

**Economic and Social Commission for Asia and the Pacific**
Committee on Transport**Sixth session**

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Item 4 of the provisional agenda*

Accelerating transformative action in transport for the achievement of the Sustainable Development Goals**Accelerating transformative action in transport for the achievement of the Sustainable Development Goals****Note by the secretariat***Summary*

The decade of action for the Sustainable Development Goals calls for mobilizing regional action, raising ambitions and identifying solutions. It thus provides an additional impetus and opportunity to reconsider the transport priorities in the Asia-Pacific region and to accelerate impactful change toward sustainability while building back better in the aftermath of the coronavirus disease pandemic, which has disrupted progress towards many of the Goals.

The present document is aimed at providing context to the discussion on the ways in which regional cooperation in transport can further accelerate progress on the 2030 Agenda for Sustainable Development in Asia and the Pacific. It also contains considerations on the key directions for the next phase of the Regional Action Programme for Sustainable Transport Connectivity in Asia and the Pacific, to be developed in 2021, that would enable the region to effectively address environmental, social and economic demands.

The Committee on Transport may wish to highlight pressing priorities and areas for policy interventions and regional cooperation in the transport sector that can accelerate the achievement of the Sustainable Development Goals in Asia and the Pacific, taking into account recent global and regional developments. The Committee may also wish to share views and experiences and to provide guidance to the secretariat on the development of the next phase of the Regional Action Programme, for the years 2022 to 2026, which will be submitted for consideration at the fourth Ministerial Conference on Transport.

* ESCAP/CTR/2020/L.1.

I. Introduction

1. Among all the factors directly influencing the capacity of Asia and the Pacific to deliver on the 2030 Agenda for Sustainable Development, transport stands out as a continuous challenge and a tremendous opportunity for the transition to economic, social and environmental sustainability. The rising demand for transport and mobility, compounded by the emergence and continued development of geographically dispersed supply chains, while already consuming a major part of the region's natural resources, is continually on the brink of exceeding capacity. Furthermore, on account of economic development and population growth, the region is expected to face substantial increases in motorization rates, trade shares and, thus, freight and passenger volumes.

2. The transition to low-carbon and resilient transport systems remains slow (see ESCAP/CTR/2020/3). At the same time, while progress has been made towards well-connected and efficient transport across Asia and the Pacific, the region is advancing unevenly in terms of connectivity, thus restricting the potential of several countries to fully access economies of scale and sustained economic growth (see ESCAP/CTR/2020/2). Furthermore, persistent gender gaps, road traffic fatalities, and inequalities in terms of access to transport and related opportunities further inhibit the capacity of the sector to address the social dimensions of sustainable development equally across the region (see ESCAP/CTR/2020/4).

3. The decade of action for the Sustainable Development Goals calls for mobilizing regional action, raising ambitions and identifying solutions. It thus provides an additional impetus and opportunity to reconsider the transport priorities in the region and to accelerate impactful change toward sustainability while building back better in the aftermath of the coronavirus disease (COVID-19) pandemic, which has disrupted progress towards many of the Goals and, in some cases, reversed decades of progress.¹

4. Some of the Sustainable Development Goals are directly connected to sustainable transport through targets and indicators, such as target 3.6 on road safety, 9.1 on infrastructure and 11.2 on providing access to safe, affordable, accessible and sustainable transport systems for all and expanding public transport. Many others are also connected through the enabling role of sustainable transport throughout the 2030 Agenda. The integrated nature of the Goals means that achieving significant progress towards sustainable transport will require simultaneous progress in other areas, like renewable energy and energy efficiency. Therefore, it is still necessary to more systematically identify the interactions among the 17 Goals, including the interactions between transport-related targets and other targets and Goals. Progress can only be accelerated if the systems that connect across the Goals and targets are transformed in ways that resolve trade-offs and deliver on potential synergies, as recently emphasized in the *Global Sustainable Development Report 2019: The Future is Now – Science for Achieving Sustainable Development*, prepared by the independent group of scientists appointed by the Secretary-General. In that regard, there is a need for policymakers, transport sector representatives, local governments and communities but also the wider public to reinforce their collaborative efforts to move the sustainable transport agenda forward.

¹ General Assembly resolution 74/270.

5. The Third Ministerial Conference on Transport, held in Moscow in 2016, identified transport connectivity as a key priority for the Asia-Pacific region to achieve its sustainability objectives and adopted the Regional Action Programme for Sustainable Transport Connectivity in Asia and the Pacific, phase I (2017–2021). As phase I enters its final year of implementation, further consideration and analysis of the relationship between transport development and sustainability in all its dimensions seems warranted, to take into account the cross-cutting impact of transport on society, the new challenges arising in line with the region’s development agenda and the inevitable links to the issues of sustained economic development, environmental protection, climate change and social inclusion. The present document is aimed at providing context to the discussion on the ways in which regional cooperation in transport can further accelerate the achievement of the Sustainable Development Goals. It also contains considerations on key directions for the next phase of the Regional Action Programme to be developed in 2021.

II. Global context and regional outlook on the Sustainable Development Goals

6. The COVID-19 pandemic has touched all segments of the population, all sectors of the economy and all areas of the world. Estimates suggest that world trade will plunge by at least 13 and as much as 32 per cent, foreign direct investment will decline by up to 40 per cent and remittances to low- and middle-income countries will fall by 20 per cent in 2020. All of these external shocks, together with job losses, fragile health systems, insufficient basic services and low coverage by social protection systems have aggravated countries’ vulnerabilities. Accordingly, forecasts indicate that the pandemic will push 71 million people back into extreme poverty in 2020 in what would be the first rise in global poverty since 1998, effectively wiping out the progress made since 2017.²

