

Expert Group Meeting on “Special Needs and Challenges in Developing Countries for Achieving Sustainable Transport”

*Organized by the Division for Sustainable Development, UN Division for
Economic and Social Affairs (UN-DESA)*

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Draft MEETING REPORT

Background

DSD/DESA brought together over thirty sustainable transport experts mostly from developing countries and some representatives from a few UN organizations to an Expert Group Meeting (EGM) in the UN HQs in New York for two days of dialogue on the special needs and challenges facing developing countries as they strive to achieve sustainable transport within the context of SDGs. Representing all regions, the participants shared their country and community experience while also identifying the ways in which they had been able to advance and where roadblocks remain. By focusing on the needs, gaps and challenges in developing countries, the participants agreed on recommendations that will provide guidance on implementing sustainable transport in the context of the Sustainable Development Goals (SDGs) and will also inform the Global Outlook Report of the High-Level Advisory Group on Sustainable Transport to be released in late 2016.

Opening Session

Mr. Lenni Montiel, Assistant Secretary-General for Economic Development, DESA welcomed participants by highlighting how sustainable transport contributes to meeting all of the SDGs. He noted that DESA supports the Secretary-General’s High-Level Advisory Group on Sustainable Transport and suggested that the greatest opportunities for sustainable transport are in the world’s developing countries.

H.E. Mrs. Chulamane Chartsuwan, Ambassador and Deputy Permanent Representative of the Kingdom of Thailand to the United Nations (Chair of the Group of 77 and China) said that done right, transport contributes to the three dimensions of sustainable development (social, economic and environmental). Sustainable transport policy should be people centered by prioritizing public transport, safe multi-modal systems including bike lanes while also promoting energy and fuel efficiency.

H.E. Mr. Ahmed Sareer, Ambassador and Permanent Representative of Maldives to the United Nations (Chair of the Alliance of Small Island States) noted that the meeting was timely as the 2030 Sustainable Development Agenda and the Paris climate change agreement are moving to the implementation phase and the New Urban Agenda is being discussed. He said that transport challenges in Small Island Development States have advanced since Millennium Development Goal framework (2000 – 2015) where transport was only included as part of infrastructure. Now, the importance of transport is recognized with transport-related targets included in several SDGs.

Keynote speaker *Michael Replogle*, Deputy Commissioner for Policy at the New York City Department of Transportation said that current transport systems are unsustainable. By moving to systems that are low carbon, multi-modal, reliable and safe, sustainable transport can be a main driver for reducing inequality by providing access to employment, education, housing, entertainment and health services. He described how in 2016 the Partnership on Sustainable, Low Carbon Transport (SLoCaT) is targeting implementation of the Paris Agreement on Climate Change and the 2030 Sustainable Development Agenda while also making inputs to Habitat III and the 14th UN

Conference on Trade and Development. For each of these processes SLoCaT is making the case that sustainable transport will help meet climate change and development objectives while also saving up to 100 trillion USD by 2050 (by implementing a set of 15 Lima Paris Action Agenda LPAA transport initiatives).

He said it is essential to ensure an inclusive framework for sustainable transportation partnerships and financing, building on recent progress in this arena and strengthening cooperation between public, private, and non-governmental stakeholders. He cited as an important local example the work of New York City government, which has a OneNYC's transport goal to provide a network that will be reliable, safe, sustainable & accessible while meeting the needs of all New Yorkers and supporting the city's growing economy. This goal is complemented by Vision Zero NYC which aims to eliminate serious traffic injuries and fatalities."

Highlights of Presentations and Discussions

Session One: What does access mean for developing countries in the context of sustainable transport and SDGs?

Context: Sustainable transport is essential for achieving the 17 Sustainable Development Goals (SDGs) and the 2030 Agenda for Sustainable Development. Although not represented by a standalone SDG, sustainable transport is mainstreamed across several Goals and targets, especially those related to food security, health, energy and infrastructure. SDG 11 on sustainable cities includes target 11.2 which envisions: "by 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport..." In developing countries, economic growth constraints and priorities on poverty alleviation make meeting the growing demand for transport all the more challenging.

Mr. Azmi Abdul Aziz, Prasarana Malaysia Berhad, Kuala Lumpur, Malaysia The 2030 Agenda - How sustainable transport contributes to meeting the Sustainable Development Goals

Describing Malaysia's 2030 national agenda, Mr. Aziz said that his country's objective is to change lifestyles through shifting from private car to public transport, walking, cycling while also adjusting land use planning approaches. Improving urban public transport fits well into Malaysia's overall government aspiration which also includes improving mobility and addressing the cost of living. Sharing background on Malaysia's national land public transport master plan, he stressed the centrality of public transport for the country to become a high-income, sustainable nation.

Mr. Peter Njenga, Executive Director International Forum on Rural Transport and Development - Access in the rural context: Challenges and special needs of developing countries

Mr. Njenga outlined the primary role of sustainable transport as providing access to basic services, livelihoods and opportunities which enables economic growth, administrative control (i.e. territorial integration & political inclusion) and social integration. Despite a global trend towards urbanization, in many developing countries – particularly in Africa and Asia – the majority of the population lives in rural, or transitional zones where the vast majority of the poorest are concentrated. Globally, there is a confluence of rurality, remoteness, poor access and poverty. Transport will enable progress in many areas covered by SDGs. These include food security, school enrolment and retention, access to health services. More research is needed on rural transport to help stimulate more investment, combat rural stagnation and to promote more balanced spatial development.

