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CONNECTING TRANSPORT INFRASTRUCTURE NETWORKS IN ASIA AND EUROPE IN SUPPORT OF INTERREGIONAL SUSTAINABLE TRANSPORT CONNECTIVITY

Progress in Enhancing Transport Connectivity between Asia and Europe

2020

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1. Introduction and Background

Connectivity can be defined as a measurement of how well connected any one node is to others in a network and it increases interactions, productivity, competition, and market opportunities between countries. Transport connectivity is positively and closely related to economic growth and development, supply chain efficiency and resilience [1]. Improvements in transport connectivity is most effective at delivering long-term growth when it relieves a constraint on productivity. This is especially true on the Euro-Asian landmass. The operationalization of Euro-Asian inland transport routes will enable countries on both continents to participate more effectively in global production networks, global distribution and value chains[2]. At the same time, economic growth in countries on Euro-Asian inland routes is accompanied by an increase in exports, imports and transport services demand. The diversification of transport links, optimization of transport costs and time needed for the delivery of goods are all factors that will help increase the trade potential of the region[3].

Countries in Asia and Europe, as well as other stakeholders, have an interest to develop efficient, economically viable and environmentally sustainable trade routes and corridors between Asia and Europe. According to the estimate provided in the publication entitled "Connecting Europe and Asia: Building blocks for an EU Strategy" by the European Commission, as of 2019, if measured in value, 70 percent of the trade goes by sea, over 25 percent is carried by air, while rail remains relatively marginal[4]. However, there is potential for growth in all sectors. The competitiveness of rail connections could be increased by reducing the transit times and improving the load factors, as well as by establishment of harmonized contractual conditions for carriage. The above-mentioned publication also expresses the opinion that road transport would be efficient over medium distances and as a secondary transport network in combination with other modes of transport[5].

The need to further enhance connectivity between Asia and Europe was recognized by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) in 2015, when the concept to establish an institutional mechanism to support inter-regional transport connectivity between Asia and Europe was first introduced as part of a Resolution adopted to strengthen intra-regional and inter-regional connectivity in Asia and the Pacific [6]. This initiative was then further developed and agreed upon at the Third Session of ESCAP's Ministerial Conference on Transport in 2016, where the Ministerial Declaration on Sustainable Transport Connectivity in Asia and the Pacific was adopted, which included the agreement to establish an inter-regional coordination committee on transport between Asia and Europe[7].

Transport connectivity between Asia and Europe is thus one of the thematic areas of work in the United Nations Economic and Social Commission for Asia and the Pacific's (ESCAP) Regional Action Programme for Sustainable Transport Connectivity in Asia and the Pacific. Its main objective is to enhance transport connectivity between these two regions through initiatives on infrastructure development and the harmonization of technical standards, with

[1] https://www.oecd.org/g20/summits/osaka/G20-DWG-Background-Paper-Infrastructure-Connectivity.pdf
[2] https://www.unece.org/fileadmin/DAM/trans/doc/2019/wp5/ECE-TRANS-265e_re.pdf
[3] *Ibid*
[4] https://eeas.europa.eu/sites/eeas/files/joint_communication_-_connecting_europe_and_asia_-_building_blocks_for_an_eu_strategy_2018-09-19.pdf
[5] *Ibid*
[6] https://www.unescap.org/sites/default/files/E71_RES8E.pdf
[7] https://www.unescap.org/commission/73/document/E73_15_ADD1E.pdf

the ultimate goal of creating an inter-regional coordination body that would synergize existing mandates, stimulate actions and benchmark progress to foster seamless, sustainable and resilient transport connectivity for passenger and freight.

This report serves as an update to the 2019 "Background Document for the Inter-regional Expert Group Meeting on Transport Connectivity between Asia and Europe" and provides an overview of transport connectivity trends, existing challenge, as well as current initiatives, planning and institutional arrangements, regulations, and standards. It also includes a new section on the impact of the COVID-19 pandemic on transport connectivity between Asia and Europe, as well as relevant policy responses and recovery measures. Lastly, suggested ways in for further enhancing transport connectivity between Asia and Europe through coordinated efforts, are also provided.