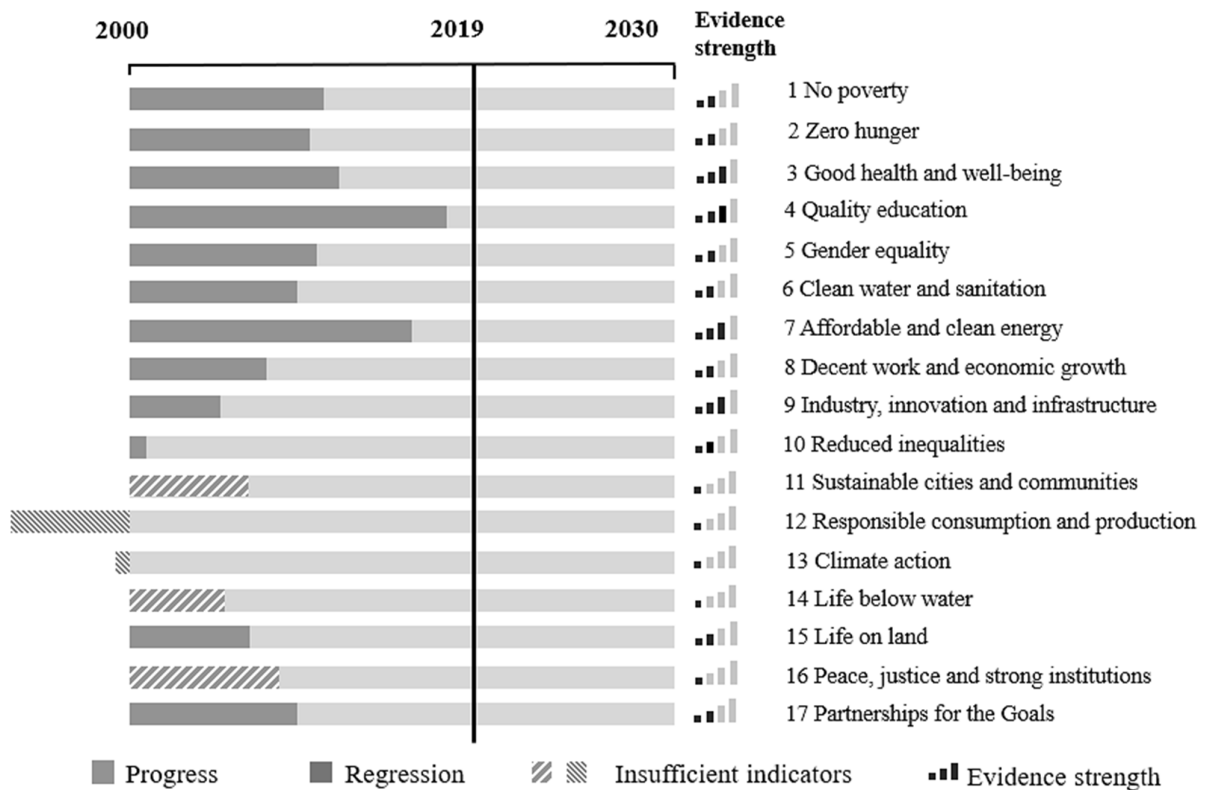
7. The average gross domestic product (GDP) for the Asia-Pacific region could contract by 4 per cent. Similarly, 7.2 per cent of working hours in the region (equivalent to 125 million full-time workers) are estimated to be lost in the second quarter of 2020, compared with 6.7 per cent at the global level. Approximately 38 per cent of the workforce is employed in at-risk sectors such as manufacturing, tourism, trade and transport, in which numerous firms are facing collapse in demand and potential bankruptcies.³

8. As at 2019, progress on the 2030 Agenda was uneven, and more focused attention was needed in most areas. Especially for the Asia-Pacific region, the data indicated that despite significant progress on some of the Sustainable Development Goals, without extra efforts the region was likely to fall short of all 17 by 2030 (see figure I). The impact of the pandemic poses further risks to progress.

² World Bank, *Global Economic Prospects, June 2020* (Washington, D.C., 2020).

³ ESCAP, “Socio-economic response to COVID-19: ESCAP framework” (Bangkok, 2020).

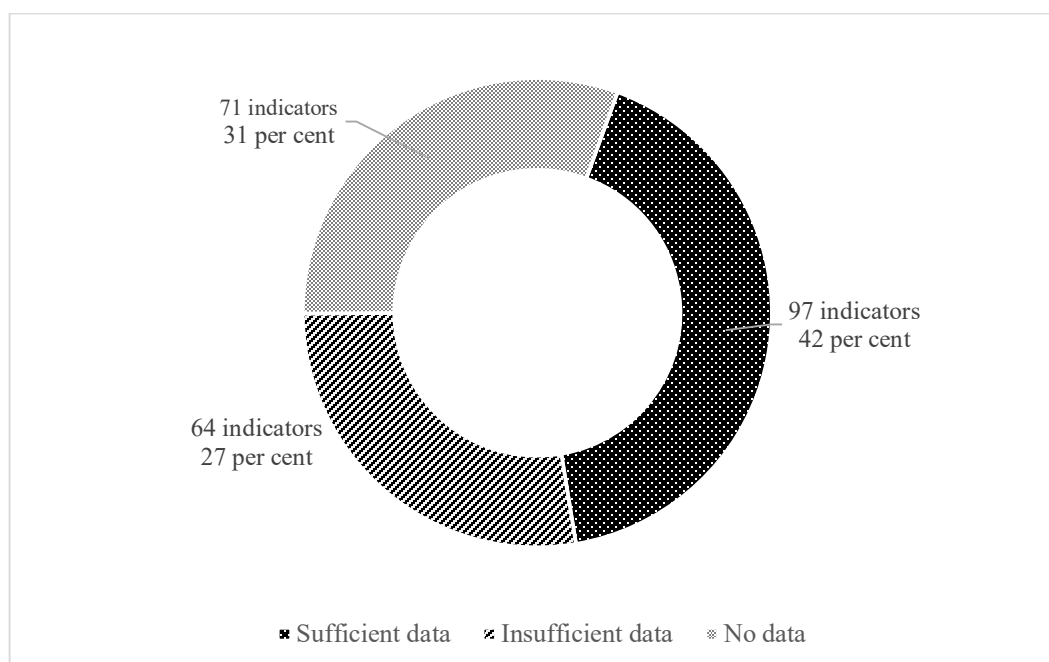
Figure I
Progress on the Sustainable Development Goals in the Asia-Pacific region, 2019



Source: *Asia and the Pacific SDG Progress Report 2020* (United Nations publication, Sales No. E.20.II.F.10).

9. Alarmingly, in Asia and the Pacific, more than half of the targets are not measurable owing to a lack of data. Even though data availability for the Sustainable Development Goal indicators has substantially increased, from 25 per cent in 2017 to 42 per cent in 2019, data are either unavailable or insufficient for more than half of the indicators, including several for Goals on which progress has been slow (see figure II).

Figure II
Data availability for Sustainable Development Goal indicators in the Asia-Pacific region, 2019



Source: Asia and the Pacific SDG Progress Report 2020 (see figure I).

10. As mentioned previously, only a few of the Sustainable Development Goals are directly connected to transport through targets and indicators, namely targets 3.6 on road safety, 9.1 on infrastructure and 11.2 on providing access to safe, affordable, accessible and sustainable transport systems for all and expanding public transport. Moreover, the lack of data, especially for tier II and tier III indicators, is affecting the measurement of progress on these targets (see table 1).

Table 1
Transport-related Sustainable Development Goal targets and indicators

<i>Sustainable Development Goal target</i>	<i>Sustainable Development Goal global indicator</i>	<i>Tier</i>	<i>Tier description</i>
3.6: By 2020, halve the number of global deaths and injuries from road traffic accidents	3.6.1: Death rate due to road traffic injuries	I	Conceptually clear, has an internationally established methodology, standards are available and data are regularly produced by at least 50 per cent of countries and countries regularly produce data for 50 per cent of the population in every region for which the indicator is relevant
9.1: Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	9.1.1: Proportion of the rural population who live within 2 km of an all-season road	III	No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested.
	9.1.2: Passenger and freight volumes, by mode of transport	I	See tier I description above
11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	11.2.1: Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities	II	The indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries

Source: Statistics Division of the Department of Economic and Social Affairs of the Secretariat.

