

Draft Chair's Summary

Eleventh Regional Environmentally Sustainable Transport (EST) Forum in Asia

Sustainable Urban Design and Development ~ Role of EST

2-5 October 2018

Venue: Shangri-La Hotel, Ulaanbaatar, Mongolia

I. Introduction

1. In a time of continuous and rapid urbanization, many Asian cities are facing a range of socioeconomic and environmental problems, such as traffic congestion, air pollution and related health impacts, traffic accidents and fatalities, rising GHG emissions, and the growing impact of climate change and noise pollution, among others, which are often attributed to unsustainable urban planning and design. A major challenge for Asian cities has been how to manage the enormous growth in demand for urban passenger and freight transport within the constraints of current infrastructure and city development.
2. In general, the response to growing demand for transport services to a large extent has been to increase road construction; however, this is a short-term measure against growing levels of both private cars and congestion and had been shown to be contradictory to an environmentally sustainable transport pathway. Often a road-based response overlooks the mobility needs with the provision of footpaths, walkway facilities, bicycle lanes and dedicated lanes for public transport. International communities are convinced that the way towns and cities are structured and how they function urgently needs to change to fulfill the required demand and address the needs for making cities more safe, resilient, liveable, inclusive and sustainable.
3. Sustainable urban design and development can help curb urban sprawl by creating compact, walkable neighborhoods, reducing the number of vehicle kilometers traveled. In the context of a sustainable city, an efficient and low carbon transport system can deliver mobility, accessibility, affordability, safety, inclusiveness and green growth. In the context of achieving the SDGs, and in particular SDG 11, it will be crucial for cities to ensure that urban planning, design and development are undertaken in such a way as to reduce a range of environmental problems while enhancing the seamless flow of people and goods.
4. The Paris Agreement on climate change calls for intensifying actions and investments in a sustainable and low-carbon future to limit the average global temperature rise to well below 2 degrees Celsius by end of this century. The Addis Ababa Action Agenda (AAAA) calls for a new initiative to ensure sufficient investment in sustainable and resilient infrastructure, including transport, communication, water and sanitation and energy, in all countries. The New Urban Agenda acknowledges transport and mobility as one of its six main policy areas, with a focus on integrating land-use and transport planning, seeking innovative financing and using Big Data and artificial intelligence to help countries leapfrog to more sustainable transport modes. Implementation of sustainable urban design, including environmentally-friendly and low-carbon transport solutions could significantly contribute to the objectives of the inter-linked and mutually-reinforcing 2030 Agenda, the Paris Agreement, the New Urban Agenda, the Sendai Framework for Disaster Risk Reduction, the Nairobi Mandate and the AAAA.

5. To reach the objectives of these international agreements, enhanced actions towards environmentally sustainable transport is crucial. The Bangkok Declaration 2020 highlights the need for comprehensive integrated action to implement *Avoid-Shift-Improve* strategies that can enable a transformation in Asian countries and laying the foundation for the substantial exchange on country progress over recent years.
6. With the above background, the Ministry of Construction and Urban Development, the Ministry of Road and Transport Development, the Ministry of Environment and Tourism and the Municipality of Ulaanbaatar, the Government of Mongolia, the Ministry of the Environment of the Government of Japan (MOE-Japan), the United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP), and the United Nations Centre for Regional Development (UNCRD) of the Division for Sustainable Development Goals (DSDG) / UN DESA co-organized the 11th Regional EST Forum in Asia with the theme ‘Sustainable Urban Design and Development ~ Role of Environmentally Sustainable Transport’ from 2 to 5 October 2018 in Ulaanbaatar, Mongolia.
7. The Forum was supported by a number of national and international organizations and donor agencies, including the Asian Development Bank (ADB), Applied Research Programme in High Volume Transport (HVT), Asia Society for Social Improvement and Sustainable Transformation, Asia Pacific Natural Gas Vehicles Association, Curtin University Sustainability Policy Institute (CUSP), Department for International Development of the United Kingdom (DFID), Eco-Mo Foundation, Hong Kong University of Science and Technology, International Council for Local Environmental Initiatives (ICLEI) - Local Governments for Sustainability, Institute for Transportation and Development Policy (ITDP), International Union of Railways (UIC), Research for Community Access Partnership (ReCAP), SAFER-Vehicle and Traffic Safety Centre, Wuppertal Institute, University of Gothenburg, UK Aid, United Nations Conference on Trade and Development (UNCTAD), Walk21, World Resources Institute (WRI) India, and the World Bank (WB).
8. The Forum was officially inaugurated by H. E. Mr. Enkh-tuvshin Ulziisaikhan, Deputy Prime Minister and Acting Minister of Road and Transport Development of Mongolia, and was chaired by H.E. Mr. Badyelkhan Khavdislam, Minister of Construction and Urban Development, the Government of Mongolia. The Forum was attended by over three hundred and forty participants comprising national and city government representatives, international resource persons, representatives from various United Nations and international organizations, multilateral development banks, scientific and research organizations, nongovernmental organizations (NGOs), local observers and professionals from the transport and development sector in Mongolia and subsidiary Expert Group Members of the Regional EST Forum in Asia from twenty-nine countries: Afghanistan, Australia, Bangladesh, Bhutan, Cambodia, People's Republic of China, Germany, India, Indonesia, Japan, Lao PDR, Liechtenstein, Malaysia, Maldives, Mexico, Mongolia, Myanmar, Nepal, Netherlands, Pakistan, the Philippines, Republic of Korea, Russian Federation, Sri Lanka, Sweden, Thailand, the United Kingdom, the United States, and Viet Nam. Out of the twenty-five regular member countries¹ of the Regional EST Forum in Asia, twenty-one member countries attended the Forum.

¹ Regular member countries of the Regional EST Forum in Asia include Afghanistan, Bangladesh, Bhutan, Cambodia, People's Republic of China, India, Indonesia, Islamic Republic of Iran, Japan, Republic of Korea, Lao People's Democratic Republic, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, the Philippines, Russian Federation, Singapore, Sri Lanka, Thailand, Timor-Leste, Viet Nam.

II. Pre-events of the 11th Regional EST Forum in Asia

A) Rural-Urban Connectivity ~ Implications towards Poverty Alleviations and SDGs

9. The pre-event on “Rural-Urban Connectivity ~ Implications towards Poverty Alleviations and SDGs” was co-organized by the Ministry of Construction and Urban Development, the Ministry of Road and Transport Development, the Ministry of Environment and Tourism and the Municipality of Ulaanbaatar, the Government of Mongolia, the Ministry of the Environment of the Government of Japan (MOE-Japan), and the United Nations Centre for Regional Development (UNCRD) of the Division for Sustainable Development Goals (DSDG) / UN DESA and the Research for Community Access Partnership (ReCAP), on 2 October 2018. The pre-event was attended by more than 100 participants representing transport ministries, development agencies, UN organizations, civil society, academia, and the private sector.
10. The pre-event noted that despite the current apparent domination of urban mobility in the sustainable transport discourse, rural access is very relevant, as a third of the global population would be living in rural areas by 2050. Currently, 1 billion people lack proper rural access worldwide (i.e. living within 2 km of an all-season road), and it is going to take substantive efforts to reduce this number. The pre-event addressed the review and improvements of the methodology of the Rural Access Index (RAI), which is defined as SDG indicator 9.1.1.
11. The panel discussion on first-mile and last-mile connectivity concepts showed that in general the delegates thought the concepts were mutually reinforcing to enhance rural-urban connectivity. The first mile is the primary transport segment between rural farms and markets, and describes the most inaccessible segment of the small-holder agricultural value chain in low income countries as a result of poor infrastructure and lack of transport service provision. The last mile refers to bringing essential services to the poorest people, whether in remote rural areas or in urban slums, described by the UN as the people and places that are under-served and excluded, where development needs are greatest and where resources are most scarce. The first and last mile concepts interact because they enable goods and services to reach the poorest communities, and facilitate movement of agricultural produce from farms to market.
12. It was stressed that access to markets, jobs, education and health infrastructure should be viewed from the perspective of quality of life for the user (i.e. the rural population). Delegates voiced the need for a more profound discussion on rural transport and access, noting that improved rural access can contribute to slowing down the current high rates of urbanization by strengthening the self-sustainability of rural areas.
13. With growing urban centres, the need for goods and services increases, necessitating good connectivity to and from the rural areas that deliver produce to consumers. Good rural access was perceived by the participants as an electoral demand (and by some even as a human right), and once it is on the political agenda, it will need appropriate funding. It was also pointed out that rural access needs contextualizing, looking at the local circumstances at national and regional levels. Rural transport is lacking a single institutional champion, as many sectors are involved in rural development, at different levels of government. It was clear from the live polling during the pre-event that none of the delegates thought that the rural-urban connectivity gap could be bridged by the transport sector alone. This important topic could be also picked up by new research programs as one of the panellists shared information on

a five-year research programme funded by DFID (High Volume Transport – HVT) to increase access to transport services, more affordable trade routes, and safer, lower carbon transport in low income countries.

14. The delegates underscored the importance of implementing the recommendations of the Vientiane Declaration on Sustainable Rural Transport towards Achieving the 2030 Agenda for Sustainable Development (2017) and recognized the need for effective national, regional and international cooperation and support for reviewing progress, institutional capacity-building, knowledge sharing, technology transfer, and research and development for innovative solutions to improve rural-urban connectivity as well as to improve and green supply chain logistics (from producers to consumers).

B) Workshop on Capacity Building Strategy for the Implementation of Low Carbon High Volume Transport in South Asia

15. The pre-event Workshop on “Capacity Building Strategy for the implementation of Low Carbon High Volume Transport in South Asia” was co-organized by the Ministry of Construction and Urban Development, the Ministry of Road and Transport Development, the Ministry of Environment and Tourism and the Municipality of Ulaanbaatar, the Government of Mongolia, the Applied Research Programme in High Volume Transport (HVT), the Department for International Development of the United Kingdom (DFID), and the United Nations Centre for Regional Development (UNCRD) of the Division for Sustainable Development Goals (DSDG) / UN DESA on 2 October 2018. The workshop was attended by more than 40 participants representing transport ministries, development agencies, UN organizations, civil society, academia, and the private sector.
16. The High Volume Transport Programme is a five-year research programme funded by the Department of International Development (DFID) of the United Kingdom to increase access to transport services, identify affordable trade routes, and to move towards a safer, low carbon transport in low income countries in Africa and Asia. The opening speakers highlighted the critical role of low carbon, high volume transport in achieving the goals of the *Avoid-Shift-Improve* strategies and cross-cutting measures under the Bangkok 2020 Declaration. Furthermore, several speakers noted that achieving their national targets within Nationally Determined Contributions (NDC) as a part of the Paris Agreement will require a wide range of activities, such as rail and road-based mass transit, increased capacity of rail and waterway freight movement, and the use of clean fuels and technology in public transport.
17. Four interactive break-out sessions yielded key findings which will be used to inform further work in the HVT research program. Among these findings is that more work needs to be done to align expectations between private investors and implementing authorities, that there is need to make low carbon transport a bankable business model (e.g. by increasing carbon market price to internalize the costs of high carbon transport, and that research on new revenue streams is required to, coupled with increased political leadership.
18. Workshop participants suggested that there is also a need to avoid overly scientific approaches in research and to demonstrate how low carbon transport is connected to daily life in order to convince business and political stakeholders of its broad benefits. Specifically, more research can be conducted to explore replicability of good examples of low carbon high volume transport from developed countries. Finally, research can play a key role in informing the public of the urgent need for low

carbon transport options in order to increase awareness and demand for action, and that these messages can be conveyed in more practical and replicable ways.

