

**Chair's Summary**

**Twelfth Regional Environmentally Sustainable Transport  
(EST) Forum in Asia**

*Achieving Smart and Resilient Cities Through Low-Carbon and Intelligent Transport System*

**28-31 October 2019**

**Sheraton Ha Noi Hotel, Ha Noi, Viet Nam**

**I. Introduction**

1. A number of major international agendas, agreements and frameworks such as the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), the New Urban Agenda, the Paris Climate Agreement of COP 21, the Sendai Framework for Disaster Risk Reduction 2015-2030, and the Addis Ababa Action Agenda, among others, have highlighted the importance of safe, resilient and sustainable urban development. Rapid population growth, unplanned urbanization, and high levels of motorization are putting unprecedented pressure on many developing cities of Asia.
2. Most of these cities face common social, economic and environmental challenges such as traffic congestion, air and noise pollution, GHG emissions, road accidents and fatalities, safety and security issues, insufficient infrastructure and financial resources, among others. These impacts are further compounded by the increasing magnitude and frequency of natural disasters and extreme weather events in recent decades. There is an urgency for cities and countries to act on decarbonizing and rapid sustainable development of the transport sector to not only ensure cities are livable but done well spur economic growth.
3. The concepts of 'smart, resilient and sustainable cities' have emerged as a popular discourse globally as the basis of solutions to address existing and future urban issues. Although there is a wide variety in definitions on what constitutes a 'smart city', the basic concept is to make cities work better, improve citizen's welfare and safety, and enhance quality of life using smart technologies and data analytics (such as Artificial Intelligent (AI), Internet of Things (IoT), Information and Communication Technology (ICT), Intelligent Transportation System (ITS), Global Positioning System (GPS), automatic translation apps and sensor networks) that extensively network people, infrastructure, vehicles, sensors and services. Such technologies can be used to assist efforts to make cities safer, economically vibrant, socially protective and environmentally sustainable, including improvements to transportation, energy, air and water quality, waste and sanitation management, healthcare, education facilities and government services.
4. At the same time, cities have to make sure, that future solutions work for all citizens ("no one left behind") and that existing solutions like walking and cycling and shared transport options are a key part of the urban development. Similarly, resilient cities have the capacity to reduce vulnerability to disaster risk and extreme climate events to respond in fast, efficient and creative ways, and can adapt well for changing circumstances in order to increase long-term prosperity.
5. The 2018 High-level Political Forum further acknowledged the importance of sustainable and resilient societies, with forty-six countries presenting Voluntary National Reviews

(VNR) on efforts to achieve the 2030 Agenda. Almost all VNRs addressed the SDG 11, showcasing strategies, program and policies put in place to make cities and human settlements more inclusive, safe, resilient and sustainable. More than 80 percent of VNRs referred to the role of sustainable transport in achieving the SDGs, and 36 percent of VNRs acknowledged the need for sustainable transport but fell short of offering practical evidence and policy measures to demonstrate their commitment to achieve it.

6. As part of regional efforts towards the implementation of international action agendas and frameworks as mentioned above and including the SDGs, the Regional Environmentally Sustainable Transport (EST) Forum in Asia has been providing the valuable inputs to its member Countries on regular basis. The 12<sup>th</sup> Regional EST Forum in Asia was organized with the theme of “Achieving Smart and Resilient Cities through Low-Carbon and Intelligent Transport System”, with a special focus on SDGs 11 - making cities and human settlements inclusive, safe, resilient and sustainable, among others. With the above background, the 12<sup>th</sup> Regional EST Forum in Asia was co-organized by the Ministry of Transport of the Government of Viet Nam; Ministry of Natural Resources and Environment, of the Government of Viet Nam; Ministry of Construction of the Government of Viet Nam, Ha Noi People's Committee, Government of Viet Nam; Ministry of the Environment of the Government of Japan, the United Nations Economic and Social Commission for Asia and the Pacific, and United Nations Centre for Regional Development of Division for Sustainable Development Goals/United Nations Development of Economic and Social Affairs.
7. The Forum was attended by more than 300 participants, comprising high-level government representatives (both national and local), international experts and resource persons, representatives from various United Nations and international organizations, scientific and research organizations, non-governmental organizations (NGOs), and the private and business sectors, and other stakeholders from 34 countries including Afghanistan, Australia, Bangladesh, Belgium, Bhutan, Cambodia, the People's Republic of China (hereinafter, China), Fiji, Germany, India, Indonesia, Iran, Japan, Lao PDR, Liechtenstein, Malaysia, Maldives, Mongolia, Myanmar, Nepal, the Netherlands, Pakistan, the Philippines, the Russian Federation, Singapore, Sri Lanka, Sweden, Tajikistan, Thailand, Uganda, the United Kingdom, USA, Viet Nam, and Zimbabwe.

## II. Opening Session

8. Welcoming the participants of the 12<sup>th</sup> Regional EST Forum in Asia, Mr. Nguyen The Hung, Vice Chairman of Ha Noi People's Committee, Viet Nam outlined two important issues for Ha Noi and other cities. The first was around EST policies, planning and financing in developing safe, intelligent, resilient and sustainable cities and communities; and the second was related to the opportunities and challenges in improving services and infrastructure. Mr. Shantanu Mukherjee, Chief, Integrated Policy and Analysis Branch, DSDG, UN DESA, then expressed that the sustainable transport has already been identified as one of the key enablers of the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change. Highlighting issues like growing income inequalities, green-house gas emissions and other negative impacts, he mentioned the EST Forum has for a long time been a leading platform in highlighting sustainable transport-related issues in the region and showcasing and identifying practical solutions. Given the urgency to act on climate change, there is a need to move from ‘low-carbon’ to ‘decarbonization’ of the transport sector. The Bangkok declaration has played a pivotal role in this connection and its successor is set to inform

action up to 2030, aligned with associated global agendas and commitments of member-states. Mr Mukherjee invited the national stakeholders to the upcoming Second Global Sustainable Transport Conference to be convened by the United Nations Secretary-General over 5 to 7 May 2020 in Beijing, China.