11. While data are widely available for indicator 3.6.1, progress on target 3.6 is not occurring at a pace fast enough to compensate for the rise in population and the rapid motorization of transport taking place in many parts of the world, particularly Asia and the Pacific (see document ESCAP/CTR/2020/4). Improvement has been achieved in important areas, such as legislation, vehicle standards and road safety management systems, including the deployment of smart transport technologies, but has not been uniform across the region, with death rates still higher in low- and middle-income countries than in high-income countries. Asia and the Pacific still accounts for more than 60 per cent of global road crash deaths. Accordingly, it is predicted that target 3.6, on halving the deaths from road traffic crashes by 2020, is no longer attainable.

12. Target 9.1 has two transport-related indicators. The first, indicator 9.1.1, is the proportion of the rural population who live within 2 km of an all-season road. Progress on this tier III indicator is being measured using the World Bank

Rural Access Index. As at 2018, data was readily available for only 20 countries, and the largest share of available information pertained to Africa. It may be worth highlighting the road-centric character of the Index, which does not account for the connectivity provided by other modes of transport in remote rural areas, such as air, inland navigation and railways.

13. The second indicator under this target is a tier I indicator, namely indicator 9.1.2: passenger and freight volumes, by mode of transport. Passenger and freight volumes are respectively measured in passenger-kilometres and ton-kilometres and broken down by mode of transport. Aviation passenger and freight volumes are reported for the air carriers through the International Civil Aviation Organization. For the other modes of transport, data for States members of the Economic Commission for Europe and the International Transport Forum of the Organization for Economic Cooperation and Development (OECD) are typically available, although some data gaps remain for some modes owing to intermittent collection. Maritime data are not widely available, so only data on tons (rather than ton-kilometres) at the regional level have been collected. Data on indicator 9.1.2 are not as widely available for the Asia-Pacific region as for other regions, making it difficult to assess regional progress.

14. Indicator 11.2.1, namely the proportion of the population that has convenient access to public transport, by sex, age and persons with disabilities, is a tier II indicator. Access to public transport is considered convenient when an officially recognized stop is accessible within a distance of 0.5 km from a reference point, such as a home, school, workplace or market. For example, for the location of public transport stops in a city, data from city administration or service providers or Geographic Information System (GIS) can be used; for information on living places within 500 m of public transport stops sources, census and GIS data can be used; for the number of residents per dwelling unit, data from census or household surveys can be used. Household surveys used to collect information on the proportion of households that declare they have access to public transport within 0.5 km can also be used to collect information on service quality.

15. Data on indicator 11.2.1 are not easily available, as no internationally agreed methodology exists for measuring the convenience and service quality of public transport. In addition, harmonized global data on urban transport systems do not exist. Expert consultations have therefore been focused on refining the method of analysis and recommending a new technique that would expand the utilization of diverse existing databases, making it possible to conduct trend analysis over the years. A range of global transport data have now been collected, including on usage, road networks, safety, transport fatalities and frequency of transport. Data are currently available for 38 countries in Asia, Europe, North America, Latin America and the Caribbean. Given the current trend, the custodian agencies predict that indicator 11.2.1 will not be met within the set deadline.

16. Against this background, the Economic and Social Commission for Asia and the Pacific (ESCAP) developed the sustainable urban transport index, an Excel-based tool that can help to summarize, track and compare the performance of urban transport systems in cities. The index is based on 10 indicators covering planning, access, safety, quality and reliability, affordability and emissions. The index can help to assess city-level progress on Sustainable Development Goal target 11.2 and support the implementation of the New Urban Agenda. Following successful pilot applications, the

sustainable urban transport index was endorsed by the Committee on Transport at its fifth session, held in November 2018.

17. This foregoing overview paints an alarming picture: globally, none of the transport-related targets are expected to be met within the set deadlines. Furthermore, the lack of data on these indicators for Asia and the Pacific hinders the region's capacity to accurately assess progress and carry out corrective actions and policies, where needed. More importantly, any progress made on the targets and indicators that directly relate to transport would still not be adequate to ensure sustainable transport at large. Of the four targets listed in table 1, two are focused exclusively on various dimensions of road transport, namely road safety to the exclusion of other modes for which safety is a critical factor, and access to roads to the exclusion of other connectivity options that may be available and, in some cases, more environmentally friendly. Meanwhile, the data on passenger and freight volumes by mode offer little guidance on the overall sustainability of the sector. Lastly, the environmental impacts of transport are entirely absent from the agreed indicators for the transport-related, climate-related and energy-related targets, nor are the issues of affordability and equitable access successfully measured in the current framework. In other words, it could be contended that even the achievement of all the transport-related targets would not necessarily mean that transport systems and services had become fully sustainable, nor that transport's overall contribution to the achievement of the Sustainable Development Goals had been maximized.

18. It follows that in the absence of appropriate and sector-specific metrics, there is currently no way to accurately measure the contribution of transport to the Sustainable Development Goals and targets that are indirectly linked to transport. This lack of accuracy impedes the formulation of specific, measurable, achievable and time-bound objectives, related strategies and means of implementation for the sector. Accordingly, understanding the range of positive and negative interactions among the Goals as they relate to sustainable transport and connectivity are key to unlocking their full potential and ensuring that progress on some Goals is not made at the expense of others. This becomes especially important when taking into account the impact of the COVID-19 pandemic on the capacities of member States in the region to deliver on the 2030 Agenda and the need to accelerate progress during the decade of action for the Goals.

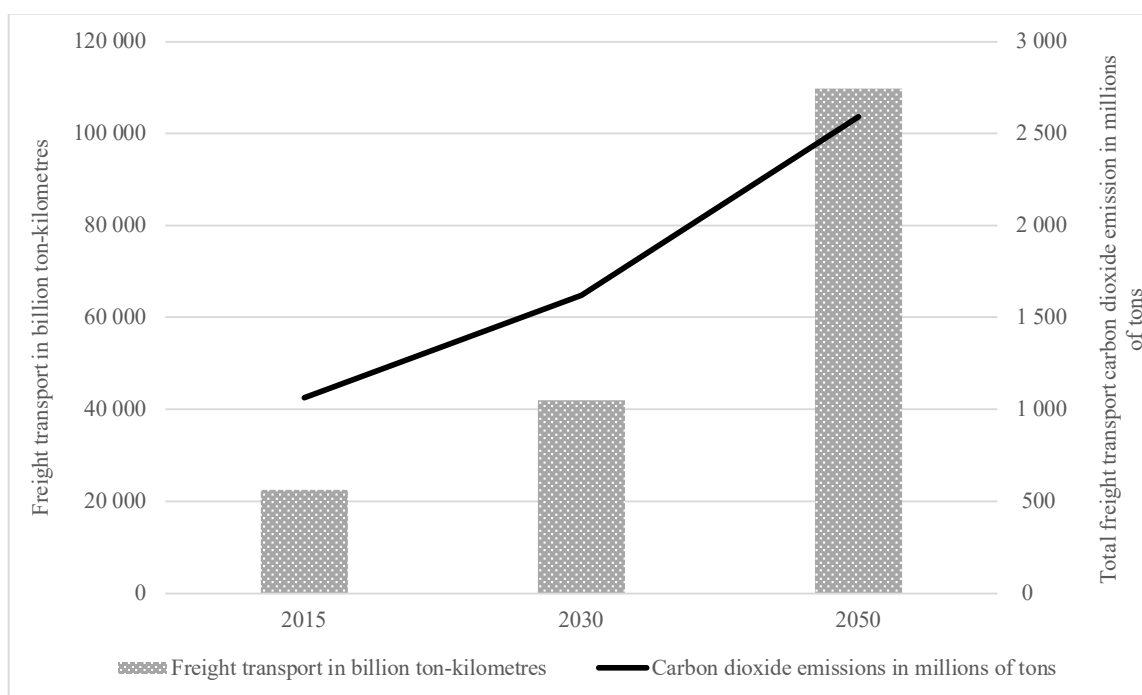
III. Sustainable transport challenges: an overview of interlinked elements

