

**Economic and Social Commission for Asia and the Pacific****Seventy-ninth session**

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Item 4 (f) of the provisional agenda*

Review of the implementation of the 2030 Agenda for Sustainable Development in Asia and the Pacific and issues pertinent to the subsidiary structure of the Commission: transport**Enhancing the environmental sustainability of transport systems to support climate action in Asia and the Pacific****Note by the secretariat***Summary*

The present document contains an outline of some of the activities and new initiatives being carried out under the environmental dimension of the Regional Action Programme for Sustainable Transport Development in Asia and the Pacific (2022–2026).

The demand for transport in Asia and the Pacific is projected to grow by more than 150 per cent between 2015 and 2050. As a result, carbon dioxide emissions are expected to increase by 50 per cent over the same period. More ambitious transport policies are required in order to reverse the growth in emissions from the transport sector and enhance environmental sustainability.

Environmental sustainability and the decarbonization of the transport sector in the region can be achieved by reducing the distance that people and goods travel; shifting to sustainable transport modes; promoting mass public transport systems; improving vehicle, fuel and system efficiency; adopting low-carbon technologies and innovations; and transitioning to electric modes of transport. Transport infrastructure and systems also need to be transformed in order to support changes in the behaviour of transport users.

The Economic and Social Commission for Asia and the Pacific may wish to review the present document and encourage active engagement of its members and associate members in the planned activities of the regional cooperation mechanism for low-carbon transport; the Asia-Pacific initiative on electric mobility; and the implementation of the 10 guiding principles for sustainable freight transport in Asia and the Pacific. The Commission may also wish to consider encouraging its members to leverage the existing intergovernmental platforms to promote, participate in and implement the regional cooperation mechanism for low-carbon transport.

The Commission may further wish to share information on innovative policies and actions taken at the national, subregional or regional levels to enhance the environmental sustainability of and reduce greenhouse gas emissions from the transport sector in the region, specifically in respect of land, rail and maritime transport.

* ESCAP/79/1/Rev.2.

I. Introduction

1. Reducing carbon emissions from the transport sector can contribute to climate change mitigation, and climate-proofing infrastructure can reduce the adverse effects of the transport sector on climate change.

2. The transport sector is one of the fastest growing sources of carbon dioxide (CO₂) emissions. According to one report, in 2018 the sector was responsible for 24 per cent of direct CO₂ emissions from fuel combustion globally. In the same year, the Asia-Pacific region accounted for 27 per cent of total transport sector emissions.¹ At present, the region is not on track to meet the net-zero decarbonization target to limit the temperature increase to 1.5°C above pre-industrial levels by 2050, as called for in the Paris Agreement. In addition, CO₂ emissions from the transport sector are projected to continue to increase by more than 50 per cent by 2050² in the Asia-Pacific region.

3. The demand for passenger transport is projected to grow most significantly in Asia and the Pacific, where population and economic growth are expected to be the highest. In the Asia-Pacific region, there is also high demand for freight transport by road, rail and inland waterways, as well as domestic shipping and aviation transport. Furthermore, urban transport demand in Asia and the Pacific is higher than in any other region, accounting for 40 per cent of global transport activity in 2015. At the same time, non-urban transport demand is projected to triple by 2050. Therefore, without additional policy interventions, CO₂ emissions in the region are expected to increase over the next 30 years.

4. Despite growing transport demand and increased CO₂ emissions, the Asia-Pacific region has the potential to achieve economies of scale in emerging low-carbon transport technologies and systems, while influencing global climate action.

5. In parallel, stronger collaboration in the Asia-Pacific region can influence global climate action, especially as countries implement the Paris Agreement at the national level through the development of transformational plans. Regional collaboration contributes to the identification of regional and national priorities, while aligning with global decarbonizing transport efforts. Regional collaboration has also been recognized as a key catalyst for global progress and will play an increasingly critical role in making progress towards the goals of the Paris Agreement. A sectoral and regional approach to collaboration could harmonize national climate and transport goals while enhancing the influential role countries in Asia and the Pacific play in global climate change and transport policy processes.

6. In general, environmental sustainability and the decarbonization of the transport sector in the region can be achieved by reducing the distance that people and goods travel; shifting to sustainable transport modes; promoting mass public transport systems; improving vehicle, fuel and system efficiency; adopting low-carbon technologies and innovations; and transitioning to electric

¹ Council for Decarbonising Transport in Asia, *The Path to Zero: A Vision for Decarbonised Transport in Asia – Overcoming Blind Spots and Enabling Change* (2022).