9. The representative from the Government of Japan reflected on the growth of the EST Forum from 14 countries in 2005 to 25 countries in 2019, signaling the increasing importance of the Forums and the policy discussions undertaken. Mr. Tetsuya Yagi, Parliamentary Vice-Minister, Ministry of the Environment, Japan, said that this 12th EST Forum is an excellent opportunity to deepen our discussion about the successor of the Bangkok Declaration 2020, considering international agendas such as SDGs and Paris agreement. Under this situations Japan wishes to contribute to solving issues through partnership with other Asian countries. Dr. Hideki Hirai, Deputy Minister for International Projects, Ministry of Land, Infrastructure, Transport and Tourism, Japan, highlighted the importance of smart cities ‘mobilizing innovation wisely’ for sustainable development. He said Asia is a very disaster-prone area. Once a city with a large population and active economy is hit by a disaster, it can be seriously damaged. A resilient city is a crucial concept for Asia with eco-friendly, sustainable and intelligent transport systems being a key to achieve a smart and resilient city.
10. Mr. Nguyen Van The, Minister of Transport, Viet Nam, shared unique features of the Viet Nam transport system, and shared features of the countries Transport Development Strategy and associated goals with mention of sustainable initiatives being undertaken in Viet Nam. Mr. Nguyen Dinh Toan, Deputy Minister of Construction, Government of Viet Nam highlighted the need for cities to share learnings about technology, finance and human resources, both domestically and internationally. Mr. Vo Tuan Nhan, Deputy Minister, Ministry of Natural Resources and Environment, Government of Viet Nam shared that Viet Nam has adopted a National Green Growth Strategy, a National Plan of Green Growth and Urban Development to 2030, a National Action Plan on Air Quality Management to 2020 and Vision to 2025, and other national policies to achieve sustainable development.
11. Delivering the keynote address, Mr. Bambang Susantono, Vice President of Asian Development Bank, presented challenges created by rapid urbanization for Asian cities including increasing congestion, limited area for urban development, and quality of transport vehicles, and increasing air pollution which is directly effecting human health, the health of the environment, and contributing to climate change. Transportation infrastructure can be an enabler of development that supports economic growth in a rapidly changing world, especially in Asian cities. The Regional EST Forum in Asia provides the opportunity to discuss the important national and global issues as they relate to transport and contribute to the global agreements, the Paris Agreement and the Sustainable Development Goals. The transport solutions are, to a large extent, known: Where possible cities can focus on avoiding or reducing the need for travel through better planned cities; shifting to more sustainable forms of transport; improving and adopting new technologies, such as electric vehicles and ride sharing apps; and ensuring the cross-cutting issues of safety, emissions and equitable access are embedded in our transport systems.
12. Mr. Susantono further elaborated that the Bangkok Declaration set 20 goals that still provide a good approach to deliver environmentally sustainable transport. The successor to the Declaration provides the opportunity to incorporate the major international agreements on climate change and the Sustainable Development Goals as the lead framework for reporting and peer-to-peer exchange. This EST Forum is part of global efforts for transforming

transport from past ways to new sustainable, climate responsive options that emphasize achieving results through action.

13. Officially inaugurating the Forum, the Deputy Prime Minister of Viet Nam H. E. Mr. Trinh Dinh Dung mentioned that the Regional EST Forum in Asia led by UNCRD is a very important Forum to create close linkages with the global agendas and agreements such as the United Nations Sustainable Development Goals (SDGs), the Paris Climate Agreement, the Habitat III New Urban Agenda, and the Sendai Framework for Disaster Risk Reduction, among others. The Deputy Prime Minister highlighted the important role played by the Bangkok 2020 Declaration over a decade and attached importance to the successor post-2020 Declaration until 2030. The Deputy Prime Minister highlighted the importance of the integration of land use and transport planning, the shift to less emitting transport modes, the development of climate resilient infrastructure, the application of information technology to meet urban challenges, innovative financing mechanisms and investment opportunities and public-private partnerships (PPP), among others.

### III. Pre-events of the 12<sup>th</sup> Regional EST Forum in Asia

14. *Regional Capacity Building Workshop on Urban Mobility and Sustainable Urban Transport Index, 28-29 October 2019, Ha Noi Viet Nam:* The workshop which was organized by ESCAP in collaboration with MOT and UNCRD, highlighted importance of assessment of mobility in Asian cities using 10 indicators and Sustainable Urban Transport Index (SUTI), to refine strategies to improve overall sustainability of urban mobility. Integrated urban transport planning, accessibility, provision of public transport, affordability are some of the important aspects to be considered for improving urban mobility. Seven cities Thimphu, Khulna, Ulaanbaatar, Bandung, Tehran, Bhopal, and Suva presented their urban mobility assessment results. The regional workshop invited cities and countries to assess urban mobility using SUTI and make evidence based decisions to improve urban mobility. ESCAP would extend support for collection of data and analysis.
15. *Unlocking Economic Benefits of Clean Transportation, 28 October 2019, Ha Noi, Viet Nam:* Transport (both personal mobility and logistics) plays a critical role in the efficiency, health and economic development of cities. In particular there is a significant economic opportunity for Asian countries and cities to avoid rising health costs as a result of air pollution – which is intricately linked to urban transport fuels. Realizing such benefits cannot be done by technology alone (such as electric vehicles) but requires an integrated approach to policy and planning to ensure that sustainable, walkable, resilient transit cities are created. It is important, that planning and policy decision favour integrated mobility, especially due to the economic concept of induced demand, where it is observed that by creating more roads, the demand for cars increases (and vice versa). Beyond just vehicle electrification, there are also significant economic benefits for a city from integrated planning approaches. In Hong Kong, the integration of railway finance, service provision, transport and urban development, environmental considerations and social issues means, that challenges are addressed simultaneously, and co-benefits are achieved across all of these categories. In developing cities, there are opportunities to use new technologies such as ‘Trackless Trams’ to provide the transit, that can underpin denser development that creates economic benefits for a city.
16. *The Role of Women in Developing Rural Transport, 28 October 2019, Ha Noi, Viet Nam:* The SDG’s cannot be met without removing gender discrimination with fifty percent of the global population being women, who are essential to the SDG’s ‘leave no one behind’ agenda. An estimated 700 million people (40 percent in the APAC region) are without access