19. The availability of reliable transport infrastructure and services that enable people and goods to reach a range of destinations at reasonable costs and within reasonable time frames is not only essential for economic growth but also for ensuring a balanced distribution of economic and social benefits alongside the proper management of the environmental impact of human development. Accordingly, transport connectivity has hard and soft dimensions and, importantly, is associated with concepts of access.⁴ It also underpins supply chains and enhances their efficiency, determines transport costs and trade competitiveness, and boosts resilience to economic shocks, protracted trends and climate-related disasters.

⁴ *Review of Sustainable Transport Connectivity in Asia and the Pacific: Addressing the Challenges for Freight Transport* (United Nations publication, Sales No. E.20.II.F.2).

20. While gains from well-connected transport are generally acknowledged, the potential for the sector to erode its own benefits when business-as-usual transport practices are maintained is also increasingly recognized. Freight transport activity in particular, which grows in tandem with the global population as well as the world economy and trade, correlates positively with negative societal and environmental externalities unless properly managed. Global freight demand is expected to triple between 2015 and 2050, and transport carbon dioxide emissions are projected to grow by 60 per cent by 2050 (see figure III for projected regional growth).⁵ By some estimates,⁶ freight trucks are the fastest growing source of global oil demand, projected to account for 40 per cent of oil demand growth by 2050 and 15 per cent of the increase in global carbon dioxide emissions. Given current carbon emissions rates and policies in effect, even in a scenario in which low-carbon technologies for transport have been deployed, the best that can be expected for overall emissions in 2050 is that they not surpass 2015 levels. Considering that transport volumes are projected to double or triple over the same period, that scenario could be considered a success; still, it would not be sufficient to meet the targets on limiting average global temperature rise.

Figure III
Projected growth in freight transport and carbon dioxide emissions from transport in the Asia-Pacific region, 2015–2050



Source: ESCAP calculations based on data provided by the International Transport Forum.

⁵ International Transport Forum, *ITF Transport Outlook 2019* (Paris, OECD, 2019).

⁶ International Transport Forum, “Towards road freight decarbonisation: trends, measures and policies”, International Transport Forum Policy Papers (Paris, OECD, 2018).

21. The growth could be offset by greater efficiency in the use of road transport and greater use of other modes of transport, including integrated intermodal transport networks combining rail, coastal shipping and inland waterways. A high potential for improvement lies in the greater synergy that would result from combining different transport modes into a transport chain that is efficient, reliable, safe, environmentally sound and resilient. By way of example, prompted by the growing transport demand arising from intraregional and interregional trade and the renewed focus of policy attention on revitalizing railways for long-distance freight transport, rail transport between Europe and Asia has been growing exponentially over the past few years and has maintained its performance even during the COVID-19 pandemic. Since 2011, more than 11,000 freight trains have travelled from China to Europe and back. In 2018, 6,300 freight trains, representing an increase of 72 per cent over the previous year, transported goods from China to Europe; of these, 2,690 made the return trip to China,⁷ with an average transit time of 5.5 days between the European Union and the western border of China.⁸ Efforts to improve the mode share of railways are mostly focused on improving operational efficiency.

22. The consolidation of significant quantities of goods is required for inland waterways, rail and coastal shipping and combinations of these modes with final road haulage to reach sufficient levels of productivity to compete with road prices. This is one of the reasons why road transport is often used for long distances when the amount of goods transported is not sufficient to justify the use of other modes typically reserved for heavier or larger amounts of freight. Lastly, in many cases, road transport is selected for long distance freight simply because it is the only solution available to shippers. It could be argued that competition between transport modes does not exist in such cases. The provision of another transport mode, as an alternative to road freight haulage, requires massive, indivisible and irreversible investments, which are rarely able to match private profitability rates and have to be provided, or at least guaranteed, by public authorities in many countries. Efforts to reduce greenhouse gas emissions by reducing road dependency would, thus, entail using all available tools simultaneously, including technology and standardization, organization and management, and regulation and taxation. In any case, the modal shift will only provide a limited part of the solution, and the main prospects for progress are expected to remain largely with the decarbonization of road transport itself.

23. In that regard, energy efficiency is recognized as one of the most cost-effective means of reducing emissions from road transport. The strategies for reducing emissions are mainly focused on avoiding unnecessary trips, measures to manage transport, shifting trips to more sustainable modes for passenger and freight, improving the efficiency of transport operations, market penetration of electric vehicles and the use of renewable energy. Rapid deployment of electric vehicles could deliver emissions reductions at scale while also reducing dependence on fossil fuels. Moreover, pairing electric vehicles with energy derived from renewable sources would further amplify emissions reductions. Current regional efforts aimed at decarbonizing electricity grids together with policies that promote setting up infrastructure for

⁷ Belt and Road News, “China sends a record 6,300 cargo trains to Europe in 2018”, 5 January 2019.

⁸ See United Transport and Logistics Company – Eurasian Rail Alliance, “UTLC Eurasian Rail Alliance”. Available at <https://utlc.com/en/> (accessed on 25 August 2020).

charging electric vehicles could facilitate the wide-spread use of electric vehicles.

24. It is worth noting that nearly half of global transport emissions relating to passenger traffic are generated by urban travel.⁹ In the Asia-Pacific region, many cities are facing air pollution peaks, and the number of early deaths from particulate matter less than 2.5 microns in diameter (PM2.5) is estimated to increase by more than 50 per cent between 2015 and 2030. Introducing low- and ultra-low-sulphur fuels along with corresponding vehicle emissions standards is likely to reduce cumulative black carbon emissions by 7.1 million tons by 2050 and annual PM2.5 emissions by more than 85 per cent. As a result, it is estimated that by 2050, annual premature deaths will decline by 470,000, and net climate benefits will be equivalent to preventing 14 trillion miles of travel by passenger vehicles.¹⁰

25. As stated in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, the understanding of how low-carbon transport and energy technologies will evolve is not well developed, and assessing this gap remains challenging for the transport sector. In response, ESCAP is currently scaling up its support for the policy interventions needed in the region to move towards a climate-neutral transport sector, including an evaluation of the modal split and the identification of conditions that would be conducive to a shift to more environmentally friendly modes of transport such as railways and inland water transport, as well as walking or cycling in the case of passenger transport.