² Organisation for Economic Co-operation and Development (OECD) and International Transport Forum, *ITF Transport Outlook 2021* (Paris, OECD Publishing, 2021).

modes of transport. Transport infrastructure and systems also need to be transformed in order to support changes in the behaviour of transport users.

7. Some common challenges mentioned by States members of the Economic and Social Commission for Asia and the Pacific (ESCAP) during consultations on low-carbon transport include the development of strategies for freight transport, as green freight policies are still lacking in many countries due to the multiple stakeholders involved and the uncertainty on the regulation and development of green freight. In addition, the transformation of vehicles with internal combustion engines into electric vehicles will require substantive investments that many countries lack. Governments and the private sector would need to work closely together to build an ecosystem that could support the electrification transition. For many countries considering the development of heavy-duty electric vehicles for freight transport, the sizeable investment needed for such vehicles and the search for renewable energy sources, including hydroelectric power, are critical issues, since road freight transport is responsible for a significant percentage of fuel consumption.

8. Other common challenges in the Asia-Pacific region include the rapid growth in the number of vehicles, especially two-wheelers; a relatively low penetration rate for electric vehicles; urban air pollution; and the fact that freight transport is responsible for the largest share of CO₂ emissions.

9. More investment in research and development for low- or zero-carbon transport would therefore need to be carried out on topics including the use of various natural resources for battery technologies and the retrofitting of vehicles.

10. Implementing low-carbon transport policies is complex, often due to the number of different ministries involved. A strong spirit of collaboration among the various ministries, including those for transport, environment, energy, finance, planning and investment, industry, commerce, and trade, is therefore critical to the achievement of national goals to reduce transport emissions.

II. State of low-carbon transport in Asia and the Pacific

11. The Regional Action Programme for Sustainable Transport Development in Asia and the Pacific (2022–2026) was adopted at the Fourth Ministerial Conference on Transport, held in Bangkok and online in December 2021. The Regional Action Programme draws concrete links to the Sustainable Development Goals and targets, either directly or indirectly, including Goal 1 (No poverty), Goal 2 (Zero hunger), Goal 3 (Good health and well-being), Goal 5 (Gender equality), Goal 7 (Affordable and clean energy), Goal 8 (Decent work and economic growth), Goal 9 (Industry, innovation and infrastructure), Goal 10 (Reduced inequalities), Goal 11 (Sustainable cities and communities), Goal 13 (Climate action) and Goal 15 (Life on land). The Regional Action Programme is specifically geared towards advancing three overarching objectives: (a) efficient and resilient transport and logistics networks and mobility for economic growth; (b) environmentally sustainable transport systems and services; and (c) safe and inclusive transport and mobility.

12. The Regional Action Programme guides the work of the secretariat along seven thematic areas, namely: (a) regional land transport connectivity and logistics; (b) maritime and interregional transport connectivity; (c) digitalization of transport; (d) low-carbon mobility and logistics; (e) urban transport; (f) road safety; and (g) inclusive transport and mobility.

13. At its seventy-eighth session, held from 23 to 27 May 2022, ESCAP adopted resolution 78/3 on the implementation of the Ministerial Declaration on Sustainable Transport Development in Asia and the Pacific, in which it endorsed the Ministerial Declaration and the Regional Action Programme and requested the Executive Secretary to accord priority to the implementation of the Ministerial Declaration.

14. Activities have been carried out to promote low-carbon mobility, clean energy technologies and logistics. The activities planned and implemented in 2022 were aimed at enhancing the capacity of stakeholders in initiating policies to reduce carbon emissions from transport operations, accelerate the transition to low-carbon transport and electric mobility, enhance the energy efficiency of freight transport and develop regional and multi-stakeholder cooperation mechanisms to support countries in meeting national, regional and global environmental commitments.

15. To accelerate the improvement of freight efficiency in Asia and the Pacific, as outlined in the Regional Action Programme, a new project on enhancing energy efficiency of the freight transport sector in Asia and the Pacific was launched in 2022. Project outputs will provide policy insights on modal shifts, the improvement of vehicle efficiency and the use of advanced energy-efficient technology and sustainable alternative fuels in transport. In addition, the secretariat will support the implementation of the 10 guiding principles for sustainable freight transport in Asia and the Pacific,³ which were endorsed by the Committee on Transport at its seventh session, held in Bangkok and online from 23 to 25 November 2022, and finalized during the consultative meeting on 28 February 2023.