to a rural road, with women disproportionately affected. There has been consideration of the use of women quotas as a measurement of success in gender equality within the (rural) transport sector, however there is agreement that this was a poor benchmark, especially when such targets are not calculated as proportionate to the population size. It was recognized, that lots of the key challenges for women within High Volume Transport (HVT) are similar to the rural transport challenges for women: Sexual harassment, difference in travel behavior leading to different demands for transport services and the challenges of role of women in informal cross-border traffic. Future research into those issues will be supported by the recently launched Department for International Development UK (DFID) HVT program. The ReCAP cluster of ‘Gender Mainstreaming in Rural Access’ projects found that policies are being implemented but not enacted by implementing agencies. Most of the seven countries included in the research were found to have national gender policies, but in many cases the transport sector has not implemented national policy directives on gender, despite political commitment. Nevertheless, some very good practice examples of gender and social inclusion being implemented in community driven rural transport development projects were presented from Viet Nam and Nepal, and other countries in the Asia Pacific Region, as well as gender mainstreaming approaches adopted in the ReCAP guidelines, and also guidelines prepared by the Ministry of Transport in Viet Nam.

17. *Innovative Concepts for Sustainable Mobility in Asia, 28 October 2019, Ha Noi, Viet Nam:* As Asian cities face various mobility challenges such as traffic congestion, air pollution, road safety and other health issues, a strong and robust planning paradigm is essential. Sustainable Urban Mobility Planning (SUMP) is an innovative way to tackle these challenges by strengthening public transport and effectively integrating active mobility. Following the SUMP method, and with strong political support, the involvement of various stakeholders including the private sector can inform and enable comprehensive planning outcomes. Systematic data collection, handling, and sharing, among different administrative bodies supports evidence-based planning, especially across administrative jurisdictions. Machine-learning analysis of traffic and mobile phone data can provide real time input for traffic models and management systems, superseding traditional data collection methods. It is important for metropolitan governance bodies, such as metropolitan transport executives, to support local governments in steering away from automobile dependence. People-centered planning and implementing multi-modal transport opportunities can deliver a wide range of benefits. Cities can plan and implement multimodal transport and living hubs, bicycle-sharing systems along with bicycle-friendly infrastructure to improve the quality of life. Implementing electric mobility (two/-three wheeler, busses, micro-mobility, freight vehicles and passenger cars) will contribute to enable cities to leap-frog and obtain greater co-benefits of decarbonizing transport, if renewable energy can be provided.
18. *Workshop on Electrification of Public Transport, 23-24 September 2019, Ahmedabad, India:* As a pre-event of the Viet Nam EST Forum this 2-day workshop was organized in Ahmedabad, India on the subject of ‘Electrification of Public Transport - Electric Mobility Forum’ by World Resources Institute, India, in association with Shakti Foundation, CEPT University, Ahmedabad Municipality Corporation on 23rd and 24th September 2019. The workshop had several sessions which explored areas related to the electrification of public transport along with the future of mobility with electric vehicles. The workshop was attended by several authorities from different areas related to electric vehicles – including policymakers, manufacturers, operators, micro-mobility, etc. The inclusive style of the discussions during the workshop sessions allowed participants to learn about a range of technology and policies. The workshop was followed by a site visit during which the

delegates had a visual experience of Battery Swap Technology and Fast Charging Technology.

19. *Conference on Integrated Sustainable Transport for Smart and Resilient Cities, 10-11 October 2019, UNESCO House, New Delhi, India:* A Conference on ‘Integrated Sustainable Transport for Smart and Resilient Cities’ was organized by the 3R WASTE Foundation in association with several partners as a pre-event to the EST 12 on 10-11 October 2019 in New Delhi. Various sessions deliberated upon the successor of the Bangkok 2020 Declaration until 2030 aligning with the 2030 Agenda and its underlined SDGs<sup>45</sup>, involving speakers and 125 participants. The conference discussed the need for public transport, walkability, cycling to be used as a system enabler; how the discussion on transport is now pan-organizational, meaning that impacts are affecting all parts of the economy and society; and how the SDGs offer an explicit tool to bring Unity in Diversity. There is a need to re-evaluate projects through a people centric approach, looking at models of co-development. It is clear that transport should be treated as a system rather than a set of infrastructures and should be considered through a lens of resilience, livelihood, food security, gender, climate, and pollution.

#### **IV. Future Role of EST and Smart, Resilient and Sustainable City Development**

20. Discussion focused on the future role of EST and importance of aligning interests around a successor of the Bangkok Declaration focused on low carbon development, smart and resilient cities, public private partnerships, and communicating with the users of transport systems in cities. Smart cities are not simply the application of Intelligent Transportation Systems (ITS). Water, energy, transport, housing, land-use and other aspects all need to be taken into account.
21. It needs to be clearly understood that implementing smart technology does not make cities sustainable if the transport system is not designed to prioritize sustainable transport modes and integration with land use and development. Car dependent cities that implement smart technology without shifting their planning and infrastructure provision to focus on transit, will simply experience more cars on the road. Similarly, cities that prioritize transit, walkability and cycling will be strengthened by smart technology that can amplify the positive impacts of the underlying system. In this way, cities must choose between whether they want ‘smart car cities’ or ‘smart transit cities’, with the latter being the only option that will be truly smart, sustainable and resilient.
22. Countries are determining intelligent transport systems as part of their NDCs. EST should align with the 5-year ambition cycle of the UNFCCC and NDC process. The future EST process should also emphasize on strengthening collaboration of the public and private sectors and implementation of concrete activities by the member countries.
23. Key recommendations resulting from the plenary session include:
  - a) Low carbon and SDG initiatives should be integrated into EST in order to realize sustainable decarbonization of the transport sector. Smart and resilient infrastructure and systems can be key elements of a more livable and sustainable city. Collaboration between the public and private sectors should be fostered appropriately to enable the transition. Future forums could be made available as platforms for discussion on ways to achieve information sharing between countries.

