisms; and time release studies by the World Customs Organization.

43. Though those indicators are relevant, they are not sufficient to comprehensively measure the performance of railway border crossing processes. An in-depth review of the extant approaches of performance measurement is suggested in order to recommend comprehensive indicators of performance for railway border crossings. Such indicators and related comparisons over time could encourage countries to institute measures for improving the efficiency of railway border crossings across the Trans-Asian Railway network and beyond.

44. The draft framework accordingly recommends the development of comprehensive indicators to measure the performance of railway border crossings and the use of a standardized methodology for identifying and analysing challenges and recommending solutions.

III. Implementing the recommendations of the draft framework

45. Railway border crossing formalities depend on numerous national, bilateral, regional and international instruments on railways and customs. Fragmentation of international railway transport based on different legal regimes and numerous bilateral arrangements is a barrier to achieving seamless international railway transport because of different rules, documents, procedures and practices. Divergence in formalities for railway transit among countries also compounds delays at railway border crossings.

46. In addition, most railways in the region rely on paper-based workflow and processes. Information is exchanged by telephone, faxes, emails and manual copying of documentation, which results in delays and inefficiencies at the border crossings. The lack of pre-arrival information does not allow for any preparation before the arrival of a train regarding the main processes at railway border crossings. Procedures are initiated on the actual arrival of a freight train when a locomotive driver hands over the paper documents. A departing train needs to have those documents when leaving the border crossing.

47. International railway traffic, particularly along the China-Europe route, is increasing rapidly and railway infrastructure in many countries is being ramped up as part of national initiatives. Furthermore, given the need to promote sustainable modes of transport to support the implementation of the 2030 Agenda, urgent measures are required to ensure reliability and punctuality of freight trains along the Trans-Asian Railway network.

48. The rapid growth in information and communications technology can now be harnessed for the facilitation of railway transport. The use of electronic information exchange among various stakeholders involved in railway transport can significantly enhance the efficiency of international railway transport operations. For example, if electronic messages required for international railway transport at the regional level are broadly harmonized, the flow of information would likely be smooth, enhancing the efficiency of railway transport operations along the corridors. Similarly, electronic exchange of information between railways, regulators and other stakeholders would lead to the streamlining of formalities and reduced documentation and time required to complete the required formalities.

49. The Committee on Transport, while considering the draft framework, also observed a need for common understanding on the issues identified therein, including on electronic exchange of information between railways and among railways and control agencies. The electronic exchange of information would support not only efficient railway operations but also efficient completion of regulatory formalities at railway border crossings.

50. However, the electronic information exchange among railways driven by scattered initiatives can potentially lead to the development of diverse ways of exchanging information electronically between railways and among railways and control agencies. Such multiplicity and divergence could undermine the seamless flow of information, particularly along international railway corridors, thereby adversely affecting the competitiveness of railway transport as compared to other modes of transport. In addition, lack of linkages between the electronic information systems of railways and control authorities in many countries inhibits the sharing of information and the use of new technologies when completing control measures.

51. Many countries of the Asian and Pacific region are expanding their international railway transport operations and are accordingly investing heavily to ramp up their railway infrastructure and operating systems and to increase their human resources. Railway investments are capital intensive and related operating systems cannot be frequently changed. Therefore, there is an imminent need to guide railways of the region on developing electronic information exchange systems that are interoperable and could seamlessly integrate with wider railway networks when required.

52. Accordingly, to provide harmonization to such initiatives in the region, a framework arrangement on electronic information exchange for the facilitation of international railway transport should be considered a priority by the railways of the region. Such a framework arrangement could also draw upon the good practices that are currently dispersed among various other agreements and international conventions related to international railway transport and customs. To take this matter forward, a task force comprised of representatives of railway and border agencies of interested countries could be constituted to work on the framework arrangement.

IV. Issues for consideration

53. Taking into consideration the information provided in the present document, the Working Group may wish to provide the secretariat with further guidance on implementing the recommendations contained in the draft framework for enhancing efficiency of railway border crossings along the Trans-Asian Railway network and beyond, particularly related to the following: (a) facilitating electronic exchange of information among various

stakeholders involved in international railway transport through an appropriate arrangement; and (b) supporting interested railways of the member countries, including by establishing a task force to work on an appropriate arrangement on electronic exchange of information and submitting its recommendations to the Working Group for its consideration at its next meeting.