C) Training Course on EST in Sustainable Urban Design ~ Implications towards SDG 11

19. The pre-event training course on ‘EST in Sustainable Urban Design ~ Implications towards SDG 11’ was co-organized by the Ministry of Construction and Urban Development, the Ministry of Road and Transport Development, the Ministry of Environment and Tourism and the Municipality of Ulaanbaatar, the Government of Mongolia, the Ministry of the Environment of the Government of Japan (MOE-Japan), the German International Cooperation (GIZ), Transformative Urban Mobility Initiative (TUMI), and the United Nations Centre for Regional Development (UNCRD) of the Division for Sustainable Development Goals (DSDG) / UN DESA on 2 October 2018. The pre-event was attended by more than 80 participants representing transport ministries, development agencies, UN organizations, civil society, academia, the private sector, and local planners including architects, engineers and geographers from Ulaanbaatar.
20. The presenters reflected on the importance of integrated approaches to urban design, including integration of climate goals and transport policies, integration of land-use and transport planning, and integration of different transport modes, with the ultimate goal of creating safe, clean, green and compact cities that are people friendly. Participants agreed on one major goal of all activities, which also relates to the SDG 11: the creation of livable cities. As many cities suffer from longstanding car-oriented urban planning, they are facing many challenges in order to achieve the range of transport goal. These challenges include a lack of universal and safe walkways, insufficient cycle lanes and bicycle facilities, unattractive public transport services, encroachment of sidewalks and public space by parked vehicles,, traffic congestion, high number of road accidents, air pollution, and high levels of traffic noise.
21. Through expert presentations the participants gained insights about effective ‘push-and-pull’ measures. A ‘push’ from car usage can be achieved by developing a parking management program, creating low-emission zones or conducting car-free days in the city. A ‘pull’ towards sustainable transport modes is possible by improving the existing public transport network, by introducing Bus Rapid Transit (BRT), Light Rail Transit (LRT) or other efficient public transport systems, as well as by creating safe footpaths and dedicated cycle lanes. To sum up, urban space should be designed for people and not for cars. Capacity building for planners was mentioned as an important step to assist implementation of an environmentally sustainable transport system. A final group exercise showed that the principles of EST were well understood and commonly agreed upon by all participants. It allowed consideration of ways to set up an EST strategy and prioritize sustainable urban design measures in local and national contexts.

III. Opening Session

22. Welcoming the delegates and participants of the Forum, Mr. Batbold Sundui, Governor of Capital City and Mayor of Ulaanbaatar, emphasized the need for environmental protection, renewing urban planning, climate mitigation and green development through sustainable transport and sustainable urban design. Referring to ‘*low carbon cities development, improving air quality and reducing greenhouse emission gas*’, he emphasized the key role of new technological innovation in the context of sustainable urban planning. He also underscored issues including desertification and centralization the Mongolian cities are facing. He shared that Ulaanbaatar had initiated various measures for

establishing satellite cities and regional sub-centers in order to implement decentralization policy and to reduce congestion.

23. In his opening statement, Mr. Kazushige Endo, Director for United Nations Center for Regional Development (UNCRD), acknowledged that this Forum is very special by marking the eleventh anniversary. He mentioned that the 2030 Agenda for Sustainable Development highlights the critical importance of sustainable transportation for achieving the SDGs and related targets. He pointed out that the Forum title ‘Sustainable Urban Design and Development - Role of EST’, is therefore highly relevant in the context of the 2030 Agenda for Sustainable Development and the set of SDGs. This is because there is a global consensus that the way the urban areas are currently planned and designed needs to be reconsidered in the context of achieving the SDGs. State-of-the-art urban design, environment-friendly transport systems, and climate- and disaster-resilient infrastructure are vital for addressing the challenges being faced in urban areas. The 11th EST Forum provided a platform to share the challenges and come up with the possible solutions. The EST Bangkok 2020 Declaration was adopted by the EST member countries in 2010 and will come to an end in the coming two years. Mr. Endo further pointed out that there is a need to initiate discussions regarding a potential follow-up agreement that will serve as a successor of the EST Bangkok Declaration. Discussion on the successor of the Bangkok Declaration will aim at extending the EST Forum beyond 2020.
24. The representative of UNESCAP, Mr. Madan B. Regmi, welcomed the participants and expressed his pleasure at continued collaboration with UNCRD/UN DESA in organizing the 11th Regional EST Forum in Asia in Ulaanbaatar, Mongolia and expressed his appreciation to the local hosts. He mentioned that many SDGs and targets are directly and indirectly relevant to transport and regional connectivity, and that urban transport, safety and sustainability of transport systems are priority areas of UNESCAP’s transport programme. Outlining the challenges in meeting mobility needs of growing urban population and rising number of vehicles, he mentioned that many governments and cities are taking policy initiatives to improve urban transport systems and associated services. However, Mr. Regmi pointed out that more needs to be done to improve the overall sustainability of urban transport systems and to increase traffic safety. He also introduced the Sustainable Urban Transport Index (SUTI) developed by UNESCAP, a tool to assess sustainability of urban transport systems and services, which has been applied in ten Asian cities. He invited participants to the Fifth Session of the UNESCAP Committee on Transport to be held from 19-21 November 2018 in Bangkok. He offered UNESCAP's readiness to collaborate and support countries and cities in the development of sustainable transport systems and he looked forward to building new partnerships with interested stakeholders for achievement of SDGs.
25. Delivering the opening address, Mr. Yasuharu Ueda, Counsellor and Minister’s Secretariat, Ministry of the Environment, Government of Japan, mentioned that the EST Forum has been gaining recognition continuously, and the number of participating countries have increased from thirteen to twenty-five, with an expanded number of participants from eighty to three hundred thirty. On the other hand, looking at the situation of the environment in Asia, motorization is expanding due to rapid economic development and bringing with it various problems such as air pollution, traffic congestion, traffic accidents and global warming in many Asian cities. To address these issues, there is an international movement related to the Paris Agreement which entered into force in 2016, aiming to achieve zero greenhouse gas emissions in the second half of the century with a significant change for the society, economy, and urban transportation policy. He mentioned that we are all required to respond to these challenges through the environmental point of view. With only two years remaining until the target

year of the Bangkok Declaration for 2020, this year's Forum should deepen discussions based on the Declaration, the Paris Agreement, and SDGs as well. He believed that the Mongolia EST Forum is an excellent opportunity to initiate our discussion of the role of the EST Forum after 2020. Japan has experienced serious pollution problems such as air pollution and large-scale natural disasters in the past, and has overcome various environmental issues through technologies, infrastructures and related policies. He finally concluded by stating that the Ministry of the Environment, Government of Japan would like to make continuous contribution to Asian countries with regard to sharing all those experiences and knowledge.

26. In his opening remarks, H.E. Mr. Tserenbat Namsrai, Minister of Environment and Tourism of Mongolia, underscored the importance of SDG 11 of the 2030 Agenda for Sustainable Development in promoting sustainable cities and communities and introducing "green city" concepts including resource efficiency, low emissions and pollution. The achievement of this goal is an important driver for other integrated goals of the Agenda, notably SDG 13 on Climate Action and SDG 15 on Life and Land. Mongolia, within its national development policy frameworks - National Sustainable Development Vision 2030, Green Development Policy, and the National Programme on Abatement of Air and Environmental Pollution, has been taking measures towards "smart" and "green" city development, low carbon, environmentally friendly and comfortable public transport systems, introducing bus rapid transit (BRT) and encouraging bicycling as a sustainable urban transport mode.
27. Under the Paris Agreement on Climate Change, Mongolia has set a priorities to reduce GHG emissions by 14 percent by 2030 compared to business-as-usual, emission level with the transport sector to play, significant role in meeting this target. The optimal city planning and development of smart transport systems brings a number of co-benefits and values, creates a win-win situation and increases opportunities for safe, convenient and fast movement of people and reduction of GHG emissions. For this purpose, it is crucial to ensure multi-stakeholder engagement and cooperation, integrated coordination and identification of synergies. Mr. Namsrai, finally urged member countries to pay attention to the end-of-life vehicle (ELV) management and waste while considering sustainable transport options. Projects aimed at recycling, reuse and disposal of ELV waste, including used tires, accumulators and batteries, along with introduction of Extended Producers Responsibility (EPR) and enforcement of safety and environmental protection standards are extremely important for Mongolia.
28. Delivering the opening remarks, H.E. Mr. Badyelkhan Khavdislam, Minister of Construction and Urban Development of Mongolia, mentioned that rapid urbanization has become a global, regional and national challenge, with urbanization rates reaching 56 percent globally in 2017, with being Mongolia is 67.6 percent urbanized. Mongolia's policy documents, such as "Green Development Policy" and "Sustainable Development Vision - 2030" have been adopted by both the Parliament and Cabinet. These policies are strictly aligned with global agendas and require "comfortable living and working environments for the locals by developing self-sufficient 'green' and 'smart' cities and villages that are compatible with the carrying capacity of the environment and climate change trends, in order to prevent the over-population in urban cities", "increase the share of green space in the urban area by 15% by 2020, and by 30% by 2030 through the re-development of Ulaanbaatar and other urban settlement areas" as reference, which reflect the commitment of the Government to implement systematically - based on a phased-out approach - actions aimed towards planning. Mr. Khavdislam also shared his Government's plan to develop and submit to the Parliament by 2020 a "Master Plan for Human Settlement and Development" aiming at optimization of human settlement and promotion of regional, national and local socio-economic development, based on a rational network of key infrastructure and

a comprehensive assessment of impacts of urbanization on natural capital, the state of ecosystems and ecological balance.

29. Delivering the keynote address, H.E. Mr. Ulziisaikhan Enkhuvshin, Deputy Prime Minister of Mongolia, mentioned that Mongolia is a land-locked country which is prioritizing the development of a national multimodal transport system among its socio-economic development goals. The Government of Mongolia also added special emphasis on environmental considerations in introducing new technologies and sectoral advancements. Environmental aspects are also reflected and proclaimed in key government policy documents such as the Sustainable Development Concept of Mongolia 2030, the Government Action Plan for 2016-2020 Term, the Three-Pillar Development Policy, the State Policy on Railway Transport, and the State Policy on Civil Aviation, among others. These policies are the government's guidelines to develop a national transport network that is safe, reliable, efficient and conducive to the country's economic growth and prosperity.
30. Mongolia is committed to maintain and pursue continued and enduring environmentally sustainable transport policies in its transport sector development plans, which include numerous ongoing and future projects aimed at expanding the national road and railway network, strengthening transport, building a new international airport, and establishing a regional logistics hub and multimodal transport terminal, among others. Mr. Enkhuvshin noted that the 11th Regional EST Forum in Asia provides a good opportunity to also share Mongolia's activities, experiences and projects directed towards fulfilling the objectives set forth in the international agreements and treaties including the UN 2030 Agenda for Sustainable Development and the SDGs, the Paris Agreement on Climate Change, the UN Habitat III New Urban Agenda, and the Bangkok 2020 Declaration. He finally welcomed the international guests to seize this opportunity to experience Mongolia's centuries old traditions and culture, and to enjoy the birthplace of Chinggis Khaan and the land of eternal blue sky.