- b) Countries should make use of the EST forum to engage with experts, and to organize local workshops to identify opportunities, strategies and potential plans for a renewable energy and sustainable low carbon transportation future.
- c) Smart technology has the potential to address transport issues by improving overall efficiency of the transportation sector. Different technological approaches require performance evaluation, and importantly, the results of evaluations need to be published so that others can take advantage of the knowledge generation. Evaluation criteria need to be developed so that technologies may be better understood and benchmarked. Timely interventions should be made through policies that promote smart transport technologies with a maximum potential for GHG reduction.
- d) Developing sustainable transport systems is a means to both achieve parts of the SDGs and associated climate commitments (NDCs). NDCs and the five-year cycles of ambition are an important opportunity for countries and the transport sector to make advances in rapid emission reduction and the achievement of SDG 13 amongst others. Transport sector decision-makers are key to developing and implementing transport-oriented emission reductions, because they are the ones that can bring stakeholders together, such as land development agencies and the private development sector. Transport ministers are encouraged to attend COP25 in Santiago, Chile for a Transport Ministers' High-Level meeting to discuss, how to coordinate these efforts within their countries. Setting ambitious GHG reduction targets for the sector aligned with comprehensive action and investments plans are a way forward.
- e) EST Forum should include NDCs as a key element in the successor of the Bangkok Declaration and become a platform for countries to report their plans and enable peer-to-peer learning.
- f) Developing countries in Asia are encouraged to participate in projects such as the new regional 20 million Euro project "NDC Transport Initiative for Asia" (2020-2024) to support China, India and Viet Nam implemented by GIZ and supported by the German Ministry for Environment. GIZ offered to host two workshops on NDC enhancement in advance to the next EST Forum.

## **V. Air Quality Co-benefits of High-Volume Low Carbon Transport- Future in Asia**

24. This session explored the co-benefits of high-volume low-carbon transport for improving air quality in Asia, based on critical experience from EST countries. With 2.2 million deaths annually through air pollution in the region, exacerbated by transport emissions in combination with climate change, it is urgent to address the rapidly increasing emissions from transport in the region as air quality in Asia. A number of interventions to reduce air pollution were discussed, such as high capacity urban rail and linking development with transport services. Since air pollutants and GHG emissions from the transport sector are not mutually exclusive, the session also addressed low emissions development and climate resilient strategies and the need to ensure that these actions are included in EST related country plans to align with NDC and SDG targets. The Asian EST Initiative can provide a platform for peer-to-peer learning, knowledge sharing, capacity building and access to financing in the region.
25. Recommended actions from the session include the following:

- a) *Integrate high volume low carbon transport options in short- and long-range transport planning:* Countries must plan for high volume low carbon transport options to address congestion in the region's cities. Sri Lanka, for example, recognizes the urgent need to include high-volume low-carbon transport in its NDC, and as congestion worsens with rapid motorization, incremental change is not enough. The EST Initiative through its partners can help to support national action to design policies and NDC development.
- b) *Provide peer-to-peer learning and capacity building platform to help countries overcome principle barriers and challenges in promoting high volume low carbon transport:* Participants indicated a need for capacity building to help design high-volume low-carbon transport solutions. Bangladesh faces challenges including high population density, vulnerability to climate change, and its lack of institutional and technical capacity. The UNCRD can coordinate capacity building and peer-to-peer learning in the region and work with partners such as the Low Emissions Development Strategies (LEDS) Global Partnership Transport Working Group, which acts as a matchmaker for knowledge sharing.
- c) *Prioritise and promote sustainable transport options in the region's countries and cities to achieve mode shift to high-volume low-carbon transport:* Use of personal vehicles must be disincentivized to shift citizens towards high-volume low-carbon transport, and governments must supply suitable infrastructure and services while managing demand. For instance, mode shift is a challenge in many countries including Malaysia; there is an opportunity to encourage a shift by improving public transport and phasing out government subsidies for fossil fuel. Promoting investment in urban railways is a low carbon transport option that can increase occupancy, reduce congestion and increase travel speeds (for instance, in Japan, urban rail significantly reduces urban NO<sub>x</sub> and particulate emissions, and offset 30 million tonnes of CO<sub>2</sub> per year). As these types of interventions include a variety of stakeholders from local and national governments as well as the private sector, the EST initiative can provide its members a platform to encourage dialogue amongst all stakeholders.
- d) *Identify additional resources to advance climate resilient and low emission transport development in the Asia-Pacific region:* Transport infrastructure and services are vulnerable to a lack of relevant and reliable data to support planning and decision making, outdated design assumptions for resilient infrastructure, and a lack of consideration of climate factors in long-term decisions infrastructure investment, location and design. For instance, when Laos PDR faced severe floods in 2018, some 75 percent of total damages were in transport systems and waterways. Financing for climate resilient and/or low emission transport infrastructure is necessary; however, other resources such as capacity building, policy interventions and access to technology are also crucial. In order to understand the investment needs for the sector, data collection must be improved. The EST Initiative can provide a framework for national reporting on SDG and NDC that include air pollution, mitigation and resilience indicators.

## **VI. Bridging Urban Transport Infrastructure Gap in the Context of Smart and Resilient City - Role of Private Sector, MDBs & Donors**

26. It is clear that there is a significant infrastructure gap in Asian cities, created by rapidly urbanising economies, growing infrastructure requirements, and limited access to investment. ADB speaks about a need of more than \$8 trillion USD for transport infrastructure for Asia by 2030. Attracting finance from the private sector, multilateral development banks (MDB) and donors will be crucial for Asian countries to address their infrastructure needs. However, there must be an integrated land use approach to leverage private development capital. Transport demand and revenue streams are more uncertain than other types of urban infrastructure (such as power networks) and thus the public-private partnership (PPP) models are more complex. However there is precedent from many cities to inform efforts. While addressing funding gaps is important, addressing capacity gaps across technical capability and institutional frameworks is also critical to allow appropriate transport and land use planning.