26. Other priority issues include strengthening port-hinterland connections by rail and strategically locating intermodal and logistics facilities to capitalize on the competitive strength of rail transport. Many production, distribution and freight processing sites in the region are only accessible by road. It could be contended that the choice of a freight transport mode is critically influenced by the location of these sites and that, consequently, the modal split is biased in favour of road transport long before shippers have to make their decision. In other words, modal split is only partially attributable to actual competition between modes, given that competition is only possible in context in which shippers have an adequate, pre-existing choice between modes, which is not the case in every country or along every route, especially with regard to infrastructure.¹¹

27. To measure progress on connectivity in the Asia and Pacific region, ESCAP developed a transport connectivity index in 2019, in which scores indicate how well each transport mode is connected in each country in the region. The index shows that despite evident progress in the region, the level and quality of infrastructure provision remain uneven and relatively low in many Asia-Pacific countries, and operational challenges persist, with commensurate effects on supply chain efficiency. Interestingly, while the region's performance with regard to connectivity and logistics is quite strong across global indicators, there is significant subregional variation, with a few top performers driving up the regional average. According to the index, East and North-East Asia are in the lead, with North and Central Asia, which

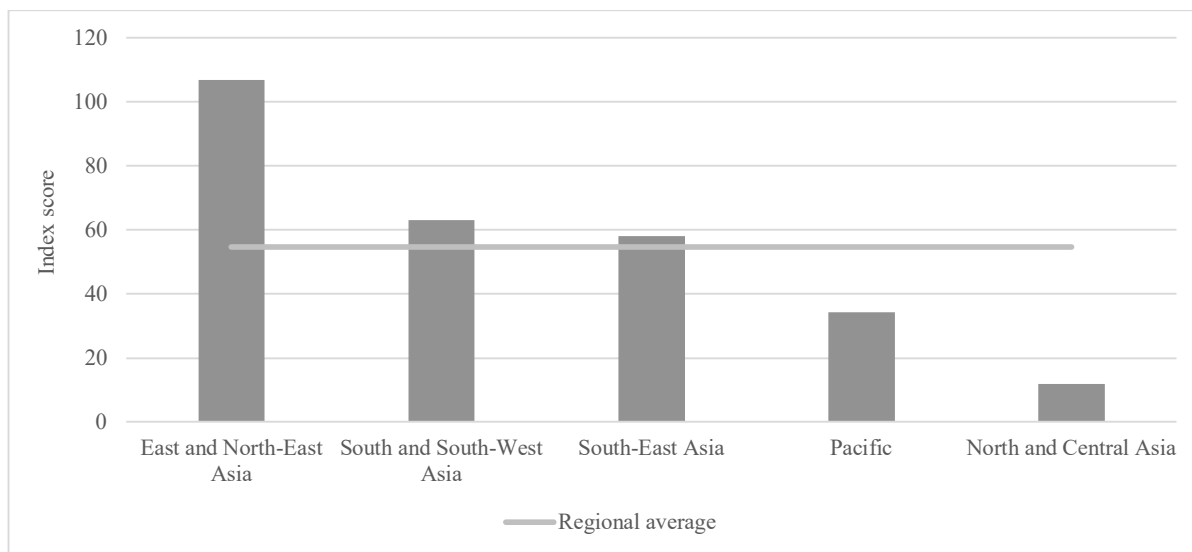
⁹ International Transport Forum, *ITF Transport Outlook 2017* (Paris, OECD, 2017).

¹⁰ International Council on Clean Transportation and United Nations Environment Programme, "Cleaning up the global on-road diesel fleet: a global strategy to introduce low-sulphur fuels and cleaner diesel vehicles" (Paris, 2016).

¹¹ Michel Savy, "Freight transport modes: competition, cooperation or areas of advantage?" (Brussels, European Automobile Manufacturers' Association, 2009).

includes a large number of the region’s landlocked countries, and the Pacific lagging behind the regional average (see figure IV).¹²

Figure IV
Transport connectivity index of the Economic and Social Commission for Asia and the Pacific by subregion, 2019



Source: *Review of Sustainable Transport Connectivity in Asia and the Pacific: Addressing the Challenges for Freight Transport* (United Nations publication, Sales No. E.20.II.F.2).

28. The connectivity gaps among subregions and for the countries with special needs suggest that considerable financial resources will be needed to reach the performance levels necessary to achieve the Sustainable Development Goals. According to recent ESCAP analysis, the developing countries of Asia and the Pacific will need an additional annual investment of \$126 billion in transport infrastructure, which represents 0.4 per cent of the region’s GDP. The bulk of the investment needs to be directed towards countries with special needs, in particular landlocked developing countries.¹³

29. In a study of the impacts of improved intermodal connectivity, it was found that a 10 per cent improvement in transport efficiency that had been achieved through improved supply-chain connectivity in the Asia-Pacific Economic Cooperation region generated more than \$21 billion in GDP.¹⁴ Improvements in liner shipping connectivity since 2004 have been associated with a 30 per cent increase in manufactured imports to China and a 40 per cent increase in manufactured exports from China.¹⁵ The lack of a direct maritime

¹² See *Review of Sustainable Transport Connectivity in Asia and the Pacific: Addressing the Challenges for Freight Transport* (United Nations publication, Sales No. E.20.II.F.2).

¹³ ESCAP, “Costing the transport infrastructure component of SDGs in Asia and the Pacific”, MPFD Policy Briefs, No.89 (Bangkok, April 2019).

¹⁴ Asia-Pacific Economic Cooperation, “The economic impact of enhanced multimodal connectivity in the APEC region” (2010).

¹⁵ John Kornerup Bang, Majbritt Greve, and Thomas Westergaard-Kabelmann, “A Leading trade nation: the role of container shipping and logistics in enhancing trade and economic growth in China”, Technical Report (Copenhagen, Maersk, 2014).

connection with a trade partner reduces the value of a country's exports by an estimated 42 to 55 per cent. Where the absence of a direct connection requires additional trans-shipments export values are lowered by 20 to 25 per cent.¹⁶ With regard to liner shipping connectivity levels in 2019, the top five best-connected countries were in Asia, four were in Europe and one was in North America. In China, the best-connected country, liner shipping connectivity has improved by more than half since 2006. However, there is a growing connectivity divide between the most and least connected countries.¹⁷

30. The small island developing States are among the least connected countries and continue to underperform owing to prohibitive trade costs and uncompetitive trade, among other factors. The unique transport and logistical challenges of small island developing States greatly undermine the realization of their sustainable development aspirations. Although of critical importance, shipping connectivity needs to be considered in conjunction with an array of other factors to provide a full picture. This is particularly true for countries where insufficient hinterland logistics connectivity is a magnified challenge. Landlocked developing countries are a typical example, where trade costs for manufactured products were estimated to be equivalent to a 219 per cent ad valorem tariff. In other words, for every \$1 it cost to manufacture a product, another \$2.19 was added in the form of trade costs. Meanwhile, for developed economies, only \$1.34 was added.¹⁸

31. Lastly, to support sustainable development, enhanced transport connectivity needs to fully incorporate social development imperatives as envisaged in the 2030 Agenda. This can be partially addressed by considering the impact of demographic trends on transport and mobility needs as well as safety. However, greater political visibility and financial support should still be directed towards special social development issues in order to redress the existing inequalities attributable to shortages in the availability and quality of transport services, which have been further exacerbated by the COVID-19 pandemic. These issues include the health and safety concerns of transport workers who have been on the front lines for the continued supply of essential goods within and across borders, as well as the need to introduce a social protection net for transport operators. The latter issue is particularly important, as the road transport operator segment of the sector is dominated by small and medium-sized enterprises, which are more vulnerable to the socioeconomic impacts of the pandemic.