16. The secretariat has also launched a capacity-building project on supporting the policies on green and resilient transport infrastructure along the Asian Highway Network, with the aim of increasing the capacity of policymakers to design, upgrade and construct green and resilient road infrastructure along the network.

17. As part of an ongoing project in several countries, the secretariat extended its support to initiate policies to accelerate the transition to electric mobility in public transport. Four national capacity-building workshops on electric mobility were held in Georgia, the Lao People's Democratic Republic, Nepal and Thailand in 2022. Case studies on electric mobility and a set of regional guidelines on electric mobility in public transport are being developed. The participants in the regional meeting on a just transition to low-carbon mobility in Asia and the Pacific, held in Bangkok and online on 10 and 11 August 2022, supported the concept of an Asia-Pacific initiative on electric mobility focusing on public transport.

³ ESCAP/CTR/2022/3, annex.

18. The concept of a regional cooperation mechanism on low-carbon transport has been developed with the aim of enhancing consultation among ESCAP member States; deepening regional collaboration through the sharing of experiences, information and best practice knowledge; identifying common interests and policy priorities in meeting global decarbonization commitments; and strengthening linkages to the nationally determined contributions. Subregional consultations with member States to refine the mechanism started in 2022 and will continue in 2023.

19. The activities under the thematic area on low-carbon mobility and logistics planned for 2023 will continue to contribute to the overarching objectives of the Regional Action Programme to advance efficient and resilient transport and logistics networks and mobility for economic growth and environmentally sustainable transport systems and services. The achievements under these two overarching objectives include capacity-building support extended to countries to accelerate the transition to electric mobility in public transport, the Asia-Pacific initiative on electric mobility, case studies and regional guidelines on electric mobility in public transport and the regional cooperation mechanism on low-carbon transport.

20. A subregional consultation and a capacity-building workshop on the regional cooperation mechanism on low-carbon transport were carried out for South-East Asia and South and South-West Asia in December 2022. Two more workshops are being organized: one for the Pacific, to be held in Suva in April 2023, and one for East and North-East Asia and North and Central Asia, to be held in Almaty, Kazakhstan, in June 2023. In addition, a regional meeting is to be organized under the auspices of the mechanism and is to be held at the end of 2023, prior to the twenty-eighth Conference of the Parties to the United Nations Framework Convention on Climate Change.

21. On the subject of electric mobility, the secretariat plans to organize a national consultation workshop for Fiji in Suva in April 2023, as part of a project on accelerating the transition to electric mobility for public transport in Asia and the Pacific; a subregional meeting on acceleration transition to electric mobility in Dhaka in May 2023; and a regional meeting on electric mobility in Manila in May 2023. Capacity-building activities aimed at providing policy support on electric mobility are also being extended to Cambodia and Sri Lanka.

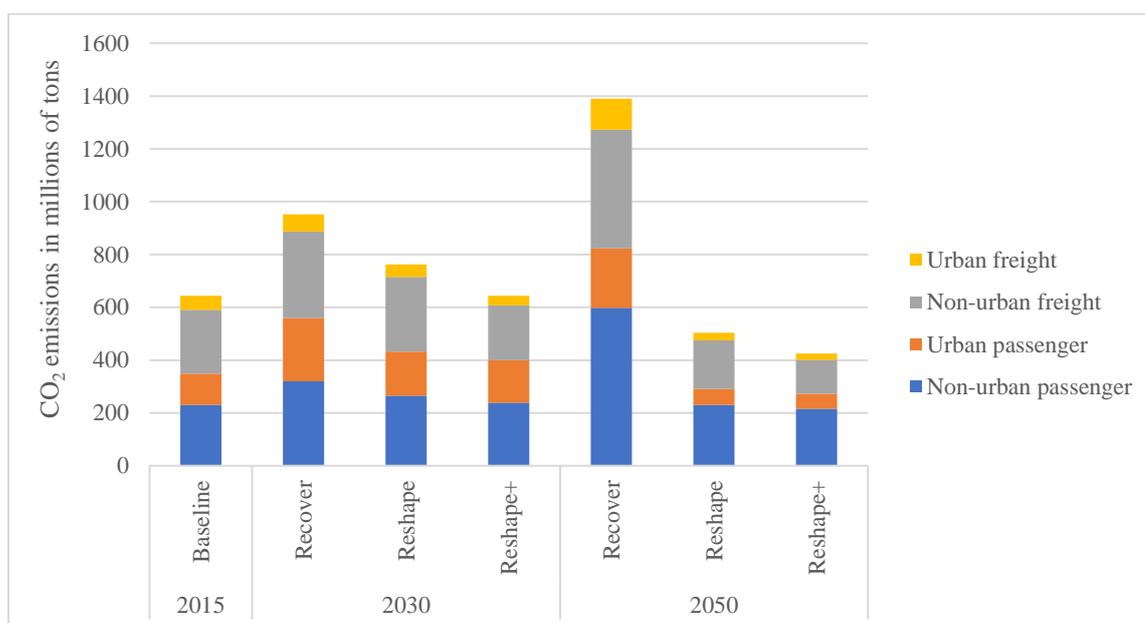
22. Additional activities under the low-carbon mobility and logistics thematic area and aligned with the overarching objectives will continue to be developed.