27. Key recommendations resulting from the plenary session include:

- a) Comprehensive and integrated master-planning should be undertaken in cities to set the direction and framework to provide transport professionals and private sector investors with confidence in the infrastructure direction of the city. These plans should involve the integration of land use and transport.
- b) Cities should embed the potential for land development into their transit planning and financing assessment, because unlike roads transit creates much more opportunity for dense development in proximity to stations – and this value can be leveraged for finance (by using mechanisms such as Land Value Creation through Transit Activated Corridors).
- c) The ‘Transit Activated Corridors’ approach recommends involving private sector developers at the very early stages of transit planning, allowing land use opportunities to be quantified and incorporated into routing and station location decisions. By doing so, the project is more attractive for private investment because the co-benefits achieved through land development are greater.
- d) Countries must continue working to ensure appropriate institutional frameworks are in place to mitigate the risk of projects and potential returns, which in turn increases the attractiveness of investment from alternative funding sources (such as the private sector).
- e) Planners should also ensure they place importance on the human-scale factors, such as ensuring diverse socioeconomic groups have access to services. Infrastructure ‘gaps’ can also be in the form of socioeconomic access to public transport (not just related to funding), and vulnerable citizens should be considered when planning transport.
- f) Underpinning successful PPPs and transport systems in general, developing countries should focus on addressing not only funding gaps but capacity gaps which are reflected in the above recommendations – to ensure that PPPs are not just about attracting money for infrastructure but this money is spent for the greatest outcomes for the city.

**VII. Strengthening Vehicle (including motorcycles) Emission Standards and Equivalent Fuel Quality and Inspection & Maintenance (I/M) and Road Safety-Benefits and Opportunities for Asian Countries towards SDGs**

28. Vehicles, including motorcycles, remain a major source of air pollution and greenhouse gas emissions in the majority of the world's cities, especially in Asia. While government in some Asian countries have tightened the emission standards for new vehicles in recent years, the inspection and maintenance systems for vehicles already in use are lacking adequate testing infrastructure and capacity, as well as awareness level amongst vehicle owners. As it is projected that emissions from vehicles will continue to rise in Asian cities, inspection and maintenance will continue to be a critical area where improved testing facilities and a better regulatory frameworks could bring significant emission reduction, fuel and cost saving, and lower collision and mortality rates. Although the recent acceleration of efforts to electrify vehicles will likely reduce the need for emission testing in time, inspection of roadworthiness will continue to be a key focus, especially as this is linked to collision rates which are resulting in growing road traffic fatalities across Asia.
29. Recommended actions coming out from this policy dialogue include:
- a) Asian countries are encouraged to review current vehicle emissions requirements and standards and where appropriate consider increased controls that are designed to underpin the achievement of economic, social and environmental benefits across the nation.
  - b) Regular emission testing of in-service vehicles against the agreed standards should become mandatory, typically bundled with annual licensing renewal. On-road remote sensing can be deployed as a complementary measure to identify non-compliance.
  - c) Inspection and Maintenance systems need to be upgraded with improved facilities, enhanced technical capacity and higher reliability in order to reap associated economic, social and environmental benefits.
  - d) Periodic technical inspection of vehicles is important and necessary to ensure the level of safety and roadworthiness of a vehicle throughout its service lifetime. This should be undertaken with driver awareness programs on the steps for proper maintenance and the associated benefits.
  - e) The use of on-board diagnostics technology should be encouraged, especially in the selection of new vehicles to help identify and notify vehicle servicing needs.
  - f) In countries, like Viet Nam, where motorcycles are an essential means of transportation and livelihood of the majority of people, the control and management of the use of motorcycles should be made in conjunction with the improvement and development of the public transportation system.
  - g) In addition to putting in place inspection and maintenance systems with appropriate testing equipment and policy support, raising public awareness on road safety through education campaigns and other activities is equally important.

## **VIII. Realizing Smart Cities in Asia**

30. Cities around the world are increasingly focusing on the opportunity presented by ‘smart’ technologies. This session focused on the emergence of smart technologies in Asian cities and the challenges and opportunities presented for achieving environmentally sustainable transport systems in-line SDG-11. The session noted that many city governments in Asia have already made efforts toward implementing components of the Smart Cities concepts, such as smart mobility and digital twin city model in Utsunomia city in Japan, Public Bike Sharing (PBS) project in New Delhi, India and Transit Oriented Development (TOD) in Hong Kong. However, it is important that rather than taking a technology-centric approach, cities should keep the needs of people and the environment at the core of smart city initiatives. New technological innovations present opportunities for closing gaps in socioeconomic inequality and increasing accessibility and liveability for all.
31. Key recommendations emerging from the policy dialogue:
- a) Cities should ensure that their citizens are involved in the process of ideating/designing and implementing new technologies. This ensures that the real needs of the people are at the core of new initiatives, and citizens are able to provide constant feedback on new developments.
  - b) It is important that benefits for smart cities initiatives are properly communicated to the citizens. Without proper education and understanding of how new smart technologies will impact the ‘status quo’ – that many people are dependent on for their daily lives – the population may be reluctant to support new initiatives they are unsure about. This also includes educating the population on how to use new technological capabilities.
  - c) Work closely with the private sector to achieve ‘win-wins’ for both parties. Private sector have the incentives to provide technological solutions, and similar to the case of the Hong Kong ‘Rail + Property Model’ discussed in this session, if partnerships can facilitate greater outcomes for private parties (while always keeping public good paramount), then participation is more attractive.
  - d) Just because new ‘smart’ technologies are emerging does not mean that alone they are a solution to all urban challenges. Cities should still prioritise walking, cycling and transit as the basis for transport planning, and focus on implementing new technological innovations to enhance these benefits. Such ‘conventional wisdom’ about sustainability should always be implemented hand-in-hand with smart technology.

