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# SSAART for Trans-Asian Railway Network in the Times of COVID-19 Pandemic RAILWAA SOLUTIONS

This study was prepared by Transport Division ESCAP. The study was prepared by Ms. Ekaterina Kozyreva and Mr. Goran Andreev, Consultants, under the supervision of Mr. Sandeep Raj Jain, Economic Affairs Officer, Transport Connectivity and Logistics Section (TCLS), Transport Division and overall guidance of the Ms. Azhar Jaimurzina Ducrest, Chief of TCLS.

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## List of abbreviations

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
ССТТ	Coordinating Council on Trans-Eurasian Transportation International Association
CIS	Commonwealth of Independent States
EAEU	Eurasian Economic Union
ECO	Economic Cooperation Organization
EU	European Union
ктz	Kazakhstan Railways
OECD	Organization for Economic Co-Operation and Social Development
OSJD	Organization for Cooperation of Railways
OTIF	Intergovernmental Organisation for International Carriage by Rail
RZD	Russian Railways
TEU	Twenty-foot equivalent unit
TITR	Trans-Caspian International Transport Route
TSR	Trans-Siberian Railway
UIC	International Union of Railways
UNCRD	United Nations Centre for Regional Development
UNIFE	European Rail Supply Industry Association
UTLC ERA	United Transport and Logistics Company – Eurasian Rail Alliance
WEO	World Economic Outlook

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# **Key Messages**

- 1. International railway transport has undergone rapid changes over the last decade with more freight trains moving along the trans-continental corridors- a trend likely to continue.
- 2. This trend is leading to development of new railway routes, construction of railway infrastructure, expansion of railway services, and new alliances to serve more markets on the international railway corridors along the Trans-Asian Railway Network.
- **3.** Over long run the geography of rail freight flows in ESCAP region and beyond, as well as the railway market in general might undergo substantive changes due to pandemic crisis that is leading to changes in supply chains and possible relocation of production.
- 4. Railway transport proved its resilience as a reliable mode of transport in times of pandemic. The railways now should turn this crisis around as an opportunity to further enhance the comparative advantages of railway transport through use of smart railway solutions that would strengthen competitiveness of the railways in the post pandemic environment.
- **5.** Railways of the region need to revisit national railway plans/ strategies/investments/ business models incorporating likely impacts of the pandemic and prepare themselves better to deal with eventualities.
- 6. Developing railway network, expanding international railway transport, shifting to rail, enhancing sustainability and digitalizing are key priorities for railways of the region and they need to be accelerated in post pandemic world to ensure the competitiveness of the railway transport.
- 7. Smart railway solutions aim to expand the knowledge of railways of the region on the range of options available to deal with the emerging challenges and harness the opportunities in the era of pandemic.
- 8. Seven modules for smart railway solutions include following areas: railway operations, predictive maintenance, rolling stock, railway border crossings, client orientation and railway financing- each module has further sub-modules that go into specific solutions.
- 9. Smart railway solutions have been successful elsewhere and are potentially replicable and scalable. However, not all solutions would have equal importance or relevance for the railways of the region. Each railway could assess its own situation and determine which smart solutions would be more beneficial and applicable for them.
- **10.** Supplementing this study on smart railway solution ESCAP has also developed a guide on smart railway solutions as a precursor to a comprehensive capacity building programme on the Smart Railway Solutions to support member railways in addressing post pandemic challenges.

### Background

The COVID-19 pandemic is changing the dynamics of international freight transport as no single event has probably done before in the recent past. The outbreak of the pandemic has adversely impacted freight transported by all other modes other than by rail.

The increase in freight carried by railways is not surprising, given its distinct features, that are working to its advantage in the current situation. International railway transport uses less manpower over long distance and accordingly there are fewer health checks, unlike, for example, in road transport where checks and congestions at border crossings cause more frequent human interactions. Each freight train can carry between 40 to 70 times equivalent of lorry loads of goods in a much more safe and secure environment giving rail a distinct advantage.

The opportunities for switching more cargo to rail during the COVID-19 recovery phase and making shift towards railways more enduring in national and international transportwould require enhanced competitiveness of railway transport compared to other modes.

To support trade and transport connectivity globally in times of pandemic the United Nation agencies have jointly launched a project titled- Trade and transport connectivity in times of pandemics: with overarching objective of developing contactless, seamless and collaborative solutions to preserve and further enhance the trade and transport connectivity. In Asia and the Pacific, ESCAP is leading the project and has initiated series of studies aimed at supporting countries in this direction.

The present study on smart railway solutions has been carried out under the project with aim to identify smart railway solutions that are proven to be successful elsewhere and are potentially replicable and scalable. Not all solutions would have equal importance or relevance for the railways of the region.

Each railway could assess its own situation and determine which smart solutions would be more beneficial and applicable for them. In this regard, the study may also be seen as an inventory of smart railway solutions that would expand the knowledge of railways of the

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