

Chair's Summary

Seventh Regional Environmentally Sustainable Transport (EST) Forum in Asia

and

Global Consultation on Sustainable Transport in the Post-2015 Development Agenda

23-25 April 2013, Bali, Indonesia

I. Introduction

1. The Ministry of Transportation (MoT) of the Government of Indonesia, the Ministry of Environment (MoE), Government of Indonesia, the Ministry of the Environment of the Government of Japan (MoEJ), and the United Nations Centre for Regional Development (UNCRD) co-organized the “Seventh Regional Environmentally Sustainable Transport (EST) Forum in Asia¹” from 23 to 25 April 2013 in Bali, Indonesia, concurrently with a “Global Consultation on Sustainable Transport in the Post-2015 Development Agenda” on 25 April 2013, co-organized by the United Nations Department of Economic and Social Affairs (UN DESA), MoT-Indonesia, the Partnership on Sustainable, Low Carbon Transport (SLoCaT) and UNCRD.
2. The conference was supported by a number of national and international organizations and partner agencies such as the Asian Development Bank (ADB), Clean Air Asia, Dutch Cycling Embassy, EMBARQ (the World Resources Institute’s Center for Sustainable Transport), German International Cooperation (GIZ), International Association of Public Transport (UITP), Institute for Transportation and Development Policy (ITDP), International Union of Railways (UIC), the Korean Transport Institute (KOTI), Nagoya Institute of Technology (NIT), Nagoya University, SLoCaT, South Asia Co-operative Environment Programme (SACEP), the Energy and Resources Institute (TERI), Transport Research Laboratory (TRL), United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP), World Health Organization (WHO) and the World Bank.
3. The conference was attended by over six hundred participants comprising government representatives from twenty-four countries (Afghanistan, Bangladesh, Bhutan, Brunei Darussalam (hereinafter, Brunei), Cambodia, People's Republic of China (hereinafter, China), India, Indonesia, Japan, Lao PDR, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, the Philippines, Republic of Korea (hereinafter, Korea), the Russian Federation, Sri Lanka, Tanzania, Thailand, Timor-Leste, and Viet Nam), subsidiary Expert Group members of the Regional EST Forum in Asia, international resource persons, representatives from

¹The geographic coverage of the Regional EST Forum in Asia encompasses twenty-three countries in Northeast, Southeast, and South Asia (Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, PR China, India, Indonesia, Japan, Lao PDR, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, the Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, Timor-Leste, and Viet Nam) and the Russian Federation.

various United Nations and international organizations, scientific and research organizations, nongovernmental organizations (NGOs), representatives from the private and business sector, as well as local observers and professionals from the transport sector in Indonesia.

4. Asian countries continue to face vast challenges in realizing safe, secure, people, and environment-friendly, affordable, and climate-resilient transport systems. Rapid urbanization throughout the region further compounds these challenges. Transport infrastructure is vulnerable to extreme weather events associated with climate change as well as natural disasters. Investments in people and environmentally friendly transport systems, including safe and dedicated walkways and bicycle lanes, in Asia have not kept pace with the still growing needs for environmentally sustainable transport in the region.
5. The outcome of the United Nations Conference on Sustainable Development (Rio+20), held in Rio de Janeiro in June 2012, has provided the development community with a meaningful framework to design and implement environmentally-protective, economically-efficient, and socially-inclusive transport policies and programmes. In the Rio+20 Outcome Document – *The Future We Want*, the Heads of State and Government and high-level representatives acknowledge that transportation and mobility are central to sustainable development. Recognizing that environmentally-sustainable transportation can enhance economic growth and improve accessibility, the Rio+20 outcomes called for, among others, efficient movement of people and goods, and access to environmentally-sound, safe, and affordable transportation as a means to improving social equity, health, resilience of cities, urban-rural linkages, and productivity of rural areas.
6. The Rio+20 outcomes can guide Asian countries in their planning for the next generation of transport systems for the 21st century which can improve access to essential human services and goods, are more environmentally friendly and at the same time more climate resilient. The integrated conference of the Seventh Regional EST Forum in Asia and the Global Consultation on Sustainable Transport in the Post-2015 Development Agenda, under the theme of “Next Generation Transport Systems We Want for the 21st Century~ Looking Beyond Rio+20”, provided a valuable platform for the countries to discuss and share the efforts and progresses made by the member countries of the EST Forum towards implementing the *Bangkok 2020 Declaration* but also to discuss the role of EST in the context of the Rio+20 Outcome Document – *The Future We Want*.
7. The participants of the Seventh Regional EST Forum in Asia embraced the Vision Three Zeros by agreeing on and adopting the “*Bali Declaration on Vision Three Zeros - Zero Congestion, Zero Pollution, and Zero Accidents towards Next Generation Transport Systems in Asia*”(Annex 1). The Declaration is based on a vision of zero tolerance towards congestion, pollution, and road accidents. It is an expression of countries’ determination to devise and implement transport policies, programmes, and enforcement measures that put in place a continuing incremental approach towards the strengthening of the sustainability of transport in the region. Vision Three Zeros can help in bringing about a paradigm shift in thinking on the role of motorization and mobility in realizing sustainable development.
8. A number of pre-, side-, and post-events were organized in conjunction with of the Seventh Regional EST Forum. They include (a) Fun Bike Event and Indonesian EST Forum organized by MoT, Government of Indonesia; (b) Enhancing Urban Walkability, co-organized by: Clean Air Asia, INFOTRAN, KPBB, Koalisi Pejalan Kaki, Koalisi Warga TDM, Walhi Yogyakarta; (c) Workshop on Aviation and Climate

Change, co-organized by MoE and MoT of the Government of Indonesia and Swedish Aviation; and (d) a Training Course on Sustainable Transport and Climate Change, co-organized by the German International Cooperation (GIZ), Transport Research Laboratory (TRL), Bridging the Gap, Ministry of Transportation (MoT), Government of Indonesia, and UNCRD.

II. Opening Session

9. Delivering the welcoming remarks on behalf of the Governor of Bali, Dhewa Punia Asa, Director of Transportation, Information and Communications Affairs of the Regional Government of Bali Province outlined the current socio-economic development and transport-related challenges Bali is facing. With the boom in development of the tourism sector in Bali, the challenges are the limitation of the land and delivery of sustainable human settlements. Bali is expending considerable efforts to develop its basic infrastructure such as roads, water supply, sewage and solid waste management systems, and transportation systems (air, land, and maritime transport). Bali is promoting BALI MANDARA, a vision and mission which implies Advanced, Security, Peace and Prosperity. He further urged that sustainable development in Bali must follow the regulations on spatial planning, environment, transportation, and architecture, including Vision Three Zeros - Zero Congestion, Zero Pollution, and Zero Accidents towards the next generation transport systems.
10. Bali is also promoting “BALI CLEAN and GREEN” towards sustainable and improved living conditions. The road conditions and capacity in Bali are generally insufficient in meeting the community demands. Bali needs to have in place an efficient transportation system, which is fast, secure, smooth, comfortable, affordable, and energy-efficient. He finally expressed hope that the Seventh Regional EST Forum would share and provide valuable EST solutions and measures to address issues such as traffic congestion, integrated transport infrastructure (road, air, maritime), technology innovation, and usage of alternative energy resources in transport sector.
11. Delivering the opening remarks, Chikako Takase, Director of UNCRD, called for national and international action in the transport sector in the spirit of the Rio+20 Outcome Document – *The Future We Want*. She mentioned that Rio+20 had provided the international community with a framework and excellent opportunities to develop and implement environmentally-protective, economically-efficient, and socially-inclusive transport policies, programmes, and measures towards the next generation transport systems. She drew attention to a number of critical transport issues and challenges faced by the Asian region. These include, among others, rapid urbanization and motorization, increasing pollution especially from fine particulate matter, increasing traffic accidents, economic loss due to traffic congestion, and energy inefficiency including in the growing freight sector. Asian countries are well placed in terms of implementing the Rio+20 outcomes with regard to sustainable transport since they have already embarked on implementing the *Bangkok 2020 Declaration (2010-2020)*. It is encouraging to see that the Asian countries will be discussing for adoption the aspirational and goodwill “Bali Declaration on "VISION THREE ZEROS" - Zero Congestion, Zero Pollution, and Zero Accidents: Towards Next Generation Transport Systems for Asia for the 21st Century”. She also welcomed the countries in moving forward in the discussion towards realizing a “regional agreement on green freight in Asia” following the recommendations of Bangkok and New Delhi EST Forums.