**IX. Presentation of First Conceptual Successor of the Bangkok 2020 Declaration (2010-2020) until 2030 aligning with the SDGs**

32. The Bangkok 2020 Declaration (2010 to 2020) is a unique regional initiative encouraging country commitment and action, as well as a coordination mechanism on sustainable transport globally. The Forum expressed strong support for a successor to the Bangkok 2020 Declaration, given the ongoing need for Asian countries to improve accessibility and sustainability of their transport systems. Such a successor to the Bangkok 2020 Declaration would need to be aligned with a number of global agreements, including the Sustainable Development Goals and the Paris Climate Agreement, with the opportunity for streamlining of reporting and capacity building efforts. It was recommended that the scope of such a successor Declaration be focused on a short list of goals (< 10) supported by appropriate set

of measurable indicators and simplified reporting to enhance collection of information and knowledge sharing and evaluation.

33. Key recommendations resulting from the policy dialogue include:

- a) The process of preparing a successor to the Bangkok 2020 Declaration should be highly participatory involving all EST member countries and selected experts, but also appropriate donors, NGOs, private sector and other multi-stakeholder organizations. Moving forward, the EST Forums should continue to adopt a multi-stakeholder approach, given the importance of, and value created by, wide collaboration to inform and implement initiatives.
- b) A renewed Declaration has the opportunity to be linked to a number of International Agreements such as the Sustainable Development Goals, the Paris Climate Agreement, the New Urban Agenda, the new Decade of Action on Road Safety from 2020-2030. For reporting efficiency, the targets and indicators of the declaration should be aligned with the targets and indicators for such global agreements, as appropriate. This ensures that efforts are not doubled for parallel monitoring and associated capacity building.
- c) The new Declaration should be focused, and it is recommended that less than 10 goals with associated metrics are adopted to allow for focused action whilst re-examining the number and scope of indicators. The new Declaration should continue to include economic, social, and environmental elements of sustainability taking into account both urban and rural transport, including passenger and freight transport.
- d) Reporting for the successor Bangkok 2020 Declaration and ongoing EST efforts should be simplified. Standard templates using new reporting tools can be leveraged to make reporting and searching reports and associated materials easier. Sharing knowledge is a very important part of the EST Forum and this can play a key role in enhancing this.
- e) Education and capacity building efforts should be an element to support implementation of goals and the continual enhancement of efforts, which can be provided by the EST development partner. It is important that Ministries, local authorities and other relevant organizations have the capabilities to collect data aligned with indicators and reporting, and can analyze such data and use this to inform future strategic decisions.
- f) There is an opportunity to use a range of events, such as the Second UN Global Sustainable Transport Conference in Beijing in 2020, to facilitate working sessions (outside conference program) for the successor to the Bangkok 2020 Declaration.

## **X. Country Reporting on the Progress of Implementation of the Bangkok 2020 Declaration**

34. The voluntary reporting by the EST member countries on the implementation of the goals of the Bangkok 2020 Declaration have been submitted to the Secretariat and can be found on the website of the Secretariat of the Regional EST Forum in Asia at: <http://www.uncrd.or.jp/index.php?page=view&type=13&nr=1185&menu=198>

## **XI. Mayors Dialogue on Transforming Asian Cities through Attractive, Efficient and Affordable Bus System ~ Achieving SDG 11**

35. Bus systems are a major pillar to achieve more sustainable urban mobility. The successful BRT systems share good experiences for transforming the conventional bus system in Asian cities. Several Asian countries are pursuing electric bus programmes for reducing the emissions and improving efficiency of transport systems. These initiatives though at different speeds are promising in terms of achieving the objectives of addressing the challenge of climate change. The bus system does make an important contribution to the principle underlying the “Avoid-Shift-Improve” approach by enabling people to move away from the private cars to the collective public transport. The public-private-partnership (PPP) can offer opportunities to make the bus system profitable and sustainable. However, keeping in view the operational challenges, an eco-system has to change for facilitating the private sector to operate.
36. Key recommendations emerging from the policy dialogue:
- a) There is a need to consider the elderly, particularly in car dependant cities, in ensuring access to affordable and efficient public transport that may assist in improving quality of life.
  - b) In electric mobility there are challenges for wastage emerging from batteries. Therefore, there is a need for creating good infrastructure for electric vehicle structures and the adequate provision of renewable energy.
  - c) Integration of private sector with the overall system and create an equal system enabling private sector to play an equal role.
  - d) Despite technologies for electric vehicles, the technology is not yet supported by infrastructure or policy. Governments are yet to decide the best modes of charging or regulation, thus supporting these new technologies will be integral in their success.
  - e) The potential for public transport to become demand responsive should be investigated using multiple criteria. Technologies are available, however financial strategies are required for making this possible.
  - f) It was recognised, that rural connectivity is an ongoing and major challenge, especially as economic and social activities and opportunities are often based in cities, towns and markets wherein buses can play a key role in ensuring better rural-urban connectivity and integration, including promotion of tourism in rural areas.

## **XII. Country, Donor & Development Partner Dialogue on Project Development**

37. The support of donors and development partners is essential for countries in Asia and the Pacific to achieve the SDG goals as well as deliver on the Paris Agreement on Climate Change. These stakeholders and supporters provide both finance as well as capacity building for the Asian transport sector.
38. The following recommendations were made by the donor and development partner:
- a) JICA touched upon mobility management to emphasize the importance of change of individual mindset in terms of choice of transport. In order to do so, a bottom up approach

such as design of incentive scheme towards use of public transportation and awareness raising of citizens was adopted, leading to more convenient and efficient transport service in line with environmental sustainability.