23. The secretariat is also working closely with other United Nations programmes, funds and specialized agencies, including the United Nations Environment Programme, the United Nations Framework Convention on Climate Change and the United Nations Centre for Regional Development, to further strengthen regional cooperation and to enhance the linkages and identify any synergies between regional and global initiatives on low-carbon transport. ESCAP also engages in the exchange of information and knowledge-sharing on best practices on a regular basis with the Asian Development Bank and the German Agency for International Cooperation.

24. In cooperation with the International Transport Forum, the secretariat published transport outlook reports for South and South-West, South-East, and North and Central Asia in 2022, analysing their future passenger and freight transport demand and emissions scenarios up to 2050, as well as their decarbonization opportunities.

25. In South and South-West Asia, the demand for passenger transport comprises urban and non-urban cohorts. Urban passenger transport accounts for all passenger transport in cities. Non-urban passenger transport demand is the sum of regional (peri-urban and rural) and intercity transport. The demand for non-urban passenger transport is considerably greater than urban passenger transport under all the scenarios in 2050. Although demand is split almost evenly between urban and non-urban passenger transport until 2030, non-urban passenger demand grows significantly thereafter, increasing 135–140 per cent in the period 2030–2050. That growth is driven mainly by an increase in the demand for rail transport necessary to meet sustainability goals. The total baseline emissions from freight and passenger transport in the subregion are split quite evenly, with passenger transport accounting for 54 per cent of the total emissions (figure I). However, as 2050 draws nearer, the split becomes more uneven. Most CO₂ emissions from the passenger sector are expected to come from non-urban transport in the period 2015–2050.

Figure I
Total tank-to-wheel emissions for freight and passenger transport in South and South-West Asia in the period 2015–2050, by scenario



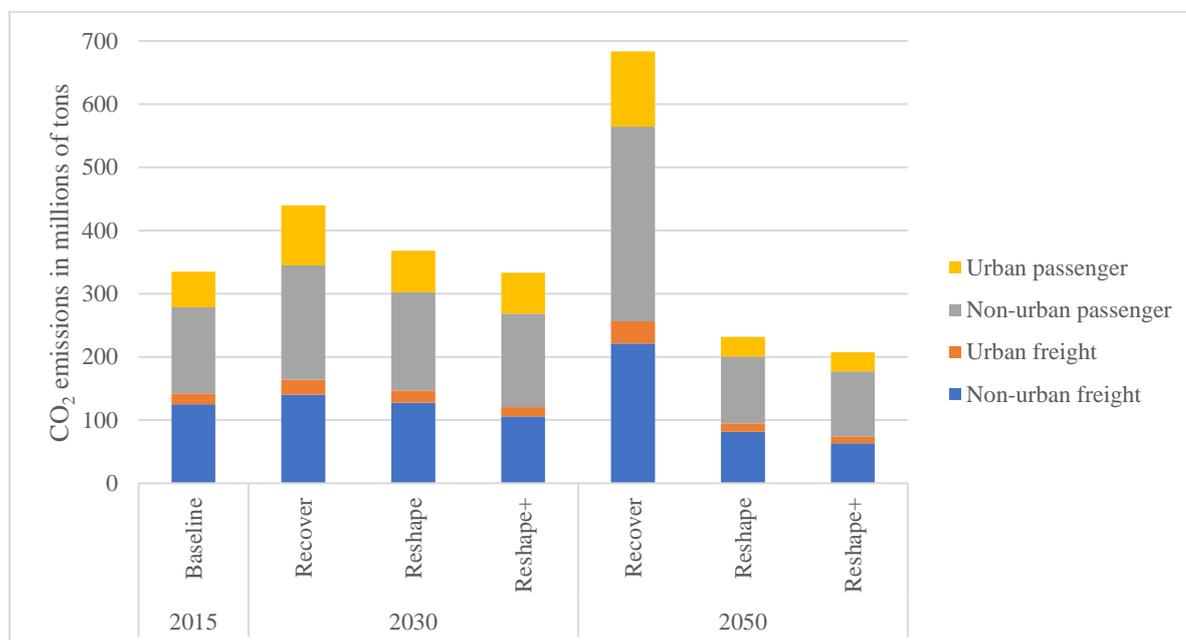
Source: Adapted from International Transport Forum, *ITF South and Southwest Asia Transport Outlook* (Paris, OECD Publishing, 2022).