12. Eiji Hiraoka, Councillor of Minister's Secretariat, Ministry of the Environment of the Government of Japan, recognized that the EST Forum had been steadily gaining recognition since its establishment in 2005 following the organization of the first Forum in Nagoya, Japan. During this period, the number of participating countries has increased from thirteen to twenty-four nations, while a growing number of international donor organizations have also shown a strong interest in joining this initiative and in the deliberations of each meeting. The Regional EST Forum in Asia has been serving as a model for other regions to emulate. Asia has been experiencing an extraordinary rate of urbanization in recent years along with expanding vehicle ownership and usage. Accordingly, transport-related air pollution and greenhouse gas (GHG) emissions are growing. From the experience of the Great East Japan Earthquake in 2011, the role of resilient traffic systems against large-scale natural disasters is now greatly recognized for the future generations. It is therefore important for Asian countries to think ahead and take the lead in putting efforts to achieve EST. Japan has considerably experience of overcoming pollution problems in the past, and possesses innovative environmental technologies. Prime Minister Shinzo Abe of Japan has recently called for strengthening cooperation in the Asian region.
13. Striving to "sharing clean atmosphere in the Asian region", Japan wishes to enhance cooperation in a comprehensive manner. This includes sharing scientific knowledge, sharing best practices and experiences, supporting capacity building, utilization of advanced environmental technology, and also contribution to international discussions on the existing framework such as Acid Deposition Monitoring Network in East Asia (ESNET) and the EST Forum.
14. Balthasar Kambuaya, the Minister for Environment of the Republic of Indonesia, referring to the progress and challenges towards achieving the common goal of clean air through environmentally sustainable transport, reaffirmed Indonesia's commitment to strengthening its cooperation with other countries through the EST Forum. Transportation problems affect people's welfare and the environment. The environment has become a key issue in the development of the global economy. The cost of health problems incurred by the population of Jakarta in 2010 was estimated to be about US\$ 4 billion. Air quality in many Indonesian cities has deteriorated, and will continue to deteriorate if no effective action is taken. The Blue Sky Program, which was initiated by the Ministry of Environment in 1996, now covers 45 cities out of the more than 400 cities and towns in Indonesia. The key recommendations from the Ministry's annual evaluation programme to cities include vision-building, development of emissions inventories, promotion of public transport and non-motorized transport, roadside air quality monitoring, vehicle inspection and maintenance, and awareness-raising. These recommendations are in line with the Vision Three Zeros for next generation transportation systems. For metropolitan cities with a high population density, rapid mass transport is a necessity to cope with the increase of GHG emissions. As an archipelagic country, waterways as means of transportation are important in Indonesia. Road, water, and air transport along with railways are all important modes of transport and should be made an integral part of sustainable transportation development strategy. The integrated development of multi-modal transportation and land-use planning is the key to reducing air pollution in the transportation sector. Implementation of strategies to reduce the environmental footprint of airports and maritime ports is important as well and should be considered as an integrated part of EST. There is a need to renew our commitment to the Rio+20 Outcome Document – *The Future We Want* through implementation of the EST.

15. The special message of the Secretary-General of the United Nations, Ban Ki-Moon, to the integrated event flagged transport as a building block for sustainable development. Access to goods and services through efficient means of transport and connectivity is essential for poverty reduction. Ensuring better market access for rural communities through improved transport services enhances farmers' lives and sustainable livelihoods. In both urban and rural areas, better planning for land-use and transport systems makes a great difference in facilitating access to jobs, goods and services for men and women alike. It also helps improve road safety and reduce traffic accidents and fatalities. On a global scale it is essential to design and build transport infrastructure to make it safer and more environmentally-friendly, and to minimize vulnerability to climate change and natural disasters. The significant financial commitments for sustainable transport made by multilateral development banks at Rio+20 conferences can help realize the aspirations of achieving the next generation transport systems for the 21st century that the forum aims to address.

16. Extending his warmest welcome to all participants and inaugurating the Seventh Regional EST Forum in Asia and Global Consultation on Sustainable Transport in the Post-2015 Development Agenda, E.E. Mangindaan, Minister of Transportation, Government of Indonesia, mentioned that the Asian countries were facing many challenges in coping with the environmental damage resulting from the tremendous expansion in the transport sector, and in realizing safe, secure, people-and environmentally-friendly, affordable, and climate-resilient transports systems. Attaching significant importance to the implementation of the *Bangkok 2020 Declaration* in line with the Rio+20 Outcomes, he mentioned that the Asian countries should start planning for the next generation transport system, which could deliver better access to essential human and goods services. Acknowledging the fact that Asia is geographically located in a disaster prone region, he expressed concerns that transport infrastructure and services were vulnerable to the effects climate change, and urged the transport community to raise their concerns to make climate resilience, mitigation, and adaptation integral parts of transport policy, planning, and development. There is a need to develop and introduce more environmentally sustainable transport policies, programmes, and projects that will contribute towards a common vision of realizing next generation transport systems and 21st century cities which are characterized by Zero Congestion, Zero Pollution, and Zero Accidents. In this regard, he called for support and assistance of the multilateral financial institutions. Finally, he called for concerted efforts and actions for the improvement and efficiency in freight transport, including road, rail, air and water through policies, programmes, and projects that modernize the freight vehicle technology, implement fleet control and management systems, and support better logistics and supply chain management, in line with the recommendations of the *Bangkok 2020 Declaration*.