- b) ADB will prepare a Transport Outlook for Asia and the Pacific which will lead to support for strategy and policy development. The ADB Strategy 2030 includes climate change, environment, gender and governance in rural, urban and regional development, targeting reduction of poverty and inequalities. The sectors will still be central, but support will see an increase in policy, capacity and sector development in addition to infrastructure development.
- c) World Bank is focused on ensuring sustainable transport access and network for economic growth in Viet Nam. The Bank is looking at climate resilience standards and developing solutions to the perceived costs of resilience plans. Integration of gender in urban and rural projects is an important focus, and community participation at the design phase is key in project and program planning.
- d) GIZ is happy to continue to support the Forum enabling a closer link to SDG and climate goals by implementing several multi-stakeholder mobility initiatives. GIZ initiatives such as the upcoming NDC transport initiative for Asia funded by BMU, BMZ-funded Transformative Urban Mobility Initiative (TUMI) and the EU-French-German MobiliseYourCity (MYC) Partnership are open for more interaction and sharing peer learning.
- e) DFID launched its High Volume Transport (HVT) applied research program along national and regional transport corridors and within cities in low income countries (LICs) in 2018 and commits in the next four years to invest 14 million GBP in research on the generation, validation and updating of evidence for effective policies and practices on HVT, capacity development in Asia on HVT, and operational understanding and knowledge management on HVT.
- f) ReCAP supports its country partners in Afghanistan, Bangladesh, Myanmar, Nepal and Pakistan under the Asian Community Access Partnership (AsCAP) until the end of July 2020, including research on design and maintenance of low volume rural roads (LVRR) and on transport services in rural areas, and aims to stimulate the effective uptake of research outputs in policy and practice. AsCAP has sought additional support from DFID and if approved, will focus on inclusivity; climate adaptation, mitigation and resilience; and, technologies for LVRR.
- g) The SLoCaT Partnership has a unique role as a development partner to convene and amplify the work of donors and other partners, working through knowledge management and data analysis (e.g. through the Transport and Climate change Global Status Report); multi-stakeholder dialogue and coalition-building (Action towards Climate-friendly Transport (ACT) Initiative) and, providing policy support to prioritize transport in global agendas (e.g. UNFCCC Transport thematic area).

### **XIII. Mayors Dialogue on Integrated Urban Transport Planning & Development- Initiative by Asian Cities & Signing of the Kyoto Declaration of Asian Mayors**

39. There is a need for sound integrated urban transport planning and development practices in Asian cities, which encompass a number of elements such as land use planning, energy efficiency, reduction of GHG emissions and other environmental and social impacts. At the same time, increased attention needs to be paid to aspects like road safety, affordability, accessibility, resilient mobility solutions, good governance, social equity and gender, mobility needs of transport sensitive groups through such strategies as multi-modal integration and ITS solutions.
40. Key recommendations resulting from the policy dialogue include the following:
- a) Asian cities should better understand and apply urban transport planning techniques in all of the relevant dimensions described above to develop urban transport plans and programs and projects that are more integrated and sustainable, as consistent with the goal of achieving the SDGs. For examples Male City, Maldives intends to reduce the need to travel individually by implementing a well-managed public transportation system, and to involve local and national government to work towards implementing sustainable transport initiatives.
  - b) Asian cities should further incorporate safe walking and cycling into public transport systems. Providing high quality and integrated urban transport requires a holistic thinking in terms of entire end-to-end journeys which involves efficient multi-modal integration for seamless transfer between mode to mode, including the provisions of safe walking and bicycling for accessing the services.
  - c) Asian cities should adopt integrated approaches to achieving sustainable transport like Sustainable Urban Mobility Planning (SUMP), which involves both horizontal integration among sectors, institutions, modes and fares and vertical integration among levels of jurisdiction and authority. It is important to strengthen linkages between cities and Transport Ministries to increase involvement and contribution to decarbonization.
  - d) Asian cities should make efforts to better integrate land use and urban planning. By addressing land use and transport planning as two sides of the same (access) coin, policy makers and planners can enable the building of more compact, efficient and low carbon cities with more effective transport corridors, parking and street designs, multi-modal integration, better public places to foster community interaction and social integration as seen in cities such as Shenzhen integration of various sustainable transport modes.
41. As an integral part of the 12th Regional EST Forum in Asia and as a demonstration of their leadership and commitment towards SDG 11, the following city mayors and local government representatives (Ha Noi, Viet Nam; Dhangadhi, Nepal; Khulna, Bangladesh; Kuming, PR China; Lalitpur, Nepal; Male, Maldives; Utsunomiya, Japan, Bangkok, Thailand, Quzhou, PR China) voluntarily adopted and signed the Kyoto Declaration and the Ha Noi Addendum for the Promotion of Environmentally Sustainable Transport (EST) Towards Realizing Resilient, Smart and Liveable Cities in Asia (see Annex II). The signing ceremony was presided over by H.E. Mr. Ahmed Mujthaba, Minister of State for Environment, Maldives.

#### **XIV. The Way Forward**

42. Among the member countries of the Regional EST Forum in Asia there is consensus that 'Environmentally Sustainable Transport' is of the utmost importance and will be a key part

of achieving various commitments to global agendas, in particular the Paris Agreement on Climate Change and the Sustainable Development Goals (SDGs). This is particularly relevant for Asia where rapid growth in urban transport is likely to continue and if done well, can deliver strong economic, social and environmental outcomes rather than exacerbate current issues. This presents a challenging agenda, however given the multiple benefits and potential for avoided costs and health impacts on citizens it presents a significant opportunity for Asian cities and nations to provide leadership and to underpin the achievement of enhanced prosperity.