2. Overview of Transport Connectivity between Asia and Europe

The connectivity between Asia and Europe is of global significance and is expected to continue. These two regions together represent around 70 percent of global population[8], 55 percent of global trade and 65 percent of the global economy[9]. EU exports grew faster than imports and consequently the trade balance increased from EUR 152 billion in 2018 to EUR 197 billion in 2019. The main destination for EU-27 exports in 2019 were other European countries accounting for just over one third of the total, followed by Asia and North America[10]. Asia, with approximately 60 percent of the world's population accounts for 35 percent of the EU's exports (€618bn) and 45 percent of the EU's imports (€774bn)[11]. As freight transport movement is based on trade flows, the relatedly high level of trade between Asia and Europe also implies a high level of freight transport demand between these two regions. An efficient and sustainable connectivity that will enable an improved movement of goods and services between the EU and Asia will thus contribute to economic growth and jobs, as well as global competitiveness and trade. However, there is still a significant investment gap in transport connectivity and a need for a greater level of engagement and cooperation with multi-stakeholders, such as private investors, national and international institutions, and multilateral development banks in order to close the gap. This section presents an overview of the benefits and challenges in transport connectivity between Asia and Europe, as well as examining freight transport demand trends in and between the two regions.

2.1. Benefits of Transport Connectivity

The benefits of transport connectivity between Asia and Europe have been long established. Historical trade routes, such as the Silk Road and the trans-Siberian routes, established in 130 B.C. and in the early 1900s respectively, had increased international and regional connectivity through the flow of goods across borders and allowed countries to relocate their resources more efficiently[12]. In fact, they continue to guide the opening of new routes between Asia and Europe[13]. The benefits of transport infrastructure connectivity also include the increase in

[8] https://www.statista.com/statistics/237584/distribution-of-the-world-population-by-continent/
[9] https://publications.jrc.ec.europa.eu/repository/bitstream/JRC112998/asem-report_online.pdf
[10] https://ec.europa.eu/eurostat/statistics-explained/index.php/Extra-EU_trade_in_goods
[11] https://eeas.europa.eu/sites/eeas/files/joint_communication_-_connecting_europe_and_asia_-_building_blocks_for_an_eu_strategy_2018-09-19.pdf
[12] https://www.econstor.eu/bitstream/10419/53649/1/604643020.pdf
[13] https://www.itf-oecd.org/sites/default/files/docs/06europe-asia.pdf

market size and economic development through higher levels of trade and production, as well as increases in the quality of life through the provision of accessibility to employment, health and education services[14]. In other words, connectivity contributes to economic growth and jobs, global competitiveness and trade, and people, goods and services to move across and between Europe and Asia[15].

The close trade and transport relations between Asia and Europe are reflected in their trade flows. Around 70 percent of the trade in goods of Asian and European countries takes place with other Asian and European countries and it was worth US$1.5 trillion in 2018[16]. In addition, greater connectivity can also help achieve the Sustainable Development Goals through the strengthening of political and institutional links, which could also lead to cost-efficient outcomes.

By further integrating the two region's transport networks, more countries and people will be able to participate in global production networks and global value chains. While this is important for all countries, it is vital for landlocked developing countries, which rely mainly on land connections to participate in interregional economic activities. Improved integration will also support cross-border investments, thereby allowing technology and innovation to be shared more easily across the regions. Ultimately, an efficient and sustainable connectivity will strengthen cooperation between Asia and Europe and unlock opportunities within the global economy.

2.2. Current Challenges

Strong trade and, accordingly, transport ties between Asia and Europe have a long-standing tradition. However, there are still opportunities to further strengthen cooperation between the two regions, specifically on transport connectivity. There is significant potential for transport connectivity between Asia and Europe to grow and improve, once the barriers to seamless, sustainable and resilient transport connectivity between Asia and Europe are reduced or removed.

Through various declarations, studies and projects, it was found that a large number of immediate, secondary, tertiary, and root causes (issues and challenges) contribute to the core problem in the Asia-Pacific region, which is the lack of a sustainable integrated intermodal transport and logistics system.

For a more focused identification process, Table 1 is divided into two parts. Table 1.1 covers immediate causes of the problems (issues and challenges in some segments) and the immediate means of achieving the objectives (recommendations and solutions), while Table 1.2 covers the root causes (issues and challenges in some segments) and the means of addressing the root causes (recommendations and solutions for countries).