Note: Figure depicts estimates modelled by the International Transport Forum. The terms “Recover”, “Reshape” and “Reshape+” refer to the three scenarios modelled, which represent increasingly ambitious post-pandemic policies to decarbonize transport.

26. In South-East Asia, non-urban passenger transport is responsible for more CO₂ emissions than any other sector, accounting for 40–50 per cent of transport-related CO₂ emissions in the period 2015–2050. The second-largest sector in terms of emissions is non-urban freight. Non-urban freight also remains the second-largest emitter regardless of the policy scenario adopted. Emissions from non-urban freight can be halved, even as freight activity grows in the period 2015–2050, depending on the policy scenario chosen (figure II). Similarly, emissions due to urban passenger transport are halved, and those due to urban freight are reduced by 40 per cent over the same time frame. On the other hand, even under the most ambitious scenario, emissions due to non-urban passenger transport are only reduced by 20 per cent in the same

period. This represents a decrease in carbon intensity for non-urban passenger transport, even as demand increases over the same period; however, it also indicates that the sector is the most difficult to decarbonize based on available policy measures and technologies.

Figure II
Total tank-to-wheel emissions for freight and passenger transport in South-East Asia in the period 2015–2050, by scenario

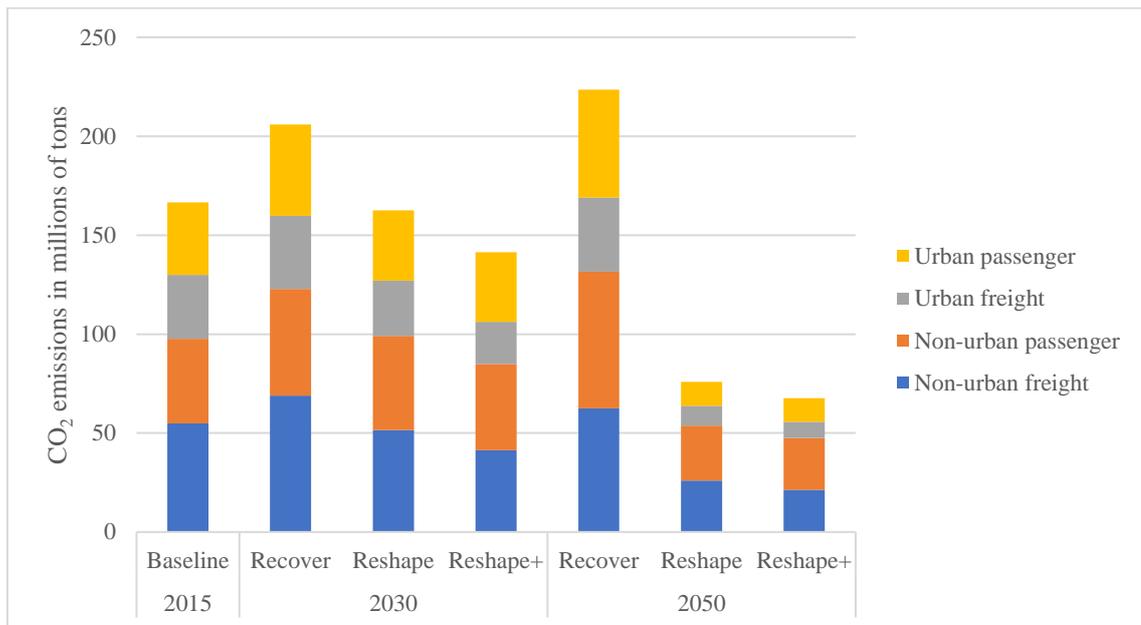


Source: Adapted from International Transport Forum, *ITF Southeast Asia Transport Outlook* (Paris, OECD Publishing, 2022).

Note: Figure depicts estimates modelled by the International Transport Forum. The terms “Recover”, “Reshape” and “Reshape+” refer to the three scenarios modelled, which represent increasingly ambitious post-pandemic policies to decarbonize transport.

27. In North and Central Asia, passenger travel emissions vary widely, and under the 2015 baseline scenario, passenger travel accounted for 48 per cent of the region’s 166 million tons of CO₂-equivalent tank-to-wheel emissions (figure III). Passenger emissions were largely the result of non-urban travel, which is projected to increase. Looking ahead to 2030 and 2050, it becomes evident that without concerted, focused and ambitious policy interventions, total non-urban transport emissions will increase in line with demand. It is projected that by 2050, total non-urban emissions will more than double under the business-as-usual scenario. The environmental impacts of the different modes of transport activity differ greatly. In the 2015 baseline scenario, air travel accounted for approximately 37 per cent of non-urban passenger kilometres but was responsible for 57 per cent of the associated emissions. When analysing these factors, regardless of the scenario or the year, air travel emissions