43. The 12th EST Forum in Ha Noi, October 2019, focused in part on the value of applying ‘smart’ technologies to transform transportation and achieve significant reductions in related air pollution and greenhouse gas emissions along with numerous other SDGs. It was reinforced that a ‘Smart Cities’ agenda needs to focus on practical and specific ways for ICT to be used to enable the transition to an effective integrated transport system that strengthens the economy, improves the livability of citizens, and reduces a range of pressures on the environment.
44. It is clear that the ‘Way Forward’ is to ensure that new and alternative technologies are appropriately integrated with urban development in order bring about the vision for change seen as so critical on the global stage and so obviously needed in the Asian region. It is important that due consideration is given to new and alternative transport and urbanism technologies to identify tangible opportunities that are both attractive to policy makers and private developers.
45. The countries involved in the EST Forum will be looking to ratchet up their commitments to global agreements including the NDCs for greenhouse emissions and the national contribution to SDG’s.
46. Currently, national governments are required every five years to share their efforts as part of the voluntary SDG reporting (VNR) to the United Nations. However, there seems to be numerous gaps in the reporting documents related to transport. Furthermore, as transport does not have a dedicated SDG, references to transport are spread across the various SDGs, lacking integration and the associated benefits. To an extent, the same can be observed in various climate action plans and agendas. Therefore it is important that the successor to the Bangkok 2020 Declaration allows for streamlined reporting to meet the various requirements of international agreements and allow aggregation to form a comprehensive national SDG/NDC report on transport.
47. The need to increase capacity in Asian nations to help deliver a creative, innovative and complex transition to environmentally sustainable transport and the phasing out of fossil fuels without losing economic momentum or sacrificing the SDG’s will be a critical agenda for EST Forum members. The EST Forum could play a vital role to help countries share experiences, access expertise, and navigate various reporting requirements by creating a unified EST reporting framework, including metrics and targeted guidance for national strategies and policy actions.
48. One of the strengths of the EST Forum is that it not only brings national and local governments from the region together, but also the international development partners who are active in the region. While many already collaborate and coordinate on the national level the EST Forum facilitates dialogue at the regional level. An outcome could be to include in the Post Bangkok 2020 Declaration a mechanism for member countries to declare

commitments and demonstrate leadership in specific areas (e.g. finance or capacity building) or themes (e.g. NDCs, urban freight, motorcycles).

49. Many of the impacts of the transport systems are experienced locally and require local solutions. With such a necessity in mind the EST Forum has established a series of Mayor Forums to facilitate sharing between local governments and to inform national government actors. It is important to ensure that outcomes of the EST Forums are suitable to inform action by local governments.
50. The UNCRD, through the EST Forums and associated Declarations, are well positioned to facilitate the reporting and tracking of progress towards EST objectives. Opportunities will be explored for Member Countries to use standardized reporting templates through an EST Online Platform to streamline reporting, strengthen ability to analyze results and share experiences and best practice.
51. The findings outlined in this Chair Summary of reformulating the Bangkok Declaration during 2020 and creating an EST 2030 Roadmap will be framing much of the considerations of future EST Forums. The plans for the EST Forum could be presented and discussed at the 2nd UN Conference on Sustainable Transport hosted in Beijing and could be used as a blueprint for other regions. This could contribute to a global vision create a common framework for reporting on environmental sustainable transport to meet the transport sector reporting needs to the global agreements.

## **XV. Closing Session**

52. In his closing statement UN ESCAP representative Madan B. Regmi congratulated all delegates on the adoption of action oriented Ha Noi Declaration and the Chairs Summary. He urged all policy makers at different level of government, on their return, to initiate discussions on implementation of these recommendations. He informed that ESCAP is planning to organize Transport Week 2020 that will include 13th Regional EST Forum and 6th Session of ESCAP Committee on Transport and other events at the United Nations Conference Center (UNCC) Bangkok sometime in November 2020.
53. Mr, Kazushige Endo, Director of UNCRD, thanked the host Government of Viet Nam for all the support and hospitality. He also thanked UN ESCAP for its expressed interest to host the 13<sup>th</sup> Regional EST Forum in Asia in Bangkok, Thailand in 2020. He appreciated the hard work put by the drafting committee members in preparing the Chair's Summary. He finally thanked all the member countries of the Forum for their continued support and cooperation in organizing the EST Forums. He finally underscored the importance of the successor of the Bangkok 2020 Declaration until 2030.
54. Mr. Tokuaki Shobayashi, Councillor of Minister's Secretariat, MoE-Japan expressed his deep appreciation to UNCRD and the Viet Nam Government for successfully organizing the Forum. Recognizing the collaboration among the governments and to that regard the role of the Bangkok 2020 Declaration, he touched upon the importance of the successor Declaration in the context of achieving the SDGs and the Paris Climate Agreement and realizing the smart and resilient cities in Asia. He further recognized the benefits of the EST concept in bringing multiple benefits from not only environmental aspect but also social and economic aspect. He finally expressed hope for strengthened cooperation of EST member countries in organizing the future EST Forum.

55. Mr. Le Anh Tuan, Deputy Minister of Ministry of Transport, Government of Viet Nam thanked UNCRD, Ministry of the Environment of Japan, HPC, MOC, MONROE of Vietnam, Quang Ninh PC for the close cooperation in organizing the 12<sup>th</sup> Regional Est Forum in Asia. He highly appreciated the result of the Forum, in particular the adopted Ha Noi Declaration on Realizing Smart Cities and Communities in Asia. He hoped that all participants and relevant agencies, donors, partners will strengthen cooperation and mobilize necessary resources in order to implement the Ha Noi Declaration. He also requested UNCRD as focal coordinator in organizing the Regional EST Forum in Asia to work with concerned countries and international organizations to seek funding support and resources in order to assist Asian countries to develop smart cities with sustainable transport systems. As for MOT of Vietnam, MOT would continue to develop and implement green transport policies in Viet Nam, enhance cooperation with other countries, international organizations to develop low carbon and intelligent transport system with an aim to implement successfully the Ha Noi Declaration.

## **XVI. Technical Field Visit**

56. On 31 Oct 2019, a technical field visit was conducted to Hon Gai International Cruise Ship Terminal and Ha Long Bay in Quang Ninh Province to show the participants multimodal integration, including inland water- transit. Quang Ninh provincial authority also shared their smart city and ITS initiatives with the Forum participants.

### **Annex 1: Ha Noi Declaration on Realizing Smart Cities and Communities in Asia through Environmentally Sustainable Transport (EST) Solutions and Measures**

### **Annex 2: Kyoto Declaration and the Ha Noi Addendum for the Promotion of Environmentally Sustainable Transport (EST) Towards Realizing Resilient, Smart and Liveable Cities in Asia**