IV. Sustainable Urban Design for Green Growth –Role of EST

31. Asian cities are responding to the challenges and opportunities of smart growth and sustainable urban development by taking numerous measures to move towards integrating land-use, urban form and transport, though challenges remain in ensuring policy coherence across cities, sub-national/ provincial and national levels, as well as across sectors. Sustainable urban design can create up to US \$17 trillion in economic savings by 2050 and reduce infrastructure capital investments by over US\$ 3 trillion between 2015 and 2030. Over the coming decades, Asia must pursue policies, plans and governance frameworks to direct its path towards green growth, underpinned by environmentally sustainable transport, and improved quality of life for its residents. Based on the Bangkok 2020 Declaration, which was approved at the Fifth Regional EST Forum, Asian countries have been encourage to focus on avoiding motorized travel by reducing the number of trips or their distance, shifting towards environmentally friendly modes like walking and cycling, public transport and shared modes, and improving fuel and vehicle efficiency. These strategies can be enabled by coordinated governance, institutional capacity, financing for sustainable infrastructure and innovative technology.
32. The dense urban fabric of Asian cities, compared to countries in Western Europe and the United States, create a unique opportunity to prioritize non-motorized transport and regulate the use of personal motor vehicles. Asian countries and regions such as the People's Republic of China, Hong Kong Special Administrative Region, Japan, the Republic of Korea and Singapore have generated economic growth

while reducing per capita GHG emissions from transport, and have provided relevant case studies for the Asian region in structuring urban growth around mass transit-based transport systems. With a majority of growth anticipated in cities with populations of 500,000 and above, the role of bus-based public transport will feature prominently. Simultaneously, countries like China and India have undertaken nation-wide centrally assisted reforms, whereas Lao PDR, Mongolia, the Philippines, and Viet Nam, have focused on their larger urban centres.

33. National governments have a crucial role to play by creating national urban policies as well as other policies related to fields which can directly affect urban development – such as transport, housing, energy and environment, such policies would focus on rapidly growing cities, by creating spatial planning guidelines, indicators and benchmarks to evaluate provincial, metropolitan and city-level plans. Policies would also include undertaking reform-based central assistance, clearly defining roles and responsibilities, enabling regions and cities towards raising their own revenues, capacity building and move towards more accountable governance with civil society participation.
34. Good urban design combines many elements, including transit, housing, finance, environment, tourism, etc. with many interesting design projects focused on building the city of the future are transit projects. Cities are built for movement, and therefore urban design is movement design. Six rules for success are: (1) Build on the DNA for sustainable transit: identify hot spots where transit can be most effective, and where it can be integrated into development that engages the community; (2) Build urban villages for sustainable transit: transit-oriented mixed-use developments; (3) Plan for urban proximity: not just planning for transit, but focus on bringing destinations closer together to reduce travel distances in mixed-use areas; (4) Expand the scope for public life: creating walking environment and inviting streets, creating an inclusive public world; (5) Transit hubs as renewable power station: maximize solar opportunity for onsite renewable energy generation such as solar energy production, in Berlin and Rotterdam; (6) Transit for urban regeneration: meeting considering the wider urban context and interconnectivity rather than focusing on individual projects.
35. Transit-oriented development (TOD) has been a core concept of sustainable urban design and green growth. The premise is to develop dense urban development around transit stations in order to increase the number of people that live within station catchments, and can walk to transit and to other destinations within mixed-use developments. This also prevents urban sprawl and reduces dependence on automobiles. In Japan, the gold standard has been set for TOD undertaken in partnership with the private sector. The private sector (e.g. real estate developers and railway companies) has been the major provider of dense, mixed-use TODs with rail at the center (i.e. monocentric form). In practice, various business models and development schemes have been applied, depending on the context of the city. Development within the station area is critical for TODs, and Japan is exploring the ‘Intelligent TOD’ and how development districts can be enhanced by Mobility as a Service (MaaS), and connected and autonomous electric vehicles (EVs), while still keeping railways at the core.
36. Considering Mongolia is located in Northeast Asia that has quite a diverse range of available resources, foreign trade plays an important role. Even though the country’s total GDP and trade is quite small given the size of the country, on a per capita basis this is quite high. The one factor that has played a critical role in Northeast Asia’s economic development, has been the rate of urbanization. By 2030, the urban population in Mongolia is expected to grow to two million. Air transport corridors present significant opportunities for Ulaanbaatar to become one of the major hubs in this area, given its location. One of the major challenges for Ulaanbaatar is air pollution, far exceeding recommended safe levels,

reaching a level of national security concerns. Car ridership should be reduced, and more integrated approaches are required that can work better to move higher numbers of people in more sustainable ways with-high-volume transport options.

37. Increased last-mile services enhances the accessibility of transit, and this requires further integration beyond traditional transit planning. Station access, and level of boarding, is also important. While Hong Kong has very limited space, this has been a great opportunity for the city to create high densities which supports such an effective public transport system, and vice versa; transit and land use integration have been crucial. As we move into the age of big data and advanced technologies, there can be more opportunities to leverage emerging technologies to create more 'intelligent' development areas and to effectively monitor the effectiveness of the transit system through data. In large infrastructure projects, it is important to recognize from the beginning that for investments made there is a return to social benefits. If such projects don't succeed for retail, housing, and other development outcomes, then these are not deemed to be projects. The design of a project and the way it is perceived by the public is very important for the success of integrated transport systems.
38. It is crucial to ensure that dense, mixed-use land development occurs around stations in conjunction with transit provision. Private sector developers and investors can act as valuable partners, along with local stakeholders, for achieving sustainable transport, because they are incentivized by the opportunity to develop land around transit stations. Some policies can be considered for the successful integration of urban development and transport projects: policy as an enabler, plan and vision, people-centric on a local level, proximity and public space, partnerships with population and private sector. The Forum recognized the co-benefits of sustainable urban development including environmentally sustainable transport such as - healthier cities (such as reduced negative health outcomes of air pollution, increased physical activity from walking and cycling, and reduced road-based accidents); greater climate resilience (including reducing the urban heat island effect); increased economic productivity and innovation (including densification and agglomeration economies); and reduced social inequality (including greater accessibility).
39. Moving forward and building on the Bangkok Declaration, the EST Forum will be an important platform for member countries to enhance their reporting of SDG and NDC implementation by exchanging good practices on environmentally sustainable transport, urban planning and accountable, coordinated governance. Key performance indicators established under the Bangkok Declaration also serve as important tools for countries to report data related to SDG and NDC implementation. The follow-up declaration to the Bangkok Declaration should consider helping EST members to set and report specific, quantified output and outcome targets for integrated sustainable transportation, urban development and improved governance.

V. Transport Challenges & Opportunities for Landlocked Countries

40. There is a persistent problem of landlocked countries traditionally lacking access to global markets. With no sea ports, they are dependent upon neighbouring countries to provide transit access to international trade. With increased overland distance, it is difficult for landlocked countries to be economically competitive; for this reason in many cases, landlocked countries are also Least-Developed Countries (LDCs). Five landlocked EST members - Afghanistan, Bhutan, Lao PDR, Mongolia, and Nepal - present a range of geographic contexts and development conditions for transport systems. With less revenue, many landlocked countries also find themselves with lower quality infrastructure, fewer skilled border management staff, and lower ability to ensure goods can be imported and exported

efficiently. With poorer infrastructure, transport services also suffer – older, polluting overloaded trucks drive on poorly maintained roads, overloaded, thus creating a vicious cycle of road and vehicle damage, and reduced service quality. Border crossings are not always adequately served by required infrastructure, systems or trusted relationships with trading partners, leading to border congestion which slows freight, reduces efficiency and increases pollution. International agreements such as the Almaty and Vienna Programmes of Action have focused countries on resolving connectivity and development issues.

41. Concern for the development of landlocked developing countries and demand for overland freight transportation between Asia and Europe are converging. In many cases, landlocked developing countries are positioned as the shortest distance between some countries along these overland trade routes, and as a result have an opportunity to offer railway transit infrastructure, giving them new access to global logistics systems. These countries need to bring their own transportation sectors up to a level that can serve global needs, requiring more resilient infrastructure, better coordinated intermodal facilities, dramatically improved electronic monitoring and data services for ITS implementation, and trade facilitation instruments such as dry ports, electronic infrastructures with single window system, and the development of trust-based mechanisms along supply chains, such as the Authorized Economic Operator (AEO) system, that allows for advance reporting of shipments, and reducing the need to investigate all shipments at borders, thus ensuring the smooth and continuous flow of freight.
42. As a landlocked country, Mongolia has undertaken legal and policy reforms, including road and waterway transport, and amended state policies on civil aviation and railway transport, to create a foundation to achieve SDGs. Mongolia is also actively engaged in regional integration and agreements including road and railway transport, and sea transport and dry ports to connect areas of production to border crossings and to improve road safety through a public action plan. Achieving resilience of transport systems is needed to address existing and evolving risks, including floods, earthquakes, and extreme heat, which have a disproportionate effect on landlocked countries. Resilience depends on exposure, vulnerabilities, intensity of hazards, and other dynamic factors, and thus is never status. Anticipating vulnerability and understanding disaster readiness of transport assets can help to increase resilience and enable opportunities for "build back better" following a disaster, with the potential to yield significant economic benefits.
43. Bhutan is assessing suitable mass transit options with a goal to remain carbon neutral and to ensure prosperity. Bhutan's capital Thimphu is experiencing more congestion, pollution and accidents, which has led to goals to expand electric vehicles (EVs) and introduce an appropriate form of Mass Rapid Transit (MRT) through an integrated mobility system. The Government of Bhutan and UNCRD have completed a pre-feasibility study for transport options. Lao PDR mentioned critical challenges faced by landlocked developing countries in achieving the SDGs, which include safety issues, constrained road networks, high per-unit freight costs, and limitations to monitoring goods; key areas for capacity building to reduce logistics bottlenecks include improved border crossing procedures, loading standards, and driver qualifications. Lao PDR is seeking to improve international connectivity through Trans-Asia Railway to connect to a deep sea port.
44. Bhutan notes that its transport sector depends on imported fossil fuel and as such the expanded use of electric vehicles stand to help in utilizing internally produced hydroelectricity, decrease energy import costs and significantly reduce carbon emissions. Nepal seeks to increase resilience to disasters due to steep slopes through non-traditional transport modes such as cable cars, and make resilient

infrastructure by increasing highway elevations and bridge clearances, and other adaptive infrastructure. International support mechanisms can improve freight corridors across multiple countries by seeking enabling conditions so the private sector bears the bulk of financing, to be supported by innovative transport solutions such as blimps and drone swarms.

VI. Sustainable Urban Design for Road Safety

45. With more than 700,000 fatalities in Asia every year the importance of achieving “Sustainable Urban Design for Road Safety” in line with earlier international agreements, such as the “Bali Declaration on Vision Three Zeros – Zero Congestion, Zero Pollution and Zero Accidents towards Next Generation Transport Systems in Asia (2013)” is critical. In particular the need for more attention to be paid to vulnerable road users (pedestrians) was stressed. For example, on an average 56 pedestrians are killed every day in India. Such a critical situation needs to be reversed by means of better designs and relevant policies like the "safe system" approach.
46. The most vulnerable road users are outside of private cars and heavy vehicles, and only 10 percent are inside the cars. Motorcycle drivers are a high risk group and drivers' education needing to be improved. The Swedish "safe system" approach illustrates safe roads, safe vehicles and safe persons. Safe road begins during the planning stage of land use and transport projects to minimize travel needs and achieve integration of safe sustainable transport modes (compact and connected urban design) which are crucial to the movement of pedestrians and cyclists. There is a need for an increase in separate and secure road space for pedestrians and cyclists in urban and suburban areas, wherever space permits, offering a low hanging fruit to be picked by urban planners in the Asian region. Several speakers brought up the issue of improving road safety through integrated land use and transport planning; improving public transport systems and services; properly maintaining transport infrastructure, using information communication technology and intelligent transport systems, prioritizing investments, and improving rural and last mile connectivity.
47. There is a need to increase resilience of rural transport networks and to emphasize road safety and vehicle inspection and maintenance. In 2011 the UN Decade of Action for Road Safety (2011-2020) was adopted with a goal to stabilize and reduce the predicted levels of road fatalities around the world. For instance, Nepal has developed a Road Safety Action Plan established in 2015; however, it is a challenge to make roads safe in the mountainous regions. The topic of city transformation by means of innovative public transport solutions was presented with case studies from different continents and several Asian cities. Eco-mobility was presented as an attractive alternative for Asian cities. The Eco-Mobility Alliance is a network of 23 ambitious cities on several continents with a combined population of 47 million people. It builds on public-private-partnership (PPP), and hosts an annual e-biking festival which attracts a large number of local stakeholders.
48. City planners and developers have an important task to make public transport more attractive as well as safer, which includes footpaths, crossings, public space and public transport and so on. Special attention is needed for e-bikes and the risks associated with silent mobility. It is important to implement and reinforce helmet laws. Dedicated and separated lanes are considered effective to maintain a comfortable standard for non-motorized transport users.
49. The session also discussed the cases of transport corridors in countries such as Mongolia and the People's Republic of China, and Russian Federation. These transit corridors are planned to bring

development and benefits to less developed areas including road safety measures such as traffic calming, protected footpaths, and well lighted spaces to establish safety as well as security along roads. For example, in Mongolia 1000 km of paved roads are underway, and Mongolia also plans to build complementary structures to increase access to neighbouring areas with adequate safety provisions. The Mongolian Government is dedicated to providing improved safety with the new corridors connecting with the Asian Highway and railway stations on the Trans-Siberian railway.