32. In addition, elements such as gender equality and the empowerment of women can be well served through transport policy reforms. For instance, women constitute half of the world's working population but generate only 37 per cent of global GDP.¹⁹ This can be attributed in large measure to

¹⁶ United Nations Conference on Trade and Development (UNCTAD), *Maritime Connectivity and Trade*, Policy Issues in International Trade and Commodities Research Study Series No. 70 (New York and Geneva, 2015).

¹⁷ *Review of Maritime Transport 2019* (United Nations publication, Sales No. E.19.II.D.20).

¹⁸ UNCTAD, "Trade facilitation and development: driving trade competitiveness, border agency effectiveness and strengthened governance", Transport and Trade Facilitation Series, No. 7 (Geneva, 2016).

¹⁹ Marie Thynell, "Roads to equal access: the role of transport in transforming mobility", *Transport and Communications Bulletin for Asia and the Pacific, No.87 – Transport and Sustainable Development Goals* (ST/ESCAP/SER.E/87).

immobility, or “transport poverty”.²⁰ It is well documented that women, particularly in low- and middle-income countries, have historically had specific mobility patterns owing to their socially determined reproductive, productive and community-related gender roles.²¹ For example, women may turn down employment opportunities further away from home if the transport system does not enable them to travel to and from work in time to also meet their domestic and family care obligations or if it does not provide ample space and flexibility for them to travel with dependents and household goods. Instead, women may have little choice but to accept lower-paid local job opportunities or informal income sources closer to home. At the same time, though, women’s travel patterns are becoming increasingly diverse, making accurate and regular assessments of their travel an indispensable step in devising gender-sensitive transport policies.

33. In Asia, an estimated 700 million people are negatively impacted by socio-spatial isolation. As road construction in remote areas is costly and the number of beneficiaries per kilometre of road is relatively low, investment in rural roads is lagging. It has also been documented that poorer residential areas in today’s megacities often lack access to road infrastructure and connectivity with the rest of the city.

34. The transport sector has traditionally been a labour-intensive and employment-generating sector. However, the outlook for transport development may include a trend of reduced employment opportunities or increasing demand for skilled employees as a result of technology and automation. This may create new opportunities for highly specialized workers to support the planning and implementation of intelligent transportation systems in the region. However, the social impact of the reduced demand for low-skilled transport workers may generate pressure on unemployment rates and poverty levels.

35. In a widely noted study published in 2013,²² in which the probability of computerization in 702 occupations was examined, it was found that the labour of most workers in transport and logistics could be automated to some extent in the future, including taxi, freight and public transport drivers (see figure V). It may be difficult to retrain displaced employees to transition to new roles. In this light, emerging national and regional transport policies will only fully realize their role in social development if they are able to eventually incorporate lifelong learning and adult education systems as well as social safety nets that would allow for repeated and viable professional transitions within and beyond the sector.²³

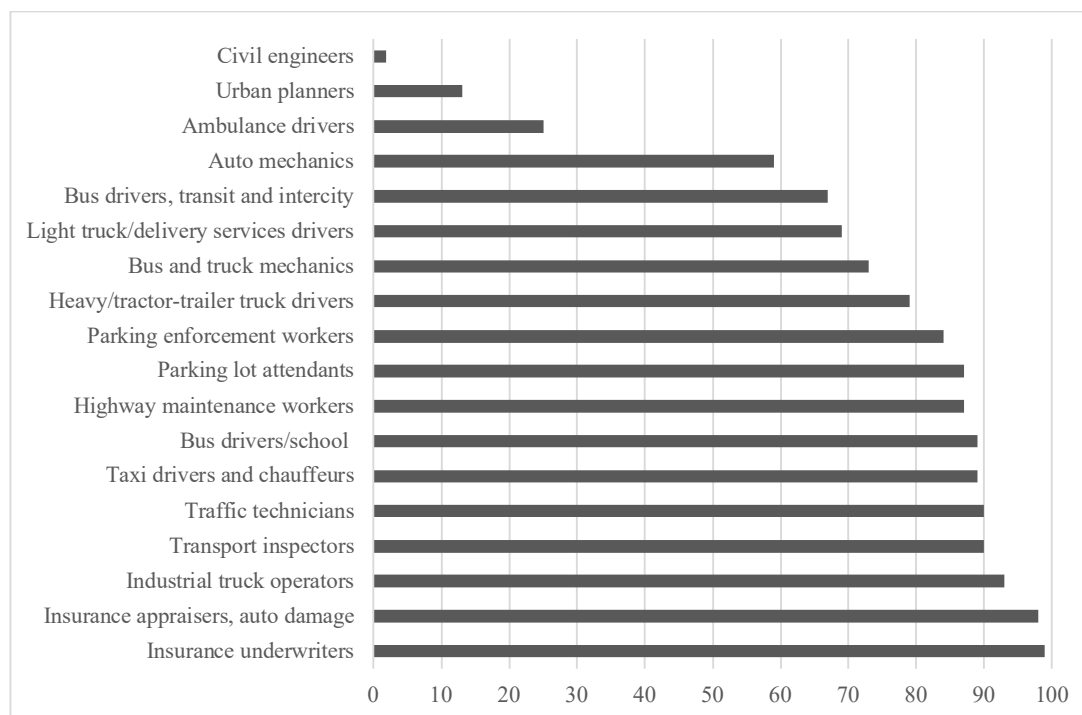
²⁰ Karen Lucas and others, “Transport poverty and its adverse social consequences”, *Proceedings of the Institution of Civil Engineers – Transport*, vol. 169, Issue 6 (December 2016).

²¹ Asian Development Bank, *Gender Toolkit: Transport – Maximizing the Benefits of Improved Mobility for All* (Manila, 2013).

²² Carl Benedikt Frey and Michael Osborne, “The future of employment: how susceptible are jobs to computerization?”, Working Paper (Oxford, University of Oxford, 2013).

²³ See McKinsey Global Institute, “A future that works: automation, employment and productivity” (New York, McKinsey and Company, 2017).

Figure V
Probability of automation of select mobility-related occupations
 (Percentage)



Source: Carl Benedikt Frey and Michael Osborne, “The future of employment: How susceptible are jobs to computerization?”, Working Paper (Oxford, University of Oxford, 2013).