were always found to be disproportionately large compared with the distance travelled. Road transport activity, which is responsible for the second-highest CO₂ emissions, has a similar effect. Despite having a relatively small modal share (16–22 per cent), it always accounts for at least 35 per cent of the emissions. Rail, which has a significantly larger modal share, contributes much less to overall emissions. The emissions share for rail is 4–6 per cent of total emissions in North and Central Asia, despite estimated modal shares of 35–44 per cent.

Figure III
Total tank-to-wheel emissions for freight and passenger transport in North and Central Asia in the period 2015–2050, by scenario



Source: Adapted from International Transport Forum, *ITF North and Central Asia Transport Outlook* (Paris, OECD Publishing, 2022).

Note: Figure depicts estimates modelled by the International Transport Forum. The terms “Recover”, “Reshape” and “Reshape+” refer to the three scenarios modelled, which represent increasingly ambitious post-pandemic policies to decarbonize transport.

28. Low-carbon transport policies have been identified and implemented in the Asia-Pacific region to improve the sustainable development of transport. Some common low-carbon transport policies that have been implemented across the region include the development of infrastructure for cyclists and pedestrians, such as dedicated lanes and footpaths, as well as the development of Bus Rapid Transit systems and public transport in general, including local and metropolitan train services. Other low-carbon transport policies contain targets that are more ambitious than those included in the nationally determined contributions and also support the shift to cleaner vehicle technologies and greater fuel efficiency.

29. Some specific examples of the implementation of low-carbon transport policies in ESCAP member States in South-East Asia include the development of electric vehicle road maps; the establishment of solid electric vehicle targets; the introduction or expanded use of electric buses; the expansion of urban public transport (metropolitan train services); and the introduction of measures to support the shift from private to public transport, such as non-motorized transport and transit-oriented development. In addition to low-carbon strategies on land transport, policies for the decarbonization of the shipping and aviation industries have also been developed through the utilization of solutions that are focused on high capacity and low energy intensity.

30. Countries in South-East Asia have also experienced a significant increase in the number of vehicles over the past few decades and are facing challenges to being or remaining carbon-neutral. The high cost of electric vehicles, their slow rate of adoption and the lack of financial assistance available are all barriers to low-carbon transport.