[14] https://books.google.fr/books?hl=en&lr=&id=nFc1CwAAQBAJ&oi=fnd&pg=PA339&dq=transport+infrastructure+connectivity+benefits&ots=n9XOefZQu2&sig=cQSdS8R5lHyDYDfZSZb9HjrceaY#v=onepage&q=transport%20infrastructure%20connectivity%20benefits&f=false

[15] https://eeas.europa.eu/sites/eeas/files/joint_communication_-_connecting_europe_and_asia_-_building_blocks_for_an_eu_strategy_2018-09-19.pdf

[16] https://publications.jrc.ec.europa.eu/repository/bitstream/JRC112998/asem-report_online.pdf

Table 1.1 Immediate problems in some segments of a lack of a sustainable transport connectivity between Asia and Europe and objectives to move forward

	Immediate Problems/ Causes (Issues)	**Means of achieving objectives (Recommendations)**
01. Infrastructure and traffic control systems	**Road Infrastructure and furniture** •Missing links •Substandard sections •Poor maintenance	•Construct missing links •Upgrade substandard sections •Improve maintenance
	Railway Infrastructure & rolling stock •missing links Break of gauge •Single track •Low level of electrification and use of different voltages •Poor maintenance •Low quality of signalling and blocking systems	•Construct missing links Develop technical solutions to deal with break-of-gauge •Double track •Electrify and address voltage issues •Improve maintenance •Rehabilitate/ replace signalling and blocking systems
	Inland waterways •Insufficient port infrastructure	Develop/ upgrade port infrastructure
02. Vehicles and rolling stock	•Old and obsolete vehicles and rolling stock •Low availability of wagons and containers	•Develop a vehicle and rolling stock rehabilitation and replacement plan •Improve management of wagons and containers/ invest in new equipment
03. International transport (visas, permits and interoperability	**International road transport** •Controls on, and mismatches between country pairs in the fundamental elements of international road transport	•Accede and/or implement Conventions/Agreements
	International rail transport Along railway routes and corridors there are: •Different technical standards for railway infrastructure, facilities and equipment (incl. rolling stock) •Different operational procedures •Different regimes for railway transport contracts Low priority for rail freight services compared to passenger services.	Over entire EA routes/ corridors, progressively move towards: •Common technical parameters for railway infrastructure, etc. (Technical interoperability[3] •Harmonization of operational procedures (Operational interoperability)[4] •Unification of contractual obligations (Legal interoperability)[5] (see also **25. Technical and operational standards**) Increase prioritisation of freight services, especially fast services, container services and long-distance services.
	Inland waterways •Unreliable ferry schedules	•Improve the reliability of ferry services
04. International transport operations	•Inefficient management of international transport and container operations Inefficient coordination of intermodal transport solutions across borders.	•Improve the management of international transport and container operations Accede and/or implement the conventions on containers and pool containers

	Immediate Problems/ Causes (Issues)	Means of achieving objectives (Recommendations)
05. Border Crossing Infrastructure and equipment	**Border crossing point (BCP) infrastructure & equipment (all modes)** •Insufficient infrastructure and equipment at BCPs	•Upgrade/ modernize infrastructure and equipment at BCPs
06. BCP control procedures	**BCP control procedures** •Delays at BCPs due to control procedures for cargo transported, containers and drivers[2]	•Reduce delays at BCPs related to control procedures/ streamline control procedures at BCPs Accede and/or implement the Harmonization Convention Implement interconnection between the eTIR International System and National Customs Systems
07. BCP operations	**BCP operations** •Poor management of traffic and cargo handling operations at BCPs	•Improve management of traffic and cargo handling operations at BCPs Accede and/or implement the Harmonization Convention
	BCP train operations •Delays due to locomotive and crew changes, technical inspection of wagons etc •Delays when container reloading/ transfer is required including at gauge change points •Lack of wagon exchange arrangements between railway operators	•Adopt efficient locomotive change, wagon inspection etc procedures •Adopt effective container transhipment procedures •Progressively move towards regimes where: (a) wagons/ bogies can cross borders (b) whole trains, incl. locomotives, can cross border •Develop arrangements for exchange of wagons between railway operators •Accede and/or implement the Harmonization Convention
08. Intermodal infrastructure (incl. intermodal nodes and logistics centres)	**Dry port and logistics centre infrastructure** •Insufficient number of dry ports and logistics centres •Insufficient infrastructure and equipment of dry ports and logistics centres No identification of which intermodal terminals and similar facilities are of strategic importance	•Increase the number of dry ports and logistics centres •Upgrade/ modernize infrastructure and equipment at dry ports and logistics centres