17. Delivering the keynote address, Michael Replogle, Managing Director for Policy and Founder of the Institute for Transportation and Development Policy, offered a very long-term vision for safe, non-polluting, congestion-free transport developed to serve the mobility needs of all. He spoke of well-managed urbanization and sustainable transport as a key pathway to shared prosperity and environmentally-sustainable development, but pointed out how unmanaged motorization often increases both economic inequality and the prospect of catastrophic global environmental degradation. While cleaner, lower carbon vehicles and fuels will be essential to achieve progress on a Vision Three Zeros, technology alone will not solve the problems of congestion, pollution, and safety. Improved governance, system management, and pricing are vital to making surface transportation more reliable. Replogle offered a vision that transport could become more like electric utilities, with network managers who balance supply and demand to avoid congestion or brownouts. He suggested cost-effectiveness should be a key focus. Instead of splurging on a

10 km metro line, cities should develop a 100 km high quality BRT system, following the 2013 Bus Rapid Transit Standard to deliver access to many more riders with the same level of resource expenditures. Governments should focus on setting goals and measuring performance, on managing performance-based contracts and funding programmes, on coordinating integrated transport, land use, resource management, and economic development. He cited Singapore as a model for many good practices in transport supply and demand management. He noted that Vision Three Zeros will require elimination of fuel subsidies, along with strong price incentives and regulations for use of cleaner, lighter, more efficient vehicle for both passengers and freight. Walking, cycling, and public transport need high priority in design and street space allocation. Enforcement of transport-related laws and more efficient transport system operations need strong support, along with national transport investment funds gathered from road users and motor vehicle charges. National funds should be available for local capacity-building and planning and for competitive investment in sustainable transport initiatives, focusing on efforts that will measure outcomes, improve system performance, and report on results. To be successful, Vision Three Zeros must be designed not just for efficiency, but also to support inclusive prosperity, improving access for the poor and disabled, and ensuring that women and children have safe and secure mobility options. Cost savings from this Vision could be US\$50 trillion or more by 2050. The dream of Vision Three Zeros may not be fully achievable in our lifetimes, but could provide important inspiration for our progress.

18. Delivering the keynote presentation on Day 2, Masashi Mori, Mayor of Toyama City, Japan, shared the major initiatives and achievements of his city as a model, eco-friendly “Future City” of Japan. Toyama’s unique compact city management strategy provided an exemplary case on building 21st century cities. Toyama city’s goal is to implement a city planning model for a sustainable, ecological, compact city, in order to prepare itself for future structural changes in society. Its three pillars for the compact city strategy include (a) the revitalization of public transportation, (b) encouraging citizens to relocate to zones along public transportation lines; and (c) revitalization of the city centre. Intensive investment in the revitalization of public transport, such as rail transport, coupled with a major effort to revitalize the city centre, has been an effective way to tackle the problem of its rapidly aging society. By integrating the LRT into the rail network, the city has created a pedestrian-friendly environment where citizens do not have to rely on cars. Furthermore, the adoption of new technology, such as an IC card pass and vibration-dampened track, has enhanced both convenience and ride quality for passengers. The city is also implementing the Special Pass Project to benefit senior citizens.

III. EST in the Context of Rio+20 Outcomes-The Future We Want

19. There is a general alignment of the Rio+20 Outcome Document-*The Future We Want*, the *Bangkok 2020 Declaration* and Vision Three Zeros contained in the *Bali Declaration: Zero Accidents, Zero Congestion and Zero Pollution*. The Forum recognized the essential contribution of EST towards realizing not just the transport-related objectives from *The Future We Want* but also other key thematic and cross-cutting issues including, but not limited to, poverty alleviation, sustainable cities and human settlements, energy, food security and sustainable agriculture, as well as health and education. In this context, the Forum recognized the role of EST as a key enabler of inclusive economic development, environmental sustainability, inclusive social development, and peace and security.

20. The establishment of the Vision Three Zeros was embraced as a useful communication strategy that can help in achieving the outcomes, goals, and policies contained in the *The Future We Want* and the *Bangkok 2020 Declaration*. All three documents provide a comprehensive approach to improving transport conditions in Asian cities. Participants concurred that the goals of the *Bangkok 2020 Declaration* continue to provide a very useful framework for the development of more environmentally sustainable transport in their countries.
21. There was consensus on the usefulness of establishing milestones and interim targets to provide a reference for each country and/or city, and that those milestones and targets should be adapted to the specific conditions of each country and/or city. The *Bangladesh Vision 2021* was given as an example of intending to reduce by half existing levels of congestion, accidents, and pollution by 2021.
22. Strong political leadership was flagged as a key precondition in achieving three goals while bringing various stakeholders on board can complement the legitimacy and effectiveness of new policies. Institutional change and elimination of corruption need to be part of political leadership. Examples of cities from Asia and other regions were also mentioned as useful references to see how change and improvement is possible even when the current transport situation is diverse and chaotic.
23. Achieving the "Zeros" is a long-term and aspirational goal. Participants agreed that the Vision Three Zeros is useful in developing policies to guide the development of next generation transport systems. This will require adjusting pipeline of projects to shift away from unsustainable projects and increase support for initiatives that advance the Vision Three Zeros goals.
24. Achieving zero pollution will require radical changes in transport policy, planning, and execution as well as vehicle engine technology. Comprehensive transportation network management and pricing strategies are required to achieve the zero congestion goal.
25. Adequate and appropriately-targeted financing is another precondition to realize the Vision Three Zeros. Financing provided by multilateral development banks (MDBs) and other donor agencies can help in developing initiatives to advance the realization of the Three Zeros Vision, and thereby prepare the ground for next -generation transport systems to fully implement the *Bangkok 2020 Declaration* and *The Future We Want*. But ultimately, existing public sector transport investment flows and subsidies need to be harnessed towards this vision. Other nontraditional sources of funding such as public-private partnerships and sovereign wealth funds also need to be considered.

IV. Regional Connectivity (intra-region/rural-urban linkage) for Sustainable Development

26. Important on-going efforts on regional connectivity include the existing inter-governmental agreements on the Trans-Asian Railway, Asian Highway and Dry Ports of International Importance. Future efforts, in the context of next generation transport systems, on regional connectivity will need to provide connectivity that is more inter-connected and intermodal in order to adapt to a more efficient, affordable, and sustainable system. It is also important to ensure the timely implementation of existing regional and subregional agreements. This requires continued awareness-raising on the advantages to be gained from timely implementation of these agreements.

27. It was urged that countries support a regional transport strategy and further develop these regional strategies to cascade down into national policies and local action plans that are practical, achievable, and take into account national and local political, financial, and institutional circumstances. If regional, national, and local efforts are well coordinated, this should help to develop transportation systems that are more fuel efficient, environmentally-friendly, and shifting towards greater use of public transport, rail, and inland and coastal waterways. Such more environmentally sustainable transport systems, including long-haul rail and intermodal freight transport, will help to realize the vision for more sustainable transport as outlined in *The Future We Want* and the *Bangkok 2020 Declaration*.
28. More work is needed to optimise the transport network's performance and determine where and under what conditions each mode would give a greater trade and mobility advantage. In doing so it is important to take into account a country's geographical location, such as island archipelagos, landlocked countries, and large countries.
29. Strengthening rural-urban connectivity is key to overall economic development in the countries. At the same time improved intercity connectivity is important to accommodate the rise in transport demand. UN ESCAP is in a position, depending on member state's demands, to further agreements on regional connectivity that take into account sustainability and equity needs of the region. These can help address the need to connect effectively, farm-gate to consumer, manufacturer to customer, and personal mobility needs of people.
30. Connectivity is not just about land transport but also about shipping and the role of ports and ocean shipping. Regional connectivity of inter-island shipping needs to be strengthened. Inland and coastal waterways have great potential to support more environmentally-sustainable transport following Vision Three Zeros, as does the greater use of rail transport with double tracking and electrification. The private sector has an important role to play especially in port operation. There is a potential for greater use of software in cross-border facilitation.
31. Institutional arrangements need to be compatible with multi-modal systems, such as integrating road, rail, and other transport-related transport ministries. It is important to be aware of the deficits in current systems, such as policy planning, institutional and infrastructural, while planning the next generation transport systems.
32. Safeguard systems, put in place by local or national governments and international development organizations are important to ensure that the interests of people affected by infrastructure projects in support of regional connectivity are respected.