31. Geographical characteristics, existing regulations and standards and current transport demand and behaviour have shaped different transport constraints and created various opportunities across subregions in Asia and the Pacific. Some potential synergies identified by the ESCAP secretariat on the basis of subregional consultations with member States were the digitalization and electrification of public transport; the introduction of measures to increase public transport ridership; the integration of two- and three-wheelers; the coupling of electrification with renewable energy options; the transition to low-carbon freight transport; and multi-stakeholder and multisectoral engagement. Key low-carbon transport policy priorities include the shift to green freight, the electrification of the railways, an increase in awareness of low-carbon transport among decision makers at the local level; the adoption of a regional approach; the creation of systems to monitor, report and verify low-carbon transport action; the identification of renewable energy sources; and effecting changes in public behaviour (switching from private to public transport use).

III. Outlook for transport and mobility in Asia and the Pacific

32. In the future, transport in Asia and the Pacific will be increasingly automated and digitalized. Transport in the region will also be under increased pressure related to climate change, as it will be in other regions. However, when faced with a rapid and continuous increase in transport demand, the Asia-Pacific region will need to identify strategic policy pathways to address both that growing demand and its environmental sustainability.

33. Digitalization was shown to be of critical importance to the Asia-Pacific region, not only in recovering from the impact of the coronavirus disease (COVID-19) pandemic, but even prior to it. The World Economic Forum conducted a survey of young people in six South-East Asian countries: Indonesia; Malaysia; Philippines; Singapore; Thailand; and Viet Nam. They were asked what impact the pandemic had had on their use of digital tools, including e-commerce and applications for ride-sharing and food delivery services. The survey found that 87 per cent of respondents had increased usage of at least one digital tool during the pandemic, and 42 per cent had started using a new one.⁴ The same survey found that 42 per cent of respondents had increased or started using e-commerce; in Indonesia and Singapore, that number was over 50 per cent. Across all respondents, 13 per cent had increased their use of or started using ride-sharing services and 9 per cent had increased or started using travel applications.

34. Several countries in the region have policies specifically aimed at intelligent transport systems and information and communications technologies. The digitalization of areas such as health and education have been intensified by the pandemic, and many countries are now encouraging the use of e-commerce.⁵ The use of digitalization in trade and logistics, including the use of digital technologies and standardizing processes to improve border crossings, will also play an important role in trade facilitation.⁶ Digitally

⁴ World Economic Forum, “COVID-19: the true test of ASEAN youth’s resilience and adaptability impact of social distancing on ASEAN youth”, July 2020.

⁵ OECD, *Economic Outlook for Southeast Asia, China and India 2021: Reallocating Resources for Digitalisation* (Paris, OECD Publishing, 2021).

⁶ Association of Southeast Asian Nations, International Transport Forum and ESCAP, *COVID-19 Recovery Guidelines for Resilient and Sustainable International Road Freight Transport Connectivity in ASEAN* (Jakarta, 2021).

enabled asset-sharing can help to improve system efficiencies and reduce CO₂ emissions in road freight and in shipping.

35. Enhanced transport connectivity is a fundamental element for strengthening regional cooperation, which is needed to accelerate economic growth and social development. Regions with well-functioning transport networks reap the benefits of free trade agreements, which promote trade and investment and increase tourism and knowledge-sharing across borders. Transport connectivity can be improved through the further development of cross-border rail and road networks, including by harmonizing procedures and advancing the digitalization of processes. The digitalization and automation of terminals and logistic hubs can increase efficiency, while transport infrastructure improvements will improve connectivity and serve as an incentive to further increase economic cooperation.⁷

36. Other developments include connected mobilities, where cooperative intelligent transport systems and connected vehicles communicate with one another. Technologies that utilize wireless data exchange between vehicle-to-infrastructure, vehicle-to-vehicle and vehicle-to-everything can help to mitigate congestion; reduce fuel consumption and emissions; and increase reliability, mobility and road safety.

37. Another important development involves autonomous vehicles, which are now able to travel without human intervention and are able to navigate through the use of wireless networks, digital maps, automated controls, communication with smart infrastructure and communication to control centres. The combination of autonomous vehicles and shared electric vehicles will lead to greater sustainability and eventually to the achievement of zero-carbon transport goals.⁸

38. The development of these technologies is proceeding quickly, but some countries in the region lack policies on smart transport systems, leading to fragmentation, slow roll-outs and the inconsistency of services. There are a number of challenges that may hinder the wider deployment of smart transport systems. For example, these systems are still not well known by policymakers in the region, resulting in a lack of policy support, governing direction and regulatory foundation. More training is needed to effectively utilize these technologies. Given the differences in the urban contexts, it is also necessary to prioritize needs and determine which fundamental requirements need to be established. At the same time, a national or regional strategy could greatly facilitate the harmonized roll-out of new technologies. The lack of interoperability and compatibility of different systems for moving people within a country and between countries will prevent countries from maximizing the benefits of smart transport systems for both passenger and freight transport.⁹

⁷ International Transport Forum, *ITF North and Central Asia Transport Outlook* (Paris, OECD Publishing, 2022).