Ms. Anjali Mahendra, World Resources Institute - Access in the urban context: Challenges and special needs of developing countries

With a focus on India, Ms. Mahendra described demographic trends for projected urbanisation and the growing desire for motorized vehicles particularly in Asia which is projected to have about half of vehicles globally by 2030. Taken together, these trends mean the need to introduce affordable, accessible, and reliable transport is urgent and this conflicts with the growing aspiration towards private mobility in these countries. She described the root challenges facing developing countries as 1) the rapid, unmanaged motorization along with declining non-motorized accessibility 2) lack of integrated planning 3) misaligned sectoral plans and conflicting government policies at national and local levels and 4) a financial gap. There are positive signs such as a rise in car and bike sharing, vehicle demand management schemes, efforts to integrate informal transport and bus rapid transit.

Needs and Challenges

There is a pressing need for interregional transport and to keep a focus on the rural/urban transportation dynamic. When it comes to climate adaptation and disaster resilience, rural transport is a highly neglected sector. Rural connectivity and accessibility is an important thread for rural development, rural resiliency and rural empowerment, which have significant implications to many of the SDGs. Improved rural transport along with better supply chain logistics makes key contributions to socio-economic resilience as an enabling factor for food security through significant reduction of post-harvest losses. While some see a massive uptake in car ownership in emerging economies, others suggest that if planners do not plan around cars perhaps a more systemic shift is possible. It is important to remember that often the powerful real estate sector generally make the most important planning decisions.

Session Two – What are the challenges and needs for countries in special situations in achieving sustainable transport?

Context: The demand and requirements for mobility differ between countries due to different stages of economic development. Inappropriate transport strategies can result in networks and services that aggravate the condition of the poor, harm the environment, ignore the changing needs of users and exceed the capacity of public finances. For the development and implementation of sustainable transport policies, it is important to understand different implementation challenges given variations among geographic regions and conditions, as well as the stage of development of a country.

Mr. Jean Maxy Simonet, Ministry of Public Infrastructure & Land Transport Mauritius Small Island Developing States (SIDS)

Mr. Simonet said Mauritius has transport constraints just as many other SIDS - small size, remoteness and insularity, located far from sea routes, small internal markets, high freight costs, weak port transport infrastructure, lack of inter-island transport network (between port and airport), as well as being vulnerable to climate change. Given economies of scale, it is difficult for Mauritius (and SIDS in general) to attract private investment for transport. That said, Mr. Simonet stressed that SIDS need a robust transport system and his country provides free public transport for students and high government subsidies so all can access the public transport. In Mauritius access constraints have been mitigated through government policies including huge investments to modernize port infrastructure, upgrading airport facilities while liberalizing air access policies such as air service agreements (for example the Air Corridor with Singapore linking eastern Africa and eastern Asia).

Mr. Bernard Dzawanda, Senior Transport Economist, COMESA, Lusaka, Zambia, Least Developed Countries

Least developed countries have a weak transport infrastructure along with a growing population Mr. Dzawanda explained. Without transport, poverty alleviation is impossible. However the cost of infrastructure is high and investment recovery is so low it is difficult to attract financing. In addition, weak institutions mean capacity to manage investments or to invoke the “user-pay principle” is

lacking. Currently, over 80% of transport is by road which is not energy efficient and highly polluting (for example, in some countries in Southern Africa coal is transported by road trucks) and while rail is more efficient, the investment required is massive and maintenance is also costly. Stressing the need for modal shifts, stronger institutions, and safer systems, Mr. Dzawanda suggested more community and private sector involvement along with pollution reduction measures.

Mr. Sengsavang Phandanouvong, Ministry of Public Works and Transport Vientiane, Lao PDR, Landlocked Developing Countries (LLDCs)

In the 32 LLDC with a worldwide population of 440 million, transport constraints include complex institutional structure, lack of capacity, poor accessibility and funding challenges. There is a pressing need to improve connectivity and integration in part through international conventions which will help boarder management and will link to sea ports (necessary as ships carry more freight and are cheaper than road transport). Key problems in Lao PDR include empty return haulage, high logistic cost, limited transport volume, small markets, old truck fleets, and lack of transport logistics. Mr. Phandanouvog explained how new “dry ports” help coordinate shipping systems as well as active participation of the private sector. In general, LLDCs must depend on neighbouring countries which means effective partnerships are essential.

Needs and Challenges

LDCs, LLDCs and SIDS are faced with lack of adequate physical infrastructure which limits the flows of goods and curtails trade, but also impairs the competitiveness of these countries. Yet, infrastructure development requires large and increased amounts of funding. There are challenges in non-physical infrastructure and trade logistics and facilitation are all issues for LDCs, LLDCs and SIDS, leading to high transportation costs. The geographical location, mostly in remote areas of the world, and the fact that these countries are surrounded by other developing countries means isolation from main markets and from the international trading system. In addition, they tend to be mostly small economies, with relatively small volumes of transport. Remoteness, together with smallness has a significant impact on increasing transport costs and preventing these countries from taking advantage of economies of scale. Regional economic integration through maritime network could provide effective solutions for SIDS.

Capacity building in a number of areas is required such as port infrastructure development, port productivity and efficiency and vessel efficiency to reduce transportation costs. Small island countries like Singapore provide useful insights and learning experiences in this regard. In the global conversation around sustainable transport the context of the narrative must recognize that some developing countries are also considered to be middle income and accordingly the drive towards sustainable transport must be tailored to the specific needs of the country, given that blanket prescriptions do not hold true for all.

The issue of size is a critical one in the discourse on sustainable transport as in some cases solutions are not scalable because of the issue of finance. Similarly, there must be the recognition that, notwithstanding the drive towards