V. Full integration of Transport Modes/Issues Concerning Multi-modal Integration in Public Transport in Asia

33. In order to promote a shift to clean transport modes or to maintain an advantageous modal split, multiple modes need to be integrated well. This is important both in passenger and freight transport. Full and seamless integration of public transport modes (physical, information, network, and fare integration) will be an essential characteristic of next generation transport systems. This can be achieved by forming transit alliances between local government organizations and the private sector at provincial or regional level. These have been shown to be successful in German cities, and significantly increasing public transport

usage. China has established a coordination mechanism over different government levels in order to promote integration. In Hong Kong Special Administrative Region of China, 90 per cent of daily trips are by public transport, and interchanges between modes are facilitated by park and ride, mobile applications for information, fare collection, and transit-oriented land-use planning. It is vital to improve intermodal integration, between public transport, cycling and walking. Informal modes such as motorcycle taxis can also provide important linkages with public transport. In order to promote modal shift, public transport needs to compete with private vehicles on speed, price, and accessibility.

34. Freight transport is currently mainly road-based, even in countries with large potentials for domestic sea transport. Indonesia is in the process of increasing the modal share for shipping and rail by promoting multimodal transport within economic development corridors, as part of a national logistics system.
35. Asian countries face several challenges with regard to diversity of existing transport modes and high growth rates of urban population. Concerns also include requirements for subsidies for high capacity public transport systems and long lead times for construction of transport infrastructure. In order to achieve the vision of an integrated transport system, there is a need for knowledge-sharing among cities and countries. The private sector also plays a key role, which can be enhanced. Technical capacity at the local and national level needs strengthening, as does political will.
36. When planning major, capital-intensive public transport projects, it is essential to have integrated planning under the overall responsibility of one organization. It is important to have one organization that plans and organizes public transport in a given city or region. While constructing rail-based systems (Metro or light rail transit (LRT)) it is important to plan appropriate feeder systems, in the form of bus networks or non-motorized transport (NMT) infrastructure. Rail-based systems and bus rapid transit (BRT) are fast and more environmentally-friendly and if planned properly they can help ensure greater utility of public transport systems. There are best practice examples of efficient multi-modal integration in public transport from all major regions of the world.

VI. Building Resilient Communities through EST Measures (policies, programmes, and infrastructure)

37. The frequency and magnitude of climate change related extreme weather events and natural disasters (floods, earthquakes, cyclones, landslides, etc.) are on the rise across Asia, yet the majority of developing countries and cities have not made climate resilience a major part of their transport policy and transport infrastructure and services development. As a consequence, Asian countries and cities bear unprecedented potential for widespread damage to both human life and the economy during such extreme events. For instance, the damage caused by 2011 flooding in Thailand amounted to US\$46.5 billion, while the recovery and reconstruction costs are expected to reach at least US\$50 billion according to the Government of Thailand and the United Nations.
38. Resiliency, among others, should therefore form one of the important components for next generation transport systems for the 21st Century.
39. Resilience and sustainability are basic pillars of society. Resilience can be defined as how cities are able to recover from a climate related event or other disasters and sustainability is how cities can deliver a high quality of life that is economically, environmentally, and socially viable.

40. The example of climate-resilient rail infrastructure can be seen in Japan. The 300 km of low lying regional railways and roads routed in low land on the coastal areas of North East Japan were badly damaged and are slowly coming back into service some 24 months later while the more climate-resilient high speed rail was less damaged and services were able to be up and running within 6 weeks of the earthquake and tsunami, because of higher standard in building code and standardized equipment. Examples of building in resilience to road infrastructure were discussed as well as motivations to invest in additional cost of this reinforced infrastructure. Governments appear to be more open to additional investments required after such an event as an earthquake or flood has been experienced.
41. Country and city climate resilience is often defined in terms of how quickly a community can rebound after a weather-related extreme event and the human resilience of rebuilding communities was recognized as being a crucial component of resilience. Bangladesh, a country that has to cope with flooding on a frequent basis, shared its experiences on disaster risk management strategies (DRM) and programmes. Bangladesh has created multipurpose centres as part of its DRM, which can also be used as community centres.
42. Thailand proposed that the EST Forum could help build capacity as many country and city decision makers so far did not systematically include resilience as a standard when defining infrastructure projects. A better understanding of the vulnerabilities of transport infrastructure, e.g. by mapping, was considered as being very helpful. The wealth of international experience, both in developing Asia and elsewhere, could be useful in building a better understanding especially in transport ministries.
43. In conclusion, there may be a variety of motivations for countries to build climate-resilient infrastructure. However, this presently only seems to be the case if a country has suffered from a destructive weather event. It is recognized that building climate-resilient infrastructure is more expensive but it also appears that there are many co-benefits as well as economic benefits in taking this approach as resilient transport infrastructure can significantly reduce economic losses when such an event takes place. However, mitigation by infrastructure can be effective when coping with appropriate adaptation by land use. Also there is a need for increased awareness and research into local solutions developed and the international community is expected to play a role in building capacity and increasing awareness. By increasing financing for resilience in the transport sector, countries can reap long-term benefits by reducing the impacts from natural disasters and extreme weather events related to climate change.

VII. Green Freight Issues – A Framework for a Regional Agreement on Green Freight in Asia

44. Green Freight relates to reducing environmental impact, improving social conditions and enhancing economic development from the movement of goods by road, rail, marine, inland waterways, and air, and includes strategies, policies, practices, and infrastructure developments that are consistent with the avoid-shift-improve approach and are developed and implemented by governments, the private sector, and other stakeholders. Green Freight is essential for Asian countries in the 21st century to respond to high logistics costs, disproportionate environmental and social impacts from freight movement, and market pressures to improve efficiency.
45. Ample efforts exist in Asia. National green freight programmes are in place in China, Korea, Indonesia, and Thailand which have comprehensive strategies for improved freight logistics. Hong Kong Special

Administrative Region of China, introduced lower sulfur fuels, on-shore power supply, and reduce speeds for ships entering its port. Other countries, such as India, recognize the urgent need to improve efficiency and reduce adverse impacts from freight transport.

46. Asian countries announced they will collectively and effectively follow up on the *Bangkok 2020 Declaration* goal and Sixth EST Forum recommendation on freight by improving regional cooperation. Such cooperation is desirable because freight is transported across borders, countries are affected by each other's policies and standards, companies involved in freight movement operate in multiple Asian countries, and countries can share experiences and learn from each other, all leading to a more sustainable freight sector.
47. The core areas for collaboration presented were green freight programmes at national or subregional level; specific plans, policies and regulations where regional cooperation and harmonization would be beneficial; data and indicators on green freight; and establishing a regional collaboration framework. It was noted that the term green freight implies environment, whereas the presented scope was broader.
48. Delegates supported the need for moving towards a regional agreement on green freight in Asia. A recommended next step is to initiate a consultation process with EST member countries through sub-regional intergovernmental processes led by ASEAN, SAARC, SACEP and others, facilitated by UNCRD in collaboration with UN ESCAP and with the support of supporting organizations and partners of the EST Forum. It was also recommended that the resulting agreement among EST member countries is voluntary; clearly defines the scope and coverage of green freight; identifies concrete areas for collaboration; and describes the roles of government, private sector, international organizations and other stakeholders, including the support that can be provided to governments. Such a regional agreement on green freight will need to incorporate the economic, social, and environmental dimension of freight transport.
49. The Forum recommended the following core elements to be considered as part of a possible regional agreement, but not limited to: (a) green freight programmes at the national or subregional level, (b) set of plans and policies for a socially-inclusive green freight, (c) standard set of indicators for green freight, and (d) regional collaboration framework on green freight.