50. The Forum also noted that there is conventional thinking in the region that bicycles and walking are the modes of poor people. Japan reported it has made a significant transformation of its public transport system with provision of dedicated walking and bicycle lanes. Though the private vehicle ownership is high, the efficient and well-developed seamless public transportation system that integrates various mode of transport such as MRT, LRT and bus systems has played a significant role for Japan in achieving one of the lowest traffic accident rates in the EST region.

VII. Sustainable Urban Design Co-benefits-Role of EST in Air Pollution Reduction and Climate Change Mitigation

51. According to the WHO, ambient outdoor air pollution results in three million premature deaths per year, and with the vehicle numbers doubling every 5-7 years, it is expected that Asia will produce a third of global transport GHG emissions by 2030. Innovative, entrepreneurial partnerships between levels of governments, funders, and the private sector will be key for building infrastructure to address this problem. Sustainable urban design brings co-benefits including a reduction in ambient air pollution, increased physical activity, reduced road-based accidents, improved climate resilience, economic activity and innovation, and reduced social inequality.
52. The Asian Development Bank (ADB) has developed a strategy for climate perspectives in transport pointing out that while transport, brings great benefits, air pollution from transport can cost 2-4% of GDP and bring great health risks. Policy loans, results-based lending and sector loans can all help address financing challenges to emission reductions. Financing could be used to help Asian city transport departments scale up their staffing levels.
53. The Eco-Mo Foundation has developed a system of environmental certification in Japan that enables companies and individuals to become environmentally compliant. Green management certification, eco-commuting certification; and eco-driving certificates are inexpensive and effective means of reducing GHG emissions and noise. The Russian Federation has developed a legal framework for clean transport, including an Urban Development Code of the Russian Federation, Charter of Road Transport and Urban Land Electric Transport, which enable technical measures for traffic management, mathematical modeling software products, development of transshipment units, development of pedestrian and bicycle movement, and organization of parking spaces. Mongolia has implemented a national air quality monitoring system which monitors SO₂, NO_x and other pollutants. Air pollution in the country almost always exceeds international standards, and is seasonal in nature, with more coal burned in the winter for domestic heating and electricity production. An emission inventory methodology with support of international development partners has been developed for all modes of transport in Mongolia.
54. During the discussion, it was noted that that innovative design is important because air pollution has heavy impact on health. Innovation is needed to understand the current situation as well as prepare for

the future in cities through national planning and overall design across regions and countries. It was emphasized that transit-oriented development brings co-benefits like reduction of health hazards, reduction of fossil fuel consumption and improved energy security, along with mitigation of greenhouse gas emissions, but also requires updated standards and policies for vehicles and fuels.

VIII. Mobility and Non-Motorized Transport (NMT) in Sustainable Urban Development –Role of City Developers

55. With the negative impact of rapid urbanization and motorization in Asia, the Forum recognized the need for a radical shift from the use of private motor vehicles to public transport and walking and cycling, as part of an integrated and environmentally sustainable transport system. The challenge to promote and support walking and cycling requires a transformation in terms of infrastructure provision, planning design, policy and regulatory support, resource allocation, and buy-in from city planners and developers. It was suggested that the term “walking and cycling” be used instead of non-motorised transport (NMT) as the best means to acknowledge and direct focus on the subject. Walking and cycling are quickly becoming an important part of various global imperatives related to SDGs and public health, having a notable impact on transport systems (e.g. efficiency, capacity, fiscal viability and integration with public transport); residents (e.g. equity, safety and health); and urban areas (e.g. resilience, vitality, economic benefits and competitiveness).
56. The role of city developers was emphasized, as they are key enablers of the shift to public transport and walking and cycling. A people-oriented city that highlights safety and urban liveability could be achieved by strengthening planning regimes and increasing integration with transport planning. Success stories from different cities often show common enabling factors such as effective collaboration, visionary leadership, people-oriented planning, transformation through major impactful projects, and a strong civic culture.
57. The role of the private sector in the construction and operation of regional and metro railways in Japan was elaborated. Private companies were involved with the construction, ownership and operation of metropolitan railways and also in transit oriented development near rail and metro stations. For instance, in response to climate change impacts, air pollution, noise pollution and traffic congestion, future plans in Ulaanbaatar to improve public transport and to promote walking and cycling were presented. For examples, bike lanes and walkways will be added to the existing network. A bike sharing service also started recently with 2,000 bikes in operation. The social aspect of walking and cycling planning and design was elaborated, citing the importance of providing access and connectivity. Due attention should be given to the needs of people in different income, age, gender and ethnic groups, and with different disabilities.
58. It was acknowledged that different cities may face different challenges. For example, extremes in weather may deter the promotion and planning of walking and cycling, but there are good examples that provide solutions that address such challenges. There was a strong consensus that an enabling environment with the land use regulation and other complementary policies that support compact urban development are the keys to enhancing walking and cycling in the region. Cities like Bogotá have proven that consistent and timely investment in walking and cycling infrastructure will add up to substantial improvement in usage over time.

59. Many cities in Asia are taking steps to enhance safety and urban liveability and reduce traffic congestion by adopting policies, planning and design aspects and integrating walking and cycling with public transport. City planners and developers have a major role to play in sustainable urban planning, design and development. There are issues related to infrastructure development, design, quality and data gaps. There is also a need for enhancing investments by national and local authorities for improving walking and cycling infrastructure to improve mobility options. Asian cities can learn lessons from a significant number of best practices and good examples, case studies and success stories of city developers around the world for improving urban mobility through successful planning, design, and investment in walking and cycling projects which can be replicated and scaled up to meet the global challenge of sustainable mobility.

IX. Role of e-Mobility in Sustainable Urban Development

60. Taking into consideration the increasing population, transport demand and concerns regarding air pollution and climate change in Asia, the Forum recognized that vehicles powered by fossil fuels cannot be relied upon in the long term. Electro-mobility (or e-mobility) offers an opportunity for cities around the world to reduce reliance on conventional modes of transport powered by fossil fuels. Examples of e-mobility modes of transportation include electric vehicles, electric buses, electric two- and three-wheelers and electric-boats.

61. E-mobility is one of the several integrated elements that will play an important role in the decarbonisation of Asian cities, including changes in mobility planning, and transitioning to renewables and clean energy in the transport sector. In 2017, electric vehicles sales in China increased 69 percent and accounted for nearly half of the global sales, India has announced an electric vehicle target, Thailand approved a new electric vehicle support policy. International initiatives like the IEA-initiated Electric Vehicles Initiatives (EVI) and the Zero Emissions Alliance (ZEV) involve several EST countries including China, India and Nepal to accelerate adoption of EVs. The city of Kathmandu, in Nepal is also a pilot city for EVI program. Development banks like the Asian Development Bank expressed willingness to provide financial support for EV adoption.

62. Adoption of electric vehicles such as electric buses and trams will also aid in reducing congestion working towards achieving SDG 11, particularly SDG 11.2. Cities are key for electric vehicles adoption, and there are challenges and opportunities for both the transport and energy sectors. In the transport sector, challenges include upfront costs of vehicles, new procurement methods requirements, standardization and interoperability of charging stations, and reinforcing cooperation with energy providers.

63. Opportunities for electrification of the transport sector include; higher energy efficiency, lower running and maintenance costs of vehicles, renewed of operating systems leading to more efficiency, attractive vehicles may attract more rider, less GHG emissions and noise. Opportunities for the energy sector include use of electric vehicles for grid integration and storage of renewable energy, decentralized production and storage, energy security through more robust grid that can call on EV storage, reduction of oil dependency, and new business models. Challenges for the energy sector include; development of charging infrastructure, increasing electricity demand from EVs, and impacts of uncontrolled charging.

64. Good planning and analysis of systems is necessary to implement EVs successfully. Electric light rails, trams, and buses are an emerging trend in cities along with electric two- and three-wheelers which can substitute trips taken by cars and are also more affordable. Financial incentives are one mechanism that has triggering the advancement of e-mobility particularly in India, however safety still presents as a concern. Additionally, strong policy in relation to the import of conventional cars should lead the way. There is concern that as gas, petrol and diesel vehicles are phased out of developed countries, they may be taken up by developing countries with less stringent regulations.
65. One of the options to increase the uptake, rentals of electric vehicles can to be coupled rental options, with the sustainability branding of tourist destinations (e.g. islands, parks, nature reserves. For mobility in and around tourist destinations as then “range anxiety” of electric vehicle may be less of a constraint than in other contexts. Rental businesses can amortize higher investment costs faster than private households. Private entrepreneurship and public-private partnerships are essential for successful EV projects. E-mobility investments may be given public approval if sustainability criteria are met.
66. Session participants also recognized the problems associated with the recycling and safe disposal of end-of-life toxic lithium-ion batteries. While promoting electric vehicles, it is essential for countries to enact regulations, build recycling infrastructures and facilities to deal with end-of-life batteries and create opportunities for second-life operation batteries, to avoid environmental problems and health hazards.

X. Railways for the Sustainable Urban Development

67. Rail is growing in Asia as a sustainable transport mode for long-distance travel as well as urban transport. Urban rail is taking up a larger share of total rail ridership globally, offering passengers more predictable urban transport speeds. Asia is leading the growth in urban rail ridership. Railways only consumes 10% of energy for equivalent distance travelled by road transportation. Railway stations can contribute to urban sustainable development by acting as intermodal hubs, as well as cores of TOD landscapes. Rail transport is also digitizing, moving towards paperless tickets and smart scheduling for passengers.
68. High speed rail coverages in P.R. China increased just over 9 times (902%) between 2010 and 2016 (from 46 to 464 billion passenger km), while activity in the Republic of Korea increased 37% (11 to 15 billion passenger km) and Japan 22 percent (77 to 94 billion passenger km). Electrification of rail is also a growing trend, which can reduce diesel imports and utilize local source of renewable energy to make rail transport even cleaner and more cost effective. Indian Railways have announced plans to electrify its entire railway system by 2022.
69. Japan has rich experience in building up national and local railway services using integrated rail and real estate development. Rapid population growth is a key enabler to private sector success in railway development (e.g. through the Kobayashi Model), where developers build both railways and nearby real estate, allowing them to capture the increase in land value at and around stations, making rail development economically sustainable. Government is responsible for ensuring that land readjustment occurs and supports coordinated development. As population growth slows down, the public sector needs to take on the development role, also focused on both rail and real estate development.