⁸ Dan Sperling, *Three Revolutions: Steering Automated, Shared, and Electric Vehicles to a Better Future* (Washington, D.C., Island Press, 2018).

⁹ *Review of Developments in Transport in Asia and the Pacific: Towards Sustainable, Inclusive and Resilient Urban Passenger Transport in Asian Cities* (United Nations publication, 2021).

39. Enhancing energy efficiency and the accelerating the adoption of electric mobility are key to reducing emissions from public transport. The impact of these initiatives would be even greater if combined with smart transport technologies and innovations, such as passenger information systems, automatic toll payment and congestion charging. Such technologies continue to evolve, and a new era of transport systems and disruptive innovations that will rely on big data, the Internet of things, artificial intelligence and machine learning are forthcoming. Many countries in the Asia-Pacific region are attempting to shift their traditional transport technologies to systems with greater automation. Less developed countries are also actively adopting advanced techniques to increase the capacities of their transport systems. However, new technologies often require an initial investment for their implementation, posing difficulties to developing countries. The provision of financial support from bilateral development agencies and multilateral development banks can help these countries to adopt smart transport systems for passenger mobility. Such technologies can improve the quality and efficiency of urban passenger services, making them more welcoming, easier to navigate, faster and safer.¹⁰

40. These changes to transport and land-use planning could be placed under the broader umbrella of transitioning towards becoming smart cities in the medium and long term. Investment in digital infrastructure will enhance the flexibility and agility of urban transport systems if it provides users across all social strata and locations within the urban area with greater discretion over whether to undertake physical trips or engage in online activities. This highlights the importance of enhancing the abilities of transport system users, since they can only benefit directly from improved digital infrastructure if they have the skills to utilize it and can afford the associated costs. Enhancing intelligent transport literacy and overcoming the digital divide must be tightly coupled to transport policy.¹¹

41. Gender balance is necessary for the future of transport, with regard to women as transport users, workers and decision makers. At present, the transport sector is not providing adequate gender-inclusive services, infrastructure and systems, as most transport policies do not reflect differences in travel behaviour or preferences related to gender. The unsustainable state of the transport sector could also be attributed to the lack of gender diversity in its workforce and leadership, which has traditionally been male-dominated. Because women in leadership positions show more consideration for the social and sustainable impacts of their decision-making, the inclusion of female executives could improve decision-making processes on environmental sustainability initiatives. If applied to transport policies, where gender assessment will be applied to low-carbon transport policies, it could serve to accelerate the transition to a zero-carbon sector.¹²

¹⁰ Ibid.

¹¹ Nafis Anwari and others, “Exploring the travel behavior changes caused by the COVID-19 crisis: a case study for a developing country”, *Transportation Research Interdisciplinary Perspectives*, vol. 9 (March 2021).

¹² Wei-Shiuen Ng and Danielle Bassan, “Gender equality and the role of women in decarbonising transport” (International Transport Forum and FIA Foundation for the Automobile and Society, 2022).

IV. Issues for consideration by the Commission

42. The Commission may wish to review the document and encourage active engagement of its members and associate members in the planned activities of the regional cooperation mechanism for low-carbon transport; the Asia-Pacific initiative on electric mobility; and the implementation of the 10 guiding principles for sustainable freight transport in Asia and the Pacific. The Commission may also wish to consider encouraging its members to leverage the existing intergovernmental platforms¹³ to promote, participate in and implement the regional cooperation mechanism for low-carbon transport.

43. The Commission may further wish to share information on innovative policies and actions taken at the national, subregional or regional levels to enhance the environmental sustainability of and reduce greenhouse gas emissions from the transport sector in the region, specifically in respect of land, rail and maritime transport.

¹³ Existing relevant ESCAP intergovernmental platforms include three intergovernmental agreements on the Asian Highway, the Trans-Asian Railway Network and on Dry Ports, as well as the regional dialogue on sustainable maritime connectivity.