VIII. Dedicated NMT (Promotion of National Bicycle Schemes) and Road Safety for Social Equity

50. The relevance of developing national cycling policies that are linked to the local policy was recognized. The positive impacts of implementing these local policies was shown with examples from the Netherlands, London, New York, Korea and other places in the world where cycling and walking have increased throughout the years due to the implementation of improved policies.
51. It is also important to create a logical linkage between policies and their implementation. Public bicycle systems are a useful complement to those policies. Furthermore, the importance of creating virtuous cycles through a better understanding of urban space and its use was reiterated.
52. Walking was also identified as a basis for proper urban transport planning, since it creates more efficient and more equitable transport systems in general. The integration of walking and cycling with public

transport was also mentioned as an important strategy to advance the Vision Three Zeros and sustainable transport. An important new development in this respect is the Greenways which have been constructed by various countries including China and Korea. This has proven to be a cost-effective way to enhance the attractiveness of walking, thereby contributing to more sustainable cities and human settlements.

53. It was agreed that it is important to invest on a large scale to develop facilities for dedicated pedestrians and cyclists to advance Vision Three Zeros.
54. Transport systems must be properly defined by the context, needs and current changes in cities. Equity is also a deep concern for developing cities and should be taken as a core value, while providing the best access to a city's inhabitants. Investments should then be directed to those benefiting lower-income people. Specific short-term opportunities were indicated (e.g. financing bicycle-related improvements via increased pricing of facilities for cars). Phnom Penh's implementation of a pedestrian-friendly area was cited as good practice example.
55. Asian examples were given, including India's National Policy and Delhi's street design manual. Seoul was also mentioned with its policy of walkability and integration of public transport and walking. Manila is another city that is creating bicycle trails to connect strategic destinations.
56. It was pointed out that "motorization will not go on forever". The willingness to improve conditions for walking, cycling, and public transport is now less hesitant than before. Cities have found that it is fundamental to understand that, "there is no point of no return". Cities should realize that it is much easier to sustain a higher bicycle and public transport mode share than to reverse their decline from very low levels of use.
57. Some cultural barriers were also identified in cities where the implementation of non-motorized vehicles was resisted by protests from taxi drivers. Various broader cultural concerns created an excessive use of automobiles and motorcycles, but the trend is slowly changing in Asia towards one where the historically strong tradition of walking and cycling is slowly coming back into focus.
58. It is critical to create institutions and agencies that are oriented towards walking and cycling since they will enable a more consistent capacity to advance these modes in transport planning, operations, traffic enforcement, and investment to provide a better focus on transport planning. The creation of new governmental departments in Viet Nam was mentioned as an opportunity where walking and cycling can be included more effectively.

IX. Role of Railways in EST towards post Rio+20 Development

59. Growing urban populations, rapid motorization, and escalating emissions from the transport sector, especially from road transport pose a major challenge to sustainability. In light of this context, railways play a key role to serve urban and economic development in Asian countries, while at the same time offering opportunities to mitigate emissions, reduce traffic congestion, enhance traffic safety, and improve accessibility and connectivity.

60. The Indian Ministry of Railway's white paper Vision 2020 put forward a plan to develop a six-corridor high-speed rail network. There is also a major emphasis under Vision 2020 on capacity creation through electrification of rail lines, which supports both economic growth and potentially carbon emissions reduction. In Indonesia, railways will be built along the key economic corridors, and there are also plans to work towards the electrification of the rail system. In Japan, for example, Tokyo Metro has plans to prolong the life span of the rail system and to build eco-friendly stations. Also in Japan, Toyama city is planning how to adjust rail service to an ageing population. All these examples demonstrate the dual roles of railway to support national and local economic development, and to enhance the sustainability performance of the transport sector.
61. The shift from road transport to more sustainable modes of transport such as railways is a challenge for many Asian countries. It will certainly require the strengthening of institutional arrangements, innovative financing mechanisms, and the setting of indicators and targets for benchmarking purposes.
62. A major challenge is the mobilization of financial resources to facilitate the development of railways, and the shift of passengers from private to public transport. The use of subsidies to promote public transport, whether it is only directed to the poor or to all, is another key challenge. In terms of financing railway development and making the system self-sustaining, Indonesia, for example, is working to secure loans from other countries and international agencies, as well as exploring the merits of a public-private partnership model.
63. In addition, while railways can be an effective way to reduce street-level congestion, and support the Vision Three Zeros, rail system congestion is fast becoming an issue in mega-cities such as Beijing and Shanghai. This is another critical issue that should be addressed swiftly, as overcrowding and hence deterioration of service quality may work against the idea of further expanding and promoting railways under the EST strategy in Asian countries.

X. Financing Need for Next Generation Sustainable Transport System for the 21st Century

64. Road congestion costs Asian economies 2.5 per cent of Gross Domestic Product (GDP) each year due to lost time and higher transport costs. According to ADB US\$2.5 trillion investments is needed for Asia alone. To enable progress towards the Vision Three Zeros this money has to be shifted from unsustainable towards sustainable transport.
65. In June 2012, eight MDBs voluntarily committed to supporting sustainable transport at the Rio+20 conference in Rio de Janeiro, Brazil. The support includes a pledge of US\$175 billion in loans and grants over the coming decade, to invest in more sustainable transport systems in developing countries (Rio+20 Joint Statement, 2012). This commitment can be only successful in making a real difference if it leverages domestic and private investment.
66. Central Governments will play a vital role in transport finance supporting environmentally sustainable transport systems that help meet the key challenges of the 21st century. The primary need is to bridge the gap between the supply of international MDBs financing and demand from central and local governments for environmentally sustainable transport projects. Central governments are vital for linking their national finance programmes with international finance sources to promote a shift to more sustainable transport.

67. For example, India has a huge infrastructure deficit at the current level of urbanization. As the urban population doubles in the next 20 years the pressure to build infrastructure is huge. India has estimated the finance needs to be US\$70 billion in the next 5 years, US\$450 billion over the next 20 years and the government is planning to support cities through the next round of the Jawaharlal Nehru Urban Renewal Mission (JnNURM) investments.
68. Six actions were identified for Central governments to leverage sustainable transport financing and improve its effectiveness. Recommended actions were found in two clusters. The first is in leveraging sustainable transport financing for greatest impact by linking international with national finance and leveraging climate finance; engaging the private sector and creating supportive conditions for private investment; use of local and innovative funding sources for sustained, long-term financing such as increased taxes on motor vehicles. The second is increasing the effectiveness of sustainable transport financing by enabling institutional arrangements to streamline flows of funding to the local level, impact-based monitoring and evaluation (M&E) and capacity-building and policy guidance. In addition, there were specific issues raised around the MDBs commitment at Rio+20.
69. A strong recommendation was made to have dedicated legislation to support urban transport as a public good. India spoke about the efforts being made to establish a national urban mobility law and also to create a dedicated urban transport fund at the national level through levies of taxes on private vehicles and a fuel tax. Experts emphasized that fuel subsidies in many countries dwarf all other funding flows. Unpopular decisions such as reducing or eliminating fuel subsidies and raising taxes these are needed to achieve the Vision Three Zeros however these actions should be meticulously planned and correctly executed. There was mention of integrating land use and transport to reduce the need for travel and also using land value capture to then finance transit infrastructure.
70. There was agreement that new infrastructure should be made climate resilient. The green climate fund or carbon finance money might be used to finance additional costs. Transportation is a source of livelihood for 7-20 per cent of households in cities in the global south. And as environmentally sustainable transport systems are developed there is a need to ensure these workers are brought into the new systems or aided through other structural adjustment efforts.
71. Recommendations were made for the next Regional EST Forum regarding the value of inviting participants from the ministries of finance to discuss financing of sustainable transport. It would be also valuable to highlight the importance of central governments and facilitate knowledge-sharing among governments; support peer-to-peer capacity-building initiatives; coordinate regional capacity-building on finance; develop a monitoring framework (based on the *Bangkok 2020 Declaration*) and offer guidance on scorecards.
72. National actions to advance EST can be further supported through the MDBs commitment. Rio+20 inspired several member countries to setup new national policies and initiatives towards a green economy.
73. Financial assistance, technology and knowledge transfer as well as capacity-building support are required to enable an EST paradigm shift. The needs and capacities of countries vary and hence these initiatives will have to be tailored to specific requirements: from rural accessibility to urban infrastructure needs.