70. Railways were laid out to deliver coal to the power plant when industries were established in Ulaanbaatar. Today, Mongolia is in the process of determining the role of rail in urban transport in its integrated transport plan. Initial studies investigated future locations and strategies for serving various industries such as coal, milk, meat and vegetables. In Ulaanbaatar, there is no alternative to driving or taking buses and while buses represent only 1 percent of the fleet, they carry 65 percent of passengers. If undertaken in partnership with private sectors, public rail line in Ulaanbaatar could spur real estate prices to rise, but financing would still be a challenge, and intermodal transport would be needed regardless.
71. Low carbon, high volume transport such as rail or tramways development are a key strategy of achieving of the greenhouse gas reductions as a part of the Paris Agreement targets. More than 75 percent of Asian countries have prioritized transport in their NDCs, but less than 10 percent have specific targets for greenhouse gas emission reduction from transport. Bangladesh aims to reduce transport emissions by nearly a quarter vs. BAU levels by 2030, and Mongolia aims to double the uptake of hybrid vehicles in the same timeframe. Options for the high volume transport are the subject of an ongoing research programmes such as those funded by the United Kingdom Department for International Development (DFID). It was noted that the railway policies are to be explored further in the forthcoming Transport and Climate Change Global Status Report (TCC-GSR), led by the EST Co-sponsor the Partnership for Sustainable Low Carbon Transport Partnership.
72. For governments, rail development is key for linking urban to rural areas and to achieve SDGs, but urban rail is a focus. Hanoi aims for 17 percent of trips to be taken by rail in 2030, Ho Chi Minh City has also set targets. In India, major railway and station capacity must address current and projected demand; the Delhi airport rail connection is a good example. The International Union of Railways (UIC) offers methodologies and criteria for evaluating rail transport sustainability. Furthermore, where rail technology was once questioned for developing countries, it is now a proven strategy, while finance remains a critical issue.

XI. Country Reporting Session ~ Reporting/Reviewing Progress towards Implementation of Bangkok 2020 Declaration on EST (2010~2020)

I. Country Reports: Covering period from Lao EST Forum 2017 to Mongolia EST Forum 2018

73. With the objective of demonstrating the renewed interest and commitment of Asian countries towards realizing a promising decade (2010-2020) of sustainable actions and measures for achieving safe, secure, affordable, efficient, and people and environment-friendly transport in rapidly urbanizing Asia, the participating countries of the Fifth Regional EST Forum in Asia discussed and agreed on a goodwill and voluntary declaration - “Bangkok Declaration for 2020 – Sustainable Transport Goals for 2010-2020”.
74. At the Seventh Regional EST Forum held in Bali in 2013, the participating countries adopted the “Bali Declaration on Vision Three Zeros- Zero Congestion, Zero Pollution and Zero Accidents towards Next Generation Transport Systems in Asia” reinforcing the implementation of Bangkok 2020 Declaration (2010-2020) with emphasis to zero tolerance towards congestion, pollution and road accidents in the transport policy, planning and development. The Bali Vision Three Zeros calls for a paradigm shift in thinking on the role of motorization and mobility in realizing sustainable development in Asia. In the Eight Regional EST Forum in Colombo, member countries adopted the “Colombo Declaration” for the

promotion of next generation low-carbon transport solutions in Asia. Subsequently, the Tenth Regional EST Forum held in Vientiane, Lao PDR in 2017, the member countries adopted the “Vientiane Declaration on Sustainable Rural Transport towards Achieving the 2030 Agenda for Sustainable Development”.

75. The following provides a summary of consolidated country reports provided by member countries reflecting how EST trends and developments have taken place in the country from Lao EST Forum 2017 to Mongolia EST Forum in 2018 around the Goals of the Bangkok 2020 Declaration. The objective of the country reporting is to share among the international community the voluntary progress, achievements, initiatives and various challenges faced by countries in implementing each of the underlined goals of the Bangkok 2020 Declaration to realize the Bali Vision Three Zeros, the Colombo Declaration and the Vientiane Declaration. Country reporting is intended to inform efforts in member countries and assist development agencies, donors, development banks and other stakeholders in assessing the sustainable transport needs and challenges. This is intended influence investment decisions and inform to better devise their existing as well as future capacity building programs and operations in the area of sustainable transport.
76. **Afghanistan:** The Afghanistan Transport Sector Master Plan Update (2017-2036), National Development Framework and Vision for 2016-2025 recognizes that transportation is vital to connecting people and resources allowing for poverty reduction, social stability and peace keeping. Consequently, under the National Rural Access Program, the construction of 2,500km of gravel and asphalt roads is intended. Approximately \$4.5 billion has been invested in roads in Afghanistan since 2002, and it is estimated that the national road network is spans from 93,000km to 140,000km long. Afghanistan has entered into a number of bi-lateral, multi-lateral agreements with surrounding nations to enable cross-border transport such as the New Silk Road Initiative. In relation to climate change, Afghanistan recognizes that it is vulnerable and that mitigation and adaptation are required to limit impacts. The Euro III fuel standard has been introduced and only fuel of this standard is allowed to be imported.
77. **Bangladesh:** The National Integrated Multimodal Transport Policy emphasizing reducing the need for travel through integration of land-use and transport planning has been integrated into the Dhaka Structure Plan (2016-2035). Development Authorities have been created in Chittagong, Khulna, and Rajshahi to ensure proper integration of land-use and transport planning. However, efforts are challenged by a lack of coordination between implementing agencies, inadequate funding, and lack of institutional capacity. Construction is underway on a new Bus Rapid Transit (BRT) line and a Mass Rapid Transit (MRT) line, with feasibility studies for another BRT, three MRT’s, and a circular rail line around Dhaka City is underway, including consideration of complimentary bus sector reform. Bangladesh has introduced staggered work hours to spread out commuter traffic from government offices, financial institutions and educational institutions, along with a ban on freight vehicles in Dhaka City during the day, and the phasing out of old bus technologies.
78. **Kingdom of Bhutan:** As of July 2018 there are 97,072 motor vehicles in Bhutan, up from 13,000 in 1997 and this rapid motorization of Bhutan is causing a range of issues. The government has placed an emphasis on hybrid and electric vehicles and has introduced a green tax on imported vehicles with no tax being placed on electric vehicles. A feasibility study has been undertaken in 2015 in collaboration with the UNCRD to consider mass transit options that recommends heavy rail link to India and Paro, and a mass transit corridor transit system in Thimphu with the majority of urban trips currently taken by taxi. All the 20 districts in the Kingdom of Bhutan have had fibre-optic networks and local

government and central agencies have access to teleconferencing facilities. Mobile connectivity is accessible to 98 percent of the population and internet connectivity to over 90 percent, thereby substantially reducing the need for travel. A lack of funds and inadequate public transport networks has hindered efforts to reach a number of the Bangkok 2020 Declaration goals.

79. **Cambodia:** There are 4.5 million motor vehicles in Cambodia with an average growth rate between 2008 and 2018 being an average of 15.6 percent, consequently increasing congestion, air pollution, and travel time. Motorcycles and tricycles are the most popular mode and it is recognized that the public transport system is insufficient. The Ministry of Public Works and Transport (MPWT) has begun to digitize vehicle registration, vehicle inspection, transport business licenses and drivers' licenses. The MPWT has also employed the use of the private sector, who undertakes the online inspection of vehicles. To improve public transport services, improvements have been made to public buses, taxi buses, tram linkage to the airport, and train access to provincial areas. Cambodia has recognized the importance of the integration of land use and transportation. With the intention to shift to more sustainable modes of inter-city passenger and goods transport, the MPWT has implemented water taxis and public buses.
80. **India:** The Ministry of Housing and Urban Affairs has prepared guidelines for the National Transit Oriented Policy in 2017 to promote high density and mixed land use development within 500-800m of transit stations. India aims to introduce 6 to 7 million electric/hybrid vehicles by the year 2020 as a part of the National Electric Mobility Mission Plan 2020. From the 1st of April 2020, the Bharat Stage (BS) VI fuel standard will become mandatory in order to improve air quality and fuel efficiency. The capital city Delhi has already switched to the Bharat Stage – VI fuels, ahead of the scheduled deadline had set for rolling out cleaner fuel across country. The update of Intelligent Transport Systems has been demonstrated in several cities including Bengaluru, where a number of real time technologies such as 179 surveillance cameras and 20 variable messages signs have been installed to capture or share information to improve traffic management and increase safety. To address the issue of air pollution the National Air Quality Monitoring Programme is being implemented, consisting of 703 monitoring stations spanning 307 cities along with publication of air quality index and graded response action plan in many cities.
81. **Indonesia:** Efforts have been made to diversify the modes of transport, such as the Proyek MRT being 95 percent complete. Additional modes of transport such as a Bus Rapid Transit (BRT) system in Jakarta has been implemented. In addition an LRT and MRT are also under construction in Jakarta. Transit-oriented development has been recognized and implemented in the plans for the Proyek MRT. Finally, an Area Traffic Management System encompassing the use of CCTV, Automatic Vehicle Identification (AVI), and traffic lights has been installed to monitor traffic levels and congestion in Jakarta. In relation to air pollution, Indonesia has implemented an automatic air quality monitoring system, with reporting on 6 pollutants. The Pollutant Standard Index can be viewed by the public online, and data is published every 24 hours. The Emission Standard, Euro IV was implemented in 2018. Indonesia wishes to implement measures such as mass transit system, BRT systems and car free days to improve the transport sector. A lack of awareness and standardization has hindered the ability to enforce the inspection and maintenance of vehicles. However, regulations are being prepared by the Government.
82. **Japan:** As of July 2018, 24 municipalities had committed to the Low Carbon City Plan, promoting urban development that increases urban density and simultaneously integrating public transportation.

As of 2014, standardisation of the IC cards of 10 operators has occurred. The percentage of next-generation vehicles in the total number of new vehicles sold is hoped to reach between 50 to 70 percent by the year 2030, helping to transition to more sustainable technologies. Fiscal strategies, including taxation incentives and subsidies for research and development, have been implemented by the government in order to achieve the aforementioned goal. Local governments partake in the local monitoring of air pollution and noise levels for which data is collated and reported online on an annual basis. Japan is working in partnership with Sri Lanka on reducing greenhouse gas emissions by implementing measures such as exhaust gas measuring devices in buses and the Eco-drive program.

83. **Lao PDR:** Efforts are underway to integrate land-use and transport planning in Vientiane, however this is hindered by resource constraints and a lack of internal capacity. A Sustainable Transport Management Agency has been set up for Vientiane with a remit to focus on: managing private operators, parking and vehicle registration, ensuring quality of service, maintaining daily operations, future planning of the system, and communication with the public and other stakeholders. The Vientiane Sustainable Urban Transport Project seeks to improve pedestrian facilities near Bus Rapid Transit (BRT) stations, capacity building for transport operators, and demonstrating electric vehicle options, with financial constraints and lack of human resources hindering efforts. An 11.5km BRT system is being developed in Vientiane to link into the existing bus system consisting of 24 enclosed stations with pre-boarding fare collection and operating 96 busses. The Lao Road Sector Project 2 addresses elements of Climate Resilient Road Maintenance and Climate Road Asset Management.
84. **Malaysia:** The National Transport 2018-2030 plan aims to introduce BRT in several states and develop MRT and LRT programs in the 2017-2018 year. In relation to diversifying fuel sources, Malaysia has created the National Green Technology Master Plan which promotes the use of biodiesel, compressed natural gas and an increase in fuel quality, and also emphasises on urban rail, land use and travel demand planning. Emission inspections are being implemented for commercial vehicles as well as the registration of such vehicles. The Road Safety Plan of Malaysia 2014-2020 aims to reduce road fatalities by 50 percent by 2020, and a Transport Committee for People with Disabilities has been convened to address accessibility to public transport. Since the recent election, the Suruhanjaya Pengangkutan Awam Darat (SPAD) Land Public Transport Commission has been integrated with the Ministry of Transport to facilitate enhance integrated planning of land and transport infrastructure. Malaysia is supporting electric vehicles, and is planning for the provision of charging infrastructure in large cities.
85. **Republic of Maldives:** The Maldives Climate Change Policy Framework (2014-2024) contains the goals to adopting environmentally friendly transport modes, but the country faces many challenges including the geographical spread of many islands. On September 2018, Maldives has opened the bridge linking the Capital City of Male with the airport and the relatively newly developed island of Hulhumale. This area is now connected through public transport by both marine and land based services. Vehicle free days have been held on public holidays and certain zones have been made vehicle free. In order to improve safety, vehicle speed is controlled at 30km/hr across the islands. In general, efforts are hindered by technical, technological and financial constraints making it difficult to effectively develop necessary policies, plans and programmes to implement environmentally sustainable transportation options. Due to the dispersed nature of islands, outreach is a barrier especially at the local island community level. There was a recommendation to use cleaner fuels in transport to avoid spills. Maldives is looking forward to establishing the National Research and Data Management Centre to streamline effort to achieve carbon neutrality.