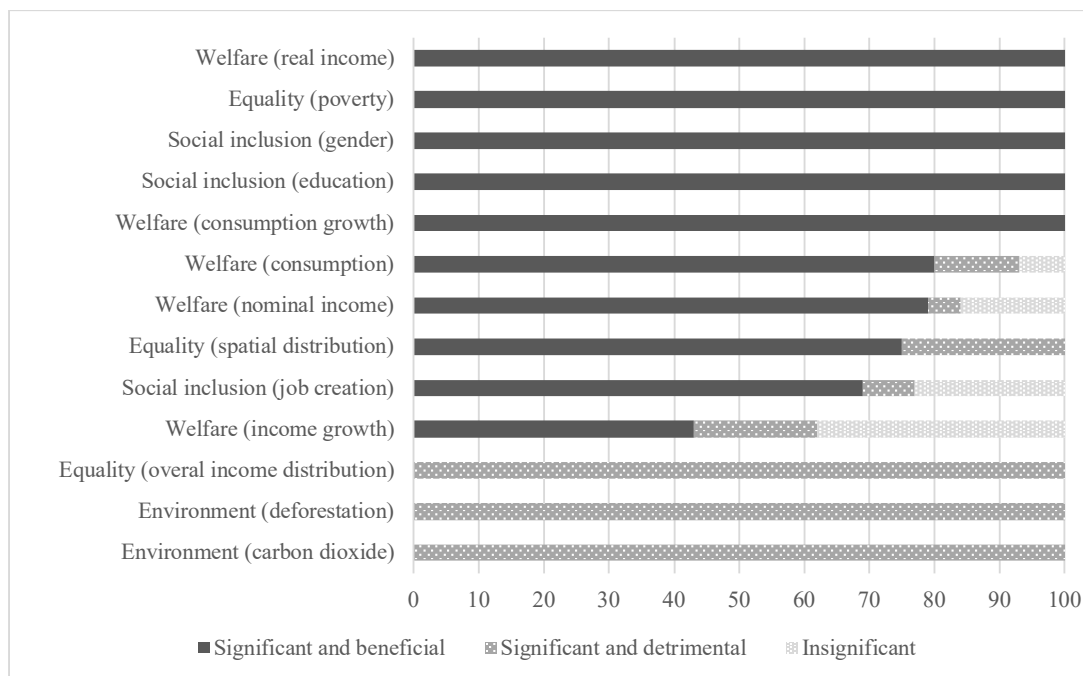
36. The conclusion generally drawn from the most recent connectivity assessments is that current infrastructure plans in Asia tend to underestimate the role of transport connectivity in local development. According to a recent report on freight connectivity in Central Asia, while transport corridors are critical to overall connectivity, their development is not always aligned with the objective of ensuring the connectivity of local businesses, which is crucial for realizing benefits from agglomeration economies and positive social impacts. In addition, project selection methodologies often do not systematically incorporate comprehensive cost-benefit analysis, multiple-criteria analysis or risk and uncertainty analysis.²⁴ Lastly, it has been observed that use of quantitative models is limited, and the most frequently cited limitation is the shortage of available and reliable data, especially with regard to measuring the social, spatial and environmental impacts of enhanced transport connectivity.

37. According to another recent report, interest is rising in the wider economic benefits of large transport projects, which include impacts on development outcomes including the following: (a) economic welfare (income, wages and consumption); (b) social inclusion (jobs, gender); (c) equity (poverty, inequality); (d) environmental quality (pollution, deforestation); and (e) economic resilience (unexpected losses resulting from large shocks or

²⁴ International Transport Forum, “Enhancing connectivity and freight in Central Asia”, International Transport Forum Policy Papers No. 71 (Paris, OECD, 2019).

protracted trends). Deciding, therefore, on how to enhance transport connectivity often involves trade-offs between multiple variables (figure VI).²⁵

Figure VI
Classification of economic impacts of transport corridor investments
 (Percentage)



Source: Mark Roberts and others, “Transport corridors and their wider economic benefits: a critical review of the literature”, Policy Research Working Paper, No. 8302 (Washington, D.C., World Bank, 2018).

38. For instance, boosting income can come at the expense of rising inequality. In planning international transport corridors, there may also be divergent interests in terms of international and domestic connectivity: for example, the shortest route may be more cost-efficient and, accordingly, more competitive, but a longer transport corridor may offer benefits in terms of domestic connectivity and territorial integration at the country level. Along those lines, scholars and institutions are increasingly incorporating social considerations in their assessments of corridor projects and stressing the varied impacts of transport investments across multiple economic and other actors.²⁶

39. In short, Asia and the Pacific has yet to fully define the optimal set of interventions, beyond investment in transport infrastructure, to include reforms and policies that would extend the wider economic benefits of that infrastructure to areas of unrealized economic potential or produce possible positive spillovers for social development. This optimal set of interventions should be defined and applied in further developing the regional transport infrastructure of the Asian Highway network, the Trans-Asian Railway

²⁵ World Bank and others, *The WEB of Transport Corridors in South Asia* (Washington, D.C., 2018).

²⁶ Julie Rozenberg and Marianne Fay, eds., *Beyond the Gap: How Countries Can Afford the Infrastructure They Need While Protecting the Planet – Sustainable Infrastructure Series* (Washington, D.C., World Bank, 2019).

network and dry ports of international importance as well as the regional port and shipping network.

IV. Conceptual framework for the next phase of the Regional Action Programme, for the years 2022 to 2026: accelerating progress on the Sustainable Development Goals

40. The efforts of development actors and member States towards sustainable transport vary and often tend to focus on one particular dimension, such as the environmental dimension (green transport), the social dimension (inclusive transport) or the economic dimension (efficient transport). However, sustainable transport should equally take into account the economic, social and environmental dimensions of the sector in an integrated manner to ensure synergies, complementarities and coherence.²⁷ Aligned with this approach, ESCAP-led regional cooperation and activities must support the development of transport systems that are safe, socially inclusive, accessible, reliable, affordable, fuel efficient, environmentally friendly, low carbon and resilient to shocks and disruptions.

41. The attainment of sustainable transport represents a significant challenge with multiple technical, operational and policy aspects. The design, testing and implementation of interventions require multidisciplinary, multi-country research. Promising interventions are not limited to introducing new transport technologies but also include changes in underlying infrastructure and operational conditions for transport and logistics processes.²⁸ Several constraints have evolved in recent years, despite the advancement in the applications of technology and efficient solutions in the transport sector. The lack of adequate infrastructure, high cost of freight transport, road congestion, traffic accidents and carbon dioxide emissions are some of the problems still militating against sustainable transport in the region.

42. Any initiative focused on environmental technology and social responsibility will remain unsustainable if the economic pillar is weak. The challenge in achieving sustainable transport is to define and progressively implement a coherent long-term strategy incorporating integrated policies and actions that eliminates or minimizes the trade-offs among the three dimensions of sustainable transport through the harnessing of technology, regional cooperation and cross-sectoral synergies. Such a strategy requires a comprehensive and long-term policy framework that would provide an overarching design for future progress in sustainable regional transport connectivity.

43. The decade of action for the Sustainable Development Goals is an opportunity to establish such a regional strategy in the form of the next phase of the Regional Action Programme, to be developed in 2021 and implemented by ESCAP and its member States over the period 2022–2026. The Regional Action Programme is intended to enable policymakers to employ the full range of options available to them with a view to realizing sustainable transport, comprising norm-setting, analysis and informed decision-making, and implementation mechanisms (see table 2).

²⁷ See TD/B/C.I/MEM.7/11.

²⁸ Lóránt Tavasszy and Maja Piecyk, “Sustainable freight transport”, *Sustainability*, vol. 10, Issue 10 (October 2018).

Table 2
Dimensions of transition to sustainable transport

<i>Dimension</i>	<i>General meaning</i>	<i>Implications for sustainable transport planning</i>
Normative	The basic principles and value orientations of sustainability	Sustainable transport is based on the environmental, social and economic pillars of sustainability
Analytical	The methodological tools to determine whether an action is sustainable or not	Knowledge on consequences for sustainability of intervention based on the availability of tools and data
Governance	The system of governance to promote and implement changes towards sustainability through institutions and policies	Organizational forms in the set-up of key government institutions, as well as transport planning and implementation, which promote the integration of sustainability.

Source: Adapted from Michael Bruhn Barfod and others, “Promoting sustainability through national transport planning”, *European Journal of Transport and Infrastructure Research*, vol. 18, No. 3 (January 2018).

A. Proposed key directions

44. In order to avoid the under-provision or underutilization of transport infrastructure and to better guide infrastructure development, the next phase of the Regional Action Programme could follow a supply chain approach to transport connectivity in which planning is linked with international trade and other policies such as environment and social protection. To that end, it will be necessary to assess the determinants of transport connectivity in all its dimensions to better inform the decisions of relevant policymakers and improve metrics used to assess modal (air, road, inland waterway and rail) and intermodal transport connectivity.

45. In addition, it will be important to develop and implement supportive regional and national regulatory frameworks that can enable integrated intermodal transport and improved connectivity but also ensure uninterrupted access and operations in cases of disruption or emergency.

46. Furthermore, the decade of action for the Sustainable Development Goals necessitates an understanding of the nexus between well-connected transport systems and sustainable development and climate action. To that end, the development of regionally harmonized metrics and methodologies would be a first step towards setting specific environmental targets for the transport sector in the region, to drive decarbonization efforts.

47. In parallel, it will be beneficial to focus on creating policy frameworks that foster innovation and leverage technology to advance the twin objectives of enhancing transport connectivity and promoting a sustainable and low-carbon development path. Importantly, intermodal transport connectivity can be promoted as a key climate action strategy in freight transport.

48. Lastly, the concrete ways in which transport can serve the social development agenda, notably gender equality, accessibility, safety, inclusiveness and social mobility, should receive special attention in policies and integrated holistically into implementation strategies. The next phase of the Regional Action Programme should, thus, help to produce broader and more concrete socioeconomic benefits from transport connectivity. In that regard, it could incorporate the key priority areas listed in table 3.

Table 3
Suggested priority areas for the next phase of the Regional Action Programme, for the years 2022 to 2026, to support the decade of action for the Sustainable Development Goals

<i>Dimension</i>	<i>Priority areas</i>
Economic	Regional connectivity and logistics (infrastructure and operations) Integration into global supply chains Resilience and shift towards sustainable freight
Social	Transport safety Accessibility Inclusiveness Gender
Environmental	Energy use Greenhouse gas emissions Other environmental externalities in freight and passenger transport, including urban and public transport

B. Means of implementation

49. Delivering on the 2030 Agenda through the implementation of the Regional Action Programme will require strengthened multi-stakeholder engagement and cooperation to facilitate the accurate assessment of local, national, subregional and regional needs and make it possible to capitalize on their interlinkages. In that regard, the private sector is a key stakeholder and can play a major role in achieving sustainable development, far beyond providing financing.

50. Businesses require stable institutions and robust regulatory frameworks to be able to operate effectively. A low-carbon green transport strategy developed in consultation with stakeholders, empowered by an inclusive and multisectoral institutional architecture and supported by a regional vision could provide a clear signal and long-term certainty to the private sector. The resulting stability would create an enabling environment for the growth of sustainable enterprises and green business. In this context, the next phase of the Regional Action Programme could serve to direct renewed attention towards strengthening the existing Intergovernmental Agreements on the Asian Highway Network, the Trans-Asian Railway Network and Dry Ports as well as developing new ones.

51. Another element that could be strengthened in the next phase of the Regional Action Programme is the scope and design of analytical and research activities to support informed decision-making. Beyond stocktaking, a focus on developing regional databases and developing benchmarks as well as launching key methodologies for assessing progress will be instrumental.

52. Lastly, capacity-building is unique in that it can be a means to an end and an end in and of itself. Attempts to measure and evaluate capacity-building efforts must recognize capacity-building in both of these roles to truly capture its impact. Strengthening capacity-building activities and basing them on thorough needs assessments could better serve the local or national actors, institutions and organizations. Doing so will strengthen the responsiveness, ownership and sustainability of any intervention. Experience has shown that while financial resources are vital, they cannot singlehandedly sustain the capacity-building process. Training, in particular, may have only short-term value unless it is accompanied by changes at other levels that enable the new skills to be used. Therefore, designing a better-balanced mix of activities and interventions could be part of the next phase of the Regional Action Programme.

53. In all the elements of the next phase, intended outcomes could be more specifically linked to the Sustainable Development Goals and incorporate objectives that could measurably contribute to the 2030 Agenda and other global commitments such as the Paris Agreement.

V. Issues for consideration by the Committee

54. The data on the Sustainable Development Goals in the region suggest that urgent interventions are needed to accelerate progress. The transport-related targets and indicators are insufficient to achieve fully sustainable transport systems, networks and services in the region. Systemic, integrated and regionally coordinated efforts are needed to fully capture all the dimensions of sustainable development in sectoral policies.

55. In light of the decade of action for the Sustainable Development Goals, the next phase of the Regional Action Programme should be aligned with the call for accelerated and transformative actions for achieving the Goals and for articulating a comprehensive vision for the region that equally addresses economic growth, environmental protection and social development objectives.

56. The Regional Action Programme, therefore, while continuing to prioritize traditional development areas such as infrastructure and operational land and maritime connectivity, logistics, smart transport, road safety and urban transport, can also adopt a more holistic approach to include the

economic, environmental and social dimensions of transport development and operations in the design of outcomes and activities.

57. To that end, the Committee may wish to take the following actions:

(a) Consider the proposed priority areas to be included in the development of a draft of the next phase of the Regional Action Programme, for the years 2022 to 2026, that would balance economic, social and environmental dimensions of transport and support the decade of action for the Sustainable Development Goals;

(b) Request the secretariat to take the appropriate steps to convene consultations with members and associate members on the next phase of the Regional Action Programme in preparation for the fourth Ministerial Conference on Transport, to be held in 2021.