74. The institutional challenges remain with or without the Rio+20 commitment. EST member countries can learn from each other to do it as well.
75. There is a need to harmonize of safeguard policies across the MDBs. This will help bridge the gap between the supply of international MDBs financing and demand from central and local governments for sustainable transport projects.
76. There is a need to raise more awareness across ministries within countries about the MDBs commitment at Rio+20 to enable them to better access existing as well new sources of international support (e.g. climate finance).

XI. Institutional Arrangements in Realizing Next Generation Sustainable Transport Systems

77. Asian cities have various challenges in transportation that make institutional integration a necessity to move forward. A proper vertical integration among institutions implies having clarity and transparency, accountability and efficient dispute resolution between agencies across different tiers of government (central and local level). In terms of horizontal integration, there is also a requirement for clarity and transparency, which can be combined by the development of single agencies or authorities for transportation. In certain case horizontal coordination can also be achieved through enabling legislation support for integration between multiple agencies. Illustrative examples of Singapore's Land Transport Authority and legislative integration of transport agencies in Victoria, Australia were given. However, there is no "one size fits all" solution for institutional arrangements and the institutional arrangements for transport need to reflect national and local conditions.
78. A positive approach in saying "Yes We Can" was put forward as developing countries have various opportunities to improve their institutions, including opportunities in relation to simplification. The example of the Government of Kenya's recent decision to reduce its ministries from 44 to 16 was given as a related example of institutional simplification. The relevance of the mindset in policies was also discussed, meaning that the way in which environmentally sustainable transport is understood and implemented has a direct impact on what projects are developed and their eventual impacts. The support of citizens and successful cases were mentioned as useful complements in achieving change.
79. Political will to implement change is a key factor determining the likelihood of making real progress in institutional reform and realizing EST. The example of China and its recent reorganization and consolidation within and between Ministries (Civil Aviations, Railways, Road Transport and Waterway Transport) was mentioned as an example of effective institutional reform to help advance more integrated EST implementation.
80. There needs to be a strong link between institutional and financial mandates since an institution with budgetary capacity will be more effective in achieving its goals and moving forward. This was exemplified by country participants in describing the financial challenges of their institutions. Tying finance to performance was identified as a key to promoting inter-agency cooperation for EST.

81. The skills of institutions and their staff were cited as one of the barriers to moving in the direction of EST. Many agencies need to work on changing the entrenched mindset of staff and officials to achieving targets and goals aimed at sustainable transport. Integrating land-use and transport, one key element of next generation transport systems, requires a supportive institutional framework. For transport to be able to realize its contribution to development (health, education, employment, and trade) as envisaged in the *Bangkok 2020 Declaration*, a supportive institutional framework is needed.
82. To be able to effectively develop EST in the large number of cities in most of the countries it is important to give greater importance to local levels of government in development and management of public transport. The national-level policy setting as in the case of India (JuNURM) was mentioned as an effective way to involve the local level. The involvement of the national level is also of key importance in ensuring adequate financing for EST at the local level. In many cases, cities cannot issue bonds themselves; this and accessing MDB funding requires the support of the central government. Without adequate and timely funding cities will face obstacles in realizing EST in a manner that is commensurate with demand. But many cities do have resources for transport investments but these need to be redirected towards EST and Vision Three Zeros goals. This will in many cases require taking on entrenched interests and expectations.
83. The private sector can play an important role, but this must be properly managed through e.g. service level agreements, franchise contracts and public-private partnerships (PPP) that are structured to address EST goals. The private sector also has a role to play in the development of new technologies and services. However, PPP can be successful only when it creates win-win situations for the private sector, general public, and government.
84. Finally, the adversarial aspect of private and public sector relationships that exists in certain countries and cities needs to be improved. The fact that many private stakeholders in urban transport (i.e. traditional public transport and para-transit operators) are highly informal and their relationship to the public sector is not easy to manage are also challenges to be resolved in determining appropriate institutional arrangements to achieve EST.

XII. Intelligent Transport System: A vision of 21st Century Cities

85. Intelligent Transportation Systems (ITS) apply advanced technologies of electronics, communications, computers, control and detecting in all kinds of transportation systems. Advantages of ITS include improved safety, higher efficiency, better service and reduced pollution and GHG emissions, therefore these can enable next generation Vision Three Zeros transport systems. They may also play a key role in integrating transport systems for both passenger and freight, across modes and localities. ITS can be used to collect data for monitoring of polices as well. Multi-agent modelling systems may help understand behavioural responses to transport policies such as parking management or price incentives.
86. Historically ITS have sometimes emerged as a by-product of systems for other purposes. ITS exist in different levels of costs and complexity, and their applicability may depend on country circumstances. For developing countries, particularly LDCs, maintenance and back-up services need to be considered. Other considerations for the application of ITS include the institutional changes they may require or trigger, and the potential environmental impacts. Road infrastructure projects should consider how ITS might contribute

to more effective road and transport system operations and management, contributing to EST and Vision Three Zeros goals.

87. Experience from Japan shows that giving real-time information to support drivers reduced the number of cars exceeding the speed limit as well as traffic accidents, while mobile phone applications ensured faster travel times and reduced emissions. In Japan, the number of over-speed vehicles has been reduced and traffic accidents dropped by 60 per cent at monitored points. Probe car data collection is another important function of ITS, with analyzed data providing the fastest route guide to drivers that reduces travel time by 20 per cent and CO2 emissions by 17 per cent. This experience shows one way that ITS might support Vision Three Zeros goals.

XIII. Country Initiatives, Achievements, and Constraints in Implementing the Bangkok 2020 Declaration (2010-2020)

88. Twenty-three Asian countries presented their progress, initiatives, and achievements against the *Bangkok 2020 Declaration* for the period 2010-2020 following the recognized policy framework “Avoid, Shift, and Improve”. The *Bangkok 2020 Declaration* and the EST Forum have helped frame national priorities and develop policies, which have worked for all countries despite the wide variety in economic development, geographical location, and topography. Furthermore, many countries reported that the EST Framework helped improve communication and cooperation between the various relevant national institutions. However, the complexity of terms is challenging for some countries especially when these need to be translated into local languages, and it is suggested to establish an EST Glossary of Terms including translations.
89. Key challenges identified are: financing and investment gaps; need for further strengthening of local capacity to implement EST measures; data availability and collection; need for stronger EST enabling legislative frameworks; low density developments; lack of available infrastructure; geographic location and weather conditions; frequency, affordability and quality of public transport service; pricing mechanisms biased towards private vehicle use; lack of high quality fuels; poor road discipline; need for better coordination among various agencies; and need for linking national transport plans with climate change plans.
90. Some of the best practice and forward-looking examples are presented below. A specific recommendation is for future EST Forums to improve the platform for exchange of best practices to accelerate knowledge transfer and scaling up.
91. “Avoid” strategies focus on land use and transport integration, mixed land use, and the use of information and communications technologies (ICT). Mongolia has developed seven strategies under its urban and transport development plan, which will accompany legal reform and amendment of present legislation. New laws on car parking and green areas in cities and towns will also be introduced. Similarly, Afghanistan is developing mixed use development plans for its main cities and Malaysia’s planning guidelines on compact cities are designed to reduce private vehicle travel. Korea is taking transit oriented development (TOD) a step further by developing Transit Oriented Corridors that optimize transport and land use integration. Bangladesh is uniquely integrating water transport planning in its land-use planning because of the multiple rivers in the country, encouraging mixed use multi-storey buildings allowing parking, commercial, and

residential use. Singapore is Asia's leader in congestion pricing and vehicle license plate auctioning and Viet Nam is presently piloting congestion pricing for Ha Noi. Sri Lanka is also focusing on ICT helping to avoid unnecessary trips, while Myanmar is starting to use ITS systems and transport demand management (TDM) measures on economic corridors and expressways.

92. "Shift" strategies involve NMT, public transport improvements, TDM, more sustainable intercity passenger and goods transport. Japan aims to achieve significant shifts in intercity passenger and goods transport by expanding the railway network and also incentivizing transport operators to invest in containers that can be transferred from road to rail easily. Many countries reported on developments in BRT and mass rapid transit (MRT), usually with PPP arrangements. Examples include Bangladesh (opening a BRT airport-city link this year), Pakistan, and Viet Nam. Thailand is also prioritizing the integration of its mass transit systems. The Philippines and the Maldives are improving their roll-on-roll-off ferry networks and upgrading terminal facilities to improve inter-island linkages for both passenger and freight transport. Countries are working on improving NMT facilities, such as introducing segregated NMT lanes within and between cities in Bangladesh, pedestrian days in Bhutan, public bicycle-sharing in India and China, and the distribution of bicycles to schoolchildren and improving walkways and dedicated cycling lanes in main cities in Sri Lanka.
93. "Improve" strategies relate to sustainable fuels and technologies, standards for fuel quality, fuel efficiency, and vehicle emissions, inspection and maintenance, ITS, and freight transport efficiency. Countries such as Bhutan are tightening their fuel standards and more countries are considering introducing fuel economy standards. Nepal is investing heavily in electric propulsion for transport and is looking to re-introduce their trolley bus system and a new cable car, while Bhutan is also looking into electric mobility options. Other countries, such as Cambodia and Myanmar are improving public bus systems. Thailand is working hard to improve their vehicle inspection and maintenance system and has introduced a pilot project on logistics and transport management as a joint effort between the Federation of Industries and energy and transport ministries to improve energy efficiency. Malaysia will upgrade its B5 (5 per cent palm methyl-ester, 95 per cent diesel) biodiesel programme that was introduced in 2011 to B10 (10 per cent palm methyl-ester, 90 per cent diesel) nationwide. The Philippines is piloting and promoting biofuels, natural and LPG especially for taxis, buses, and jeepneys, while Pakistan is promoting compressed natural gas (CNG) for vehicles.
94. China's Ministry of Transport in its 12th Five-Year Plan puts an emphasis on energy efficiency and emission reduction from commercial vehicles and ships, including subsidies for the replacement of polluting trucks and vessels and the purchase of energy efficient and alternative vehicles. Greening of ports and ships is further promoted through port-railway connections, on-shore power supply for ships, and the use of renewable energy and electricity.
95. Cross-cutting strategies are transport safety aiming for zero fatalities, monitoring of health impacts from transport, air quality and noise standards, global climate change and energy security, social equity, innovative financing mechanisms, information and awareness, and institutions and good governance.
96. Indonesia is one of the leading countries in developing transport Nationally Appropriate Mitigation Actions (NAMAs) for reducing GHG emissions expected to attract international funding. Stakeholder consultation is a key element in the development of their national master plans, whilst many others now have National Climate Change Action Plans. The EST Strategy in Lao PDR was approved by the National Environmental

Committee chaired by the Deputy Prime Minister, while also established a National Steering Committee on EST chaired by the Vice Minister of the Ministry of Public Works and Transport to align the EST strategies with national socioeconomic development plans, and related strategies and legislations, and create clarity for development agencies and other investors where the country needs support.

97. Brunei established driving schools, while Lao PDR introduced driver training to ensure safe operation of new efficient buses, highlighting the need for operations to be included when new technologies are introduced. The Philippines imposes a special tax on motor vehicle owners that goes into the Special Vehicle Pollution Control Fund that can be used for various EST strategies such as TDM.
98. In line with the National Urban Transport Policy, India has prioritized investment in public transport namely BRT projects in eleven cities covering 88 km, funding 15,260 buses for urban transport under India's JnNURM in the first phase, and now additional funding for 10,000 buses for all towns and cities in India, and funding for metro rail projects in seven cities.
99. Efforts on air quality are increasing and the introduction of noise standards (Pakistan) is becoming more widespread. Road safety is nevertheless still a challenge for most countries.

XIV. Global Consultation on Sustainable Transport in the Post-2015 Development Agenda

100. Heeding the call by Secretary-General Ban Ki-Moon to make suggestions on how to best incorporate transport in the post-2015 development framework participants in the Forum engaged in a constructive dialogue. Participants agreed on the important role that sustainable transport has to play in realizing development. In many cities, transport is one of the most important sources of employment, especially in the informal sector. In the further development of transport it is important to balance the expansion of transport infrastructure and services, in support of economic and social development, with strong efforts to reduce the negative externalities including impacts on local and global environment, road safety, and congestion.
101. Implementation of EST in the coming years can be accelerated if the role of sustainable transport is clearly acknowledged in the goal framework and means of implementation of the post-2015 development framework.

XV. The Way Forward

102. The Seventh Regional EST Forum in Asia confirmed the continued relevance of the *Bangkok 2020 Declaration* on Sustainable Transport in guiding policy-making on EST. The outcome of the Rio+20 Conference further reinforced the relevance of EST as a key enabler of inclusive and environmentally-sustainable economic and social development.
103. The Seventh Regional EST Forum in Asia was an important step forward in the development of a possible regional agreement on green freight by agreeing on a process for the further development of the regional agreement and identifying the core elements for such an agreement.

104. It is clear that countries have started to align transport policies and investments at the national and city levels with the directions set out in the *Bangkok 2020 Declaration*. There is however scope to further intensify these efforts and it is also apparent that in order to realize the developmental potential of EST that such policy alignments should be speeded up. A key outcome of the Seventh Regional EST Forum in Asia was that for transport policies and investments to be truly environmentally-sustainable they actively need to incorporate a resilience component.
105. To further intensify and accelerate transport policy alignment with the EST principles and the *Bangkok 2020 Declaration* goals countries and cities will need to strengthen institutional frameworks and organizational capacity, without which it will be impossible to make substantial progress in realizing EST in Asia. Similarly, countries will need to align transport funding, subsidies and taxes with the vision of the *Bangkok 2020 Declaration* and the *Bali Declaration*. Establishing national EST focal points will help this process.
106. If countries will increasingly align policies, institutional arrangements and financing with the *Bangkok 2020 Declaration* and the *Bali Declaration* they can build 21st Century next generation transport systems that embody the Vision Three Zeros: Zero Accidents, Zero Congestion, and Zero Pollution.
107. The Participants of the Seventh Regional EST Forum in Asia called on the Government of Indonesia as the host government of the Seventh Regional EST Forum to disseminate the outcomes of the Seventh Regional Forum, including the *Bali Declaration*, in relevant international meetings, especially the meetings discussing the follow-up to the Rio+20 outcomes.

XVI. Closing Session

108. On behalf of the Government of Sri Lanka, Deputy Minister of Transport, Rohana Kumara Dissanayaka officially announced Sri Lanka's offer to host the Eighth Regional EST Forum in Asia in 2014. Sophie Punte, the Executive Director of Clean Air Asia announced that the Better Air Quality 2014 Conference will be organized back-to-back with the Eighth Regional EST Forum in Asia.
109. Delivering the closing remark on behalf of the Ministry of the Environment of the Government of Japan, Satoru Morishita, Director, Environmental Transport Policy Division, expressed his deep appreciation to all the speakers, panelists, the Government of Indonesia, and UNCRD for the success of the Forum. The event reaffirmed the determination of Asian countries towards further promotion of EST following the Rio+20 outcomes. Taking advantage of Asia's diverse cultural, historical, social, and economic background, he further called Asian countries to move forward towards the realization of human-friendly as well as environmentally sustainable transport by strengthened cooperation among Asian countries. He finally urged bi-lateral and multi-lateral institutions and donor agencies to consider providing the necessary support in further strengthening and expanding the EST initiative.
110. Chikako Takase, Director of UNCRD, expressed her deep appreciation to all the co-organizers as well as supporting and partner organizations for their contribution to the successful organization of the Forum. The Forum resulted in two significant tangible outcomes - the Bali Declaration on Vision Three Zeros and making a step forward towards a regional agreement on green freight. Together with the *Bangkok 2020 Declaration*, the Vision Three Zeros – Zero Congestion, Zero Pollution, and Zero Accidents – will provide a meaningful framework for countries to align their policies and programmes to promote EST. She further

urged all international organizations, bilateral and multilateral donor agencies, including development banks, to provide necessary technical and financial assistance to developing countries in making a significant start and the progress in the implementation of the *Bangkok 2020 Declaration* and *Bali Declaration* towards the 21st century next generation transport systems. Finally, she thanked the Government of Sri Lanka for expressing its intent to host the Eighth Regional EST Forum in Asia in 2014, and the Clean Air Asia for its offer to organize the Better Air Quality 2014 in conjunction with the Eighth Regional EST Forum.

111. Expressing his deepest appreciation to Ministry of Transportation and Ministry of Environment of the Government of Indonesia, Ministry of the Environment of the Government of Japan, UNCRD, and all international organizations and partner agencies, the Vice Minister of Transportation of Indonesia, Bambang Susantono, said that the next generation transport systems must be able to deliver better access to essential human and goods services, and Asian countries were heading in this direction. It is a huge step forward for the Asian countries to agree on the *Bali Declaration* on Vision Three Zeros. He expressed the hope that all the results of the Forum, especially those manifested in the *Bali Declaration* would be beneficial for the future development of environmentally sustainable transport system in Asia. Finally, concluding the Seventh Regional EST Forum in Asia, he expressed his hope for continued cooperation among Asian countries as well as all major stakeholders-governments, private sectors, regional and multilateral organizations, and civil society-in developing environmentally sustainable transport in the coming years to realize a more sustainable Asia.

Annex 1: Bali Declaration on Vision Three Zeros - Zero Congestion, Zero Pollution, and Zero Accidents towards Next Generation Transport Systems in Asia

Annex 1

Bali Declaration

on

Vision Three Zeros - Zero Congestion, Zero Pollution, and Zero Accidents towards Next Generation Transport Systems in Asia

We, the participants, who are representatives of member countries of the Regional Environmentally Sustainable Transport (EST) Forum in Asia (Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, People's Republic of China, Indonesia, India, Japan, Republic of Korea, Lao PDR, Maldives, Mongolia, Myanmar, Nepal, the Philippines, Pakistan, Russian Federation, Sri Lanka, Thailand, Timor-Leste, and Viet Nam), international organizations, bilateral and multilateral agencies, nongovernmental organizations, research organizations, and expert sustainable transport professionals, having met at the Seventh Regional EST Forum in Asia and Global Consultation on Sustainable Transport in the Post-2015 Development Agenda, held in Bali, Indonesia, from 23 to 25 April 2013, adopt the "***Bali Declaration on Vision Three Zeros - Zero Congestion, Zero Pollution, and Zero Accidents towards Next Generation Transport Systems in Asia***", to give further inspiration and encouragement to all who are working on promoting environmentally sustainable transport in Asia. Realizing this will be helped by zero tolerance to fatalities, congestion, and pollution.

Recalling the commitments to achieve the sustainable transport goals under the *Bangkok 2020 Declaration (2010-2020)* agreed upon by the participants at the Fifth Regional EST Forum, held in Bangkok, Thailand, on 23-25 August 2010,

Noting the Outcome of the 2012 United Nations Conference on Sustainable Development (Rio+20) – ***The Future We Want***, which provides the international community with a meaningful framework to develop and implement environmentally-protective, safe, economically-efficient, and socially-inclusive transport policies, programmes, and measures, leading to more sustainable passenger and freight transport systems and services,

Acknowledging that the frequency and magnitude of natural disasters (floods, earthquakes, tsunamis, cyclones, landslides, volcanic eruptions, storm surges, and extreme weather events) are on the rise globally, including across Asia, and that transport infrastructure and services are vulnerable to climate change impact,

Raising concern that a majority of developing countries and cities of the region are yet to make climate resilience, mitigation, and adaptation an integral part of their transport (infrastructure and services) policy, planning and development, and recognizing the need for the developed countries to fulfil existing commitments for financial support, technology transfer, capacity-building, and institutional-strengthening for developing countries so as to facilitate introduction of next generation sustainable transport systems in Asia for zero congestion, zero pollution, and zero accidents;

1. Express our intent to voluntarily develop and introduce more sustainable transport policies programmes, and projects, appropriate to the context of our countries and cities, that will contribute to our common vision of realizing 21st century cities characterized by zero congestion, pollution, and transport accidents, and at the same time, be resilient to climate change;
2. Call for a Post-2015 Development Agenda that acknowledges the critical contribution of sustainable transport in realizing sustainable development and addressing the climate change challenges;
3. Recommend complementing the *Bangkok 2020 Declaration* with the voluntary and legally non-binding *Bali Declaration*;
4. Call for close cooperation among countries to jointly foster the vision of Three Zeros;
5. Call for the developed countries and multinational institutions to fulfil their existing commitments for financial assistance, technological transfer, sharing the expertise and experiences in advancing environmentally sustainable transport;
6. Call for multilateral financial institutions to adopt more inclusive policies for environmentally sustainable transport; and
7. Call for relevant international fora to deal with sustainable development to give more serious attention to environmentally sustainable transport aspects.