86. **Mongolia:** Mongolia is improving the legal environment for EST through a series of sustainable and green development policies and laws. There is a comprehensive set of working groups, joint coordination committees and other groups for integrating transport and land use at a national level. An Urban Planning and Design Institute has also been established as a think tank. A Geographic Information System Database is being developed for urban planning purposes. Mongolia is focused on becoming a transit corridor linking China and Russia by strengthening transport and logistics capability, including railway, and improved sea port access through China and Russia. Urban-Rural linkages are a focus of transport planning, especially using railways. Mongolia has a hybrid vehicle incentive policy with reduced import tax, low annual tax and reduced air-pollution tax. A BRT system is under development in Ulaanbaatar, and a shared bicycle system is in place. The country will also encourage left-hand drive vehicles to improve safety, and Euro V fuel compliance has been planned. There is currently a lack of an official statistical database in Mongolia in the context of environmentally sustainable transport calling for EST studies to be conducted in Mongolia which may be of interest to international donor agencies or countries can be a financial partners for the studies. Conducting a feasibility study to use railways in Ulaanbaatar (perhaps all the way to Baganuur) for the transformation of a public transportation system is a number one priority from the EST point of view for sustainability of the Ulaanbaatar city.
87. **Myanmar:** The National Transport Master Plan, National Logistics Master Plan and Yangon Urban Transport Master Plan are the major programs for land-use and transport planning. The number of motorcycle uses is increasing along with the reduction in bicycle uses, presenting a major challenge for encouraging walking and cycling. The Yangon Bus Service (YBS) is now being implemented in Yangon City with weakness in knowledge and training for Transport Demand Management, the major challenges. The Energy Standardization Technical Committee is drawing up new fuel standards. For periodic vehicle inspection and maintenance, the main weakness is budget constraint for procuring new testing machines. For road safety, National Road Safety Council (NRSC) has been established, and the State and the Division of the Road Safety Councils have also been established and five priority programmes are being carried out namely: (i) restricting drunk driving, (ii) banning mobile phone uses while driving, (iii) over-speeding, (iv) ensuring the use of wearing of seatbelts, and (v) ensuring the use of motorcycle helmets.
88. **Nepal:** While Nepal faces many challenges related to rapid urbanization and being a landlocked developing country, it has plans to implement technological and intelligent transport solutions to create a more sustainable transport system. Roadway development is an important focus for urban-rural connectivity, and rail infrastructure improvement has begun, especially the implementation of a cross-border 35km India – Nepal cross-border rail. A 1000 km east-west electrified railway project is under detailed engineering planning, and a China-Nepal rail link has undergone a pre-feasibility study. Bus services are being upgraded from small vehicles to large buses. There is a tax incentive for electric vehicles and large buses. A strict ban on drunk driving has been effective in Nepal, and a web-based road accident information system has been initiated. The syndicate system of the transport operator has been abolished. With regard to freight transport, a pilot project has been completed on the use of electronic cargo tracking system for freight transiting to and from India. Sustainable Urban Transport Index (SUTI) was piloted in Kathmandu city in 2017 to assess sustainable urban transport systems and services. A railway project to link Kathmandu with the P.R. China border and India border have been undertaken. Pre-feasibility and feasibility studies of east-west metro rail line in Kathmandu is in progress. Similarly, feasibility study of monorail along the Kathmandu ring-road has recently been

completed. On some lines, low occupancy micro buses are being replaced by high occupancy large buses. Introduction of electric-buses has been initiated by Kathmandu and Lalitpur Metropolitan cities in the Kathmandu Valley.

89. **Pakistan:** Pakistan has three sea ports and an integrated railway system. The major focus of national transport is on the road network in Pakistan. Various ministries at national, provincial and local levels focus on clean transportation. A Vehicle Emission Testing Service has been developed to phase out old vehicles. Road connectivity is being improved to connect rural areas to social services. Compact Natural Gas fuelled buses and mass transit options are being implemented in Pakistan, but face challenges such as fuel supply consistency. Mass transit has been developed in Lahore, Rawalpindi, Islamabad and Multan, with other projects in Karachi and Peshawar are in-process. The issue of funding and coordination with the provinces is being addressed by the present government. improve the overall scenario.
90. **Republic of Korea:** In 2010, the Rail-oriented Development Plan and Use Law was introduced in order to facilitate the designation of transit-oriented development areas. It is expected that in 2019, a number of Korea Train Express (KTX) projects will be completed. Seventeen smart work centres with housing have been introduced in the metropolitan area of Seoul discouraging unnecessary travel for business. A fund of US \$100,000 has been created by the national government to reimburse 7 to 8 cities for moneys expended in cities for improving safety for cyclists. In 2019, Korea plans to implement an additional 9 Bus Rapid Transit systems and 16 metro lines. High speed train services cover 1,512km and carry over 155,628 people moving daily between major cities. In relation to the diversification of fuel sources, all of the buses servicing the Seoul Metropolitan area are run on compressed natural gas and tax incentives are being provided upon the purchase of a hybrid, hydrogen powered, or electric vehicle.
91. **Russian Federation:** The number of vehicles in the Russian Federation is growing rapidly, decreasing the efficiency and reliability of passenger and freight traffic, and increasing the number of road accidents and pollutant emissions. Legal frameworks are now being put in place to support the evolution of sustainable transport. Some examples include integration of transport and land use planning in the Town Planning Code, updates to road vehicle standards to include electric cars, priority being given to pedestrian and bicycle movement, support for development of transport hubs, effective road traffic management, more optimized balance of public vs. private transport modes, and reorganization of parking planning. The Russian Federation is supporting autonomous vehicles to improve road safety, fuel economy and reduce operating costs, and in the meantime is restricting circulation of vehicles depending on their ecological class.
92. **Sri Lanka:** Sri Lanka acknowledges that it faces several critical challenges in the implementation of mass public transport such as a lack of investment, weak regulatory mechanisms and increasing number of motor vehicles. The Clean Air 2025 Action Plan (2016 – 2025) has been created and a National Transport Policy has been drafted. Sri Lanka's Blue Green National Budget 2018 intends to impose a carbon tax to encourage reduce reliance on private passenger vehicles. The revenue raised is to be placed into the Environmental Protection Fund. It is envisaged that it will be mandatory for imported vehicles to meet a Euro IV equivalent emissions standard and that bus only lanes and bicycle lanes will be introduced in Colombo. Additionally, the Transport Development Project has been created to administer projects outlined in the Western Regional Megapolis Plan which aims to aid development of Sri Lanka's Western Region including the development of transport and logistics.

93. **Thailand:** Thailand has developed a 20-year transport systems development strategy (2017-2036) covering green and safe transport, efficiency and inclusivity. Thailand has 566km of bike paths in place with a further 715km under construction, however issues related to secure bicycle parking and safety of riders hinder implementation efforts. A transit-oriented development policy for smart city development in Bangkok is being planned. Low emission options are being explored for buses in Bangkok, along with 410 km of metro over 10 lines operating by December 2019. Plans are underway to construct 8 intercity high speed rail routes by 2027, running just over 2,500km. Thailand is implementing new Euro standards for vehicles with all private vehicles to be Euro V by 2023, buses and trucks to be Euro V by 2026, and motorcycles to be Euro IV by 2019. With the electrification of the Tuk-tuk fleet, an estimated 1.2 million electric vehicles will be introduced in the country by 2030. Promotion of eco-driving practices among freight operators is also intended to reduce transport related emissions.
94. **The Philippines:** The Philippines Comprehensive Land Use Plan (CLUP) is a planning document prepared by Local Government Units (LGUs) to rationalize the allocation and proper use of land resources. Efforts are hindered by a land acquisition issues, lack of intermodal connectivity, and a lack of technical personnel in LGUs to assist in the implementation of the CLUP and other associated plans such as the Local Public Transport Route Plan. The city of Manila has a ‘Metro Manila Greenways Project to create a ‘bicycle superhighway’ including ‘family zones’ to connect major parts of the city. To enhance public transport a number of integrated transit hubs are under development. Efforts to improve transport demand management include assigning ‘rush-hour’ lanes for vehicles with multiple passengers, undertaking a feasibility study for adoption of an Intelligent Transport System, undertaking a process of route rationalization, and exploring the feasibility of a Roll-On-Roll-Off alignment project for freight trucks to travel on rail carriages as is done in Europe and India.
95. **Viet Nam:** The number of private vehicles is increasing rapidly (around 10-15 percent per year), presenting a challenge to provide urban transport infrastructure and public transport that can service the growing population. There is a high levels of air pollution in rush hours in some areas. Viet Nam has employed the use of a greenhouse gas inventory system that analyses the business-as-usual case and assesses various mitigation actions in the transport sector. In Hanoi, CNG buses have been introduced on three new routes, and Ho Chi Minh City now has 433 CNG buses in operation, and one MRT line will start operation in Hanoi in 2019, and 5 percent ethanol gasoline is available nationally. Emission standards for automobile and motorcycles have been increased to Euro IV and Euro III standards respectively. The country has drafted a roadmap to strengthen emission standards, implemented a program to shift freight transport from road to waterway and coastal shipping, and apply fuel consumption labelling for new passenger cars, and have drafted fuel consumption labelling for new motorbikes.
96. The post Country Report discussion focused on taking a close look at electric vehicle encouragement policies, taking into consideration aging populations, parking management policy, car- and ride-sharing, and autonomous vehicles. There was a suggestion that there be more dialogue between countries electronically and through other informal means. Furthermore, achievements of countries should have data-backed evidence, indicating which measures had successful impacts. There were recommendations to make use of natural gas in transport. Motorbike policy is also an important issue for developing countries due to concerns for safety, emissions and energy consumption. There are a

number of common challenges such as congestion, health issues, lack of capacity building, and lack of non-motorised modes.

97. Transit-oriented development policies have been created in a number of countries and are being linked to alternative modes of transport. Bike sharing could be integrated with existing policies in relation to non-motorised transport. Combining non-motorised and shared mobility is important to reduce fuel imports. Resilience was mentioned by a number of countries despite not being directly referred in the Bangkok Declaration 2020. Resiliency strategies should be rolled out into secondary cities in addition to major cities. All member countries have demonstrated that they are moving towards the principles of EST as set out in the Bangkok Declaration 2020. Hence, there is a great deal of opportunity for learning and sharing knowledge between countries. It will be important for all government agencies to share a common vision for EST and inform effective to undertake associated structural changes. We need to convince policy makers that EST is a policy that can be implemented to deliver a real opportunity to make cities more safe, clean and viable while create a range of social and environmental benefits.

XII. Asian Mayors Forum on the Promotion of EST in Cities

98. As an integral part of the 11th Regional EST Forum in Asia, the Asian Mayors Forum was officially opened by H.E. Mr. Batbold Sundui, Governor of the Capital City and Mayor of Ulaanbaatar. The Mayors Forum discussed a number of areas such as the integrated land-use planning and urban transport, new street and people oriented design including pedestrianization, Transport Demand Management (TDM) policies and measures and developing low carbon cities and communities in Asia. As a demonstration of their leadership and commitment towards SDG 11, twelve participating city mayors and local government representatives (Ulaanbaatar, Mongolia; Chengdu, PR China; Surat, India; Yogyakarta, Indonesia; Suwon, Republic of Korea; Kuching South, Malaysia; Male, Maldives; Mandalay, Myanmar; Dhangadhi, Nepal; Lalitpur, Nepal; Karachi, Pakistan; and Cebu, the Philippines) unanimously and voluntarily adopted and signed the Kyoto Declaration and the Ulaanbaatar Addendum for the Promotion of Environmentally Sustainable Transport (EST) Towards Realizing Resilient, Smart and Liveable Cities in Asia (see Annex I). The signing ceremony was presided over by H.E. Mr. Batbold Sundui, Governor of the Capital City and Mayor of Ulaanbaatar.
99. SDG 11 calls for making cities and human settlements inclusive, safe, resilient and sustainable and target 11.2 focuses on providing access to safe, affordable and sustainable transport and to expand public transport. The importance of universal access, efficiency, green mobility and safety has been highlighted in the context of Sustainable Mobility for All (SuM4All) with linkages to other SDGs. Compact cities planned with public and walking and cycling transport can reduce travel demand and improve overall sustainability of urban mobility.
100. In order to provide urban mobility solutions, city leadership should develop comprehensive mobility plans including integrated land use and transport planning, giving priority to public and walking and cycling, and transit-oriented development to address the larger issues and challenges of urbanization. Cities and municipal authorities need more autonomy and authority to plan and make decisions on land use and transport planning and implementation. Yet they also face governance challenges in developing legal and regulatory frameworks, enhancing institutional coordination, ensuring effective public participation, improving project management and monitoring, making effective and timely evidence-based decisions, and technical and capacity building issues.

101. Local governments have the opportunity to receive support through initiatives such as the Transformative Urban Mobility Initiative (TUMI). Supported by the German Federal Ministry of Economic Cooperation and Development (BMZ), TUMI offers world-leading expertise, innovative ideas and financial support, and enables leaders in developing countries and emerging economies to create sustainable urban mobility.
102. The Forum discussed the need for Asian Cities to strengthen planning regimes to more effectively guide development. Successful examples of cities that have used integrated land use and transit-oriented development and multi-modal integration mobility were presented, including London, Singapore, Seoul and Bogota, and many cities in Japan. Toyoma City, has effectively used integrated land use planning and LRT networks in low carbon transport development. Asian cities can utilize these experiences but need to customize international experiences to their own local contexts and situations, to develop solutions to their own cities' challenges, being mindful of their unique resources, capabilities and needs.
103. The Forum also acknowledged the designing streets for walkability is an effective mechanism for sustainable mobility and that is also makes cities more vibrant. This suggests that rather than focusing on flow of vehicle traffic, cities should focus on the mobility needs of citizens, including walkability. Planning should lower the priority for private cars and improve integration with public transport. Walkable neighbourhoods should be created around transit stations precincts to enhance walkability and promote street life. Participatory planning with citizens should be undertaken as a part of land development and transit corridor project to ensure their needs are considered.
104. Daejeon City, Republic of Korea, most trips in 2014 were made by car. Traffic congestion cost the city over \$1 billion annually from lost productivity and time lost— an important driver for non-motorized transport in cities aside from pollution. Daejeon City developed official plans centred on the mobility needs of all sections of society, with particular consideration given to vulnerable transport users such as the elderly, pregnant, and school children. Interventions that support the subway system, bus network, and over 750km of new bikeways, include installing 224 tailored traffic signals for elderly people in strategic pedestrian areas, providing allocated seating on trains for pregnant women, increasing number of street lamps for pedestrian safety, and engaging activities with schools.
105. Similarly, the City of Surat in India has been responding to its current and future urban challenges since the last decade or so. The city has developed a 'Comprehensive Mobility Plan' that focuses on improving the street network creating an integrated multi-modal public transport system; transit-oriented development focusing on 140 sq. km; pedestrians and cyclists; increasing safety and security; and, adopting smart measurement tools. Measuring the city's score against the Sustainable Urban Transport Index (SUTI) and comparing with other cities is an effective way to clearly identify areas for learning and improvement.
106. When considering urban interventions that can enhance and encourage walkability, Forum participants suggested that sometimes simple efforts can be the most effective, such as ensuring that pedestrian crossings are in-line with the flow of walkers and not offset. Space allocation in cities should be carefully considered as if the majority of available urban space is given to vehicles, then people that are trying to live active lives outdoor may be given less consideration and opportunity. Therefore, for social, economic and environmental reasons, more space should be allocated for

pedestrians and cyclist on streets. It is important that there is firm leadership from the government in this direction, while still keeping other local challenges paramount.

107. The world now has more cities than even a decade ago. Rising population in cities around the world is increasing the demand for basic services and putting pressure on limited urban space. The provision of automobile-friendly infrastructure, for example, wider streets and generous parking, encourages further increase in automobile growth. In order to avoid automobile-oriented planning, cities need to promote mixed-use development, prioritise public transport and encourage walking and cycling. Many Asian cities have a good share of public transport and walking use, but these modes need to be actively maintained and enhanced in order to achieve effective compact urban development. Transport Demand Management strategies enables the cities to implement “push” strategies such as parking management, congestion pricing and other measures that restrict high automobile use while implementing “pull” strategies such as developing attractive public transport, walking and cycling conditions to increase the use of these transport modes.
108. Even though low carbon urban development is aligned with broader social and economic objectives, only a few Asian cities have integrated urban transport and climate policy goals. However, excellent examples exist. Suwon City, Republic of Korea has successfully revitalized its deteriorating historic centre by encouraging walking and cycling, creating public spaces, encouraging new housing and urban gardening, and addressing the cityscape by improving signboards throughout the centre, creating an attractive and safe, community and promoting tourism leading to job creation. Now more districts of the city are learning from their success and implementing the practices.
109. Karachi city in Pakistan has revitalized its historic landmarks by involving NGOs, architects and academia and is moving forward to achieve a low carbon urban development plan. The vertical growth of the city now considering incorporation of green spaces and natural design elements. The builders and developers and real estate have to follow building codes and standards to minimize the risk of the possible future earthquakes. The barren and abandoned open spaces are being utilized to develop urban forest or green spaces. Options for urban, clean energy generation through solar panels and wind power is being considered by city of Karachi as a part of the Karachi Strategic Development Plan (KSDP) aimed at managing the growth of the city in manner that supports a clean and green cities. The above measures also help in achieving low carbon development.
110. National urban policies might take form along the suggestions and practices formed by the Urban Pathways project, which contributes to the implementation of the New Urban Agenda, the Paris Agreement and the Sustainable Development Goals, and help cities in emerging economies to design, implement and replicate measures on energy, mobility and resource management. It is implemented by UN Habitat, UN Environment and the Wuppertal Institute.

XIII. Moving Towards 2030 - Successor of the Bangkok 2020 Declaration (2010-2020)

111. The Bangkok 2020 Declaration (2010-2020) was adopted by the 5th Regional EST Forum in Asia held in Bangkok in 2010, and includes twenty time-bound EST goals and an extensive set of monitoring indicators (to assess progress in meeting them) embedded within an ‘*Avoid-Shift-Improve*’ framework. The Declaration was the first regional declaration on the strengthening of environmentally sustainable land transport in developing Asia. With the upcoming end of the

Declaration period in 2020, there is an opportunity to lay the foundation to accelerate action and further strengthen the support for country commitments towards international agreements. There is a need to initiate discussions on a possible follow-up agreement for a new Declaration with a timeframe of 2020-2030. For instance, the continued need to improve access and sustainability of transport in Asia together with the need to make the overall transport system, services and infrastructures resilient merits a detailed discussion to extend the Regional EST Forum in Asia beyond 2020, taking into account the changing focus in transport policy environment, including innovative financing and investment decisions towards sustainable transport.

112. The international community have embarked on a number of mutually interlinked, reinforcing and concurrent global agendas and agreements, such as: the 2030 Agenda for Sustainable Development and the SDGs, the Paris Agreement on Climate Change (2015), the Habitat III New Urban Agenda (2016), the Addis Ababa Action Agenda of the Third International Conference on Financing for Development (2015) and the Sendai Framework for Disaster Risk Reduction (2015-2030). It is clear that there is a need to appropriately align the post 2020 Declaration with these global agendas and agreements to ensure that the policy discussions in future EST Forums provide meaningful synergy with global efforts in the transport sector. There is an urgent need for transformative action in the transport sector in the EST countries. These actions will be crucial to deliver on the various commitments that countries have endorsed as part of the SDGs, the Paris Agreement, and the New Urban Agenda in particular. This requires strengthening collaboration to share lessons and experience to swiftly build on often isolated good practices to underpin mainstreaming of actions as part of the ‘Avoid, Shift and Improve’ framework.

113. The Regional EST Forum in Asia is a successful and effective platform for sharing and learning on sustainable transport across Asia. The Bangkok 2020 Declaration (2010-2020) set the foundation to track progress, share good examples and identify key areas of action for member countries. A review in 2017 of progress showed that countries have made progress on the goals within the Bangkok Declaration. In the new Declaration, consideration will be given to alignment to the SDGs transport related items and programs such as the SuM4All initiative. In particular, based on the Vientiane Declaration on Sustainable Rural Transport (2017) aspects of rural transport (such as SDG 9), rural-urban connectivity (the New Urban Agenda), adaptation (SDGs and Paris Agreement), National Determined Contributions (Paris Agreement) and available international financial mechanisms (Addis Ababa Action Agenda Financing for Development). The eight largest multilateral development banks (MDBs) have made a voluntary commitment to invest US\$175 billion to finance more sustainable transportation systems in developing countries over the next 10 years.

114. *Scope of the new Declaration:* An overarching vision would be prepared to become the key platform for sustainable transport to deliver the range of outcomes associated with the SDGs, the Paris Agreement, and the New Urban Agenda, among others, for Asian countries. Building on the existing Bangkok 2020 Declaration, the new Declaration could consider a number of new and emerging areas covered in EST Forums and Declarations since 2010 (including The Bali Declaration; Colombo Declaration and the Vientiane Declaration, namely:
 - improve sustainable rural transport and rural-urban connectivity;
 - create opportunities for capacity building, training, and partnership development;
 - develop institutional arrangements, policies, plans, and government mechanisms for sustainable transport;

- implement options to improve transport infrastructure maintenance and inform betterment investment;
- achieve economic development and job creation in transport sector;
- enhance transport outcomes in National Determined Contributions (NDC) to Paris Agreement;
- encourage intercity, bilateral and multilateral cooperation on EST;
- increase transport resilience to natural disasters and climate change;
- assess next generation transport systems and technologies (Autonomous Vehicles, Mobility-as-a-Service, Shared Mobility, Trackless Trams, Electric Mobility and other alternative fuels);
- leverage local and city-wide benefits of TODs and Mass Transit Corridors;
- harness advance technologies including Big Data (collection and analytics), Artificial Intelligence, and Blockchain technology in the transport sector;
- enhance coastal and river transport options and integration in the transport network;
- access and engage with Research and Development activities across goals; and
- provide framework for engaging development banks, private sectors and other potential investors in the areas of sustainable transport.

[representatives from Maldives proposed for the consideration of the Forum to include maritime and water transport in the successor of the Bangkok 2020 Declaration]

115. *Orientation of the Future EST Forum:* When the Regional EST Forum in Asia was established, it was agreed that the emphasis would be on environmentally sustainable urban transport. However, over the years there has been, often at the suggestion of EST Forum participants, consideration of the need to expand this focus to include sustainability aspects of national transport systems, especially a focus on rural transport and urban-rural connectivity, quality of life, and consideration of social innovations such as tactical urbanism, for example ‘car free days’. This appears to have been influenced by the focus of the EST Forum on national government representatives as primary participants in the EST Forum events. Since transport, environment and health officials have responsibilities that go beyond environmental and urban issues, they tend to support a broader focus of the EST Forum and for efforts to be fully aligned with the international agreements like the SDG and the Paris Agreement. The Forum also recognized the need for showcasing the practical achievements by member countries to support effort to attract financing and further investment for scaling up.
116. *Further integration of sub-national entities to address rural-urban linkages:* The urban focus of the EST Forum has included a link, but to some extent separate, process to engage with city mayors. This has included a focus on specific declarations (e.g., Kyoto Declaration of Asian Mayors towards realizing Resilient, Smart and Livable Cities in Asia including the recent Ulaanbaatar Addendum) and statements, as well as sessions in the EST Forum events covering city topics. At the same time, as Asia continues to urbanize, there will be a growing need to take action on sustainable transport at the urban level. Therefore, it will be crucial to further integrate mayors and senior city officials, as key decision-makers, in the EST Forum and ensure that follow-up to the Bangkok 2020 Declaration sufficiently addresses a city level focus. It is also important to address urban-rural connectivity with SDG 11 calling for supporting positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional planning and development.
117. *Positioning vis-à-vis global agreements on sustainable development and climate change:* The EST Forum and the potential follow-up to the Bangkok 2020 Declaration needs to take into account the commitments by member countries as part of their support for a number of relevant global

agreements. The next decade will be a unique opportunity to support countries in the enhanced action in the transport sector in Asia by tracking and reporting progress on a regular basis, sharing good practice and enabling further action and initiatives through a new Declaration. As such metrics associated with such a Declaration would be design to streamlining reporting processes across multiple goals, declarations and reporting requirements.

118. *Coordination with and complementarity to other intergovernmental processes on sustainable transport:* At the time of the drafting of the Bangkok 2020 Declaration in 2010, the EST Forum was the foremost process engaging governments in a dedicated policy dialogue and process on sustainable transport. Currently, ASEAN and ESCAP are examples of intergovernmental processes that are increasingly integrating sustainable transport in their discussions on sustainable development. Nonetheless, the EST Forum continues to stand out with its commitment to facilitating discussion and debate amongst different government ministries. Taking into account the expected continued emphasis on the environmental dimension of transport, it may be appropriate to consider the inclusion of energy ministries into the EST Forum, with the growing acknowledgement that the transport–energy nexus is crucial in realizing the ambitious targets set by the Paris Agreement on climate change. Similarly it may be appropriate to consider the inclusion of land related ministries given the clear call for the integration of land-use and transport planning and implementation.
119. *Shifting the emphasis towards implementation and a commonly agreed reporting framework:* Overall, there is a shift in the global sustainable transport community from advocating the adoption of sustainable transport related goals and policies to the effective scaling-up of implementation efforts across a range of goals and national and local policies. Given the early leadership and practical focus of the EST Forum it stands to become the Asian region, and sectoral focal point for engaging between countries and accelerating actions on sustainable transport with support of international development partners. This may include a streamlining of reporting processes to enable reporting to the EST Forum each year to also meet requirements for reporting on progress on the SDGs with the Voluntary National Reporting and the National Determined Contribution (NDC). Inherent to this focal shift is increased importance for topics like capacity building and innovative financing. The successor to the Bangkok 2020 Declaration could look into the areas of transport economics, in particular social and environmental implications of transport economics. While these topics have been addressed in the Bangkok 2020 Declaration, they, as well as other enabling topics like economic instruments, might have to be more highly prioritized in the future and could be further supported by multilateral banks, bi-lateral donor and other international NGOs and initiatives. Such future EST Forum partners could provide associated support to countries through capacity building, technical assistance and finance.
120. *Role of non-governmental actors in the EST Forum and their support for implementation of successor to the Bangkok 2020 Declaration:* A key reason for the success of the EST Forum is its clear focus on governments as the main ‘owners’ of the Forum and their primacy in the proceedings of the EST Forum, including the discussions on the Bangkok 2020 Declaration. It is increasingly clear that realizing sustainable transport is beyond the capacity of national governments alone, or for that matter local governments. There is also a greater involvement of the private sector which will be required in the future in addition to the development community, which traditionally has already been acknowledged as a partner for action on sustainable transport. It is also important to consider the role of informal sector in the context of intermediate public transport, among others. A key aspect of this greater involvement will be in implementing policies related to the integration of land-use and

transport planning to see new corridor transit services create opportunities for land developments that enhance the viability of the transit system.

121. *Proposed steps in deciding on the follow-up to the Bangkok 2020 Declaration:* A 10-year declaration has worked well in the case of the Bangkok 2020 Declaration (2010-2020). It is suggested that the follow-up agreement to Bangkok 2020 Declaration be another 10-year agreement consistent with the global agreements. A possible phasing of the discussions on a follow-up to the Bangkok 2020 Declaration could consist of following steps in a participatory and inclusive manner:
- Identification of the key items related to transport in each of the relevant international agreements and compare this to the topics and activities of the EST Forum and training sessions since 2010.
 - Consultations and brainstorming with key stakeholders and experts on the successor of the Bangkok 2020 Declaration, considering the outcomes of the member Country survey at EST11;
 - Setting up a small *ad hoc* taskforce to coordinate the development of the new Declaration, which could include at least four country representatives of EST Forum member countries. Ideally this would be persons who have been involved in at least three of the past EST Forums and who would be available for a two- or three-year period;
 - Creation of a wider international group of ‘EST Partners’ to provide peer-review and guidance to ensure a closer link to existing and planned activities aligned with the future Asia EST Agenda;
 - Drafting and circulation of successor document for comments at 2019 Regional EST Forum in Asia to be held in Viet Nam; and
 - Adoption of the successor (new Declaration) at the 2020 Regional EST Forum in Asia.

XIV. Closing Session

122. The representative of UNESCAP, Madan B. Regmi, commended all participants for bringing the 11th EST Forum to the successful conclusion and the adoption of the Chair’s Summary with action oriented recommendations. He invited all representatives of countries and cities and other stakeholders to initiate discussions for the implementation of the recommendations on their return to home countries and cities. He mentioned that UN ESCAP would continue to provide policy and capacity building support to countries and cities in the areas of sustainable transport, regional connectivity, road safety and urban transport. He invited participants to join UNESCAP Fifth Session of the Committee of Transport to be held in Bangkok from 19 to 21 November 2018. He confirmed that the UNESCAP would continue to collaborate with UNCRD and other partners in planning and organizing the future EST Forums and training workshops on particular themes of EST. He expressed his heartfelt appreciation to the local hosts for the excellent arrangements made for the Forum and hospitality extended to all participants.
123. Delivering the closing remarks, Mr. Kazushige Endo, Director of the United Nations Center for Regional Development (UNCRD), express his appreciation to the Government of Mongolia for great hospitality and the excellent organization of the 11th Regional Environmentally Sustainable Transport (EST) Forum in Asia. He further acknowledged the contribution of all the staff members and volunteers in the Mongolian Government, the Ulaanbaatar City, and all the supporting organizations for the successful organization of the Forum. He believed that the Forum agenda covered all the relevant and exciting topics of EST, urban planning, urban design and management techniques, which were very much linked to SDGs. He further noted that in the EST Plenary Session 8, there were very positive and fruitful discussions carried out regarding a potential follow-up agreement after the Bangkok 2020 Declaration and the successor of the EST Forum beyond 2020, which provided with important

advisories and suggestions. He welcomed the official announcement of the intention to host the 12th Regional EST Forum in Viet Nam in 2019 by H.E. Mr. Le Dinh Tho, Deputy Minister of Transport, Government of Viet Nam, and mentioned that UNCRD will initiate the preparation for the next EST Forum, in close consultation with the host Government and Ministry of the Environment, Government of Japan. He finally expressed his deep appreciation to the Mongolian Government, Ulaanbaatar City, national and city governments of the EST member countries, international organizations, development partners, experts, and stakeholders for making the 11th EST Forum in Mongolia a grand success.

124. On behalf of the Ministry of the Environment of the Government of Japan, Mr. Yasuharu Ueda, Councilor of Minister's Secretariat, Ministry of the Environment, Government of Japan, expressed his deep appreciation and respect to all the speakers and panellists who provided very interesting and meaningful topics and issues in the Forum. He expressed his sincere gratitude to the UNCRD and the Government of Mongolia, for undertaking the sufficient preparation and excellent operation of the Forum. He further thanked all the attendees, including government representatives and experts for the successful completion of the Forum. He mentioned that based on the framework of the Bangkok 2020 Declaration, high-ranking government officials from various countries have been continuously engaged in the policy dialogue, and collaborations between governments have been strengthened by sharing recognition. As a result, each country has raised the priority of sustainability and environmental policy in the transport sector, and the understanding of the EST has been spread throughout the member countries. However, target year of the Bangkok 2020 Declaration will come in two years, and thus member countries should start a discussion about a new framework of the successor of the Bangkok 2020 Declaration after 2020. He further pointed out that the concept of EST brings us multiple benefits from not only an environmental aspect but also a social and economic aspect. He believed that EST member countries can find the good successor of Bangkok 2020 Declaration that can harmonize a number of international agendas, and all the EST member countries can move forward in cooperation with each other for the future EST Forums.
125. Delivering the final concluding remarks, H.E. Mr. Badyelkhan Khavdislam, Minister of Construction and Urban Development, Government of Mongolia emphasized the potential to reduce the need for travel that can be achieved through integration of transport planning and land use. Mongolia is committed towards achieving the Sustainable Transport Goals of the Bangkok Declaration for 2020 and pursuing continued and enduring environmentally sustainable transport policies in integration with land use planning. This is to include numerous ongoing and future projects aimed to expand the national road and railway network, strengthening sustainable transport, building a new international airport, establishing regional logistics hub and multimodal transport terminal and so on. Under the Paris Agreement on Climate Change, Mongolia has identified its commitment and set priorities to reduce greenhouse gas emission by 14 percent by 2030 to a business-as-usual scenario, and the transportation sector has a significant role to meet this target. The optimal urban planning and development of smart transportation system, brings a number of co-benefits and values, creates win-win situation and increases opportunities for the safe, convenient and fast movement of people and the reduction of greenhouse gas emission. Furthermore, it is important to pay attention to the end-of-life (ELV) management of vehicles and associated waste through projects aimed at recycling, reuse and disposal of ELV waste, including used tires, accumulators and batteries, introduction of Extended Producers Responsibility. The government is in charge for enforcement of safety and environmental protection standards of Mongolia. The Government of Mongolia started development of "Master Plan for Human Settlement and Development" project aimed at optimization of human settlement and promotion of national, regional and local socio-economic development, based on rational network of key

infrastructure and comprehensive assessment of impacts of urbanization on natural capital, state of ecosystem and ecological balance.

126. On behalf of the Government of Viet Nam, H. E. Mr. Le Dinh Tho, Deputy Minister of Transport of Viet Nam officially announced Viet Nam's intention to host the 12th Regional EST Forum in Asia in 2019.

XV. Technical Field Visit

127. As an integral part of the Regional EST Forum in Asia, technical field visit was conducted on the second day (4 October 2018).

Annex 1: Ulaanbaatar Addendum to the Kyoto Declaration~ For the Promotion of Environmentally Sustainable Transport ~ Towards Realizing Resilient, Smart and Liveable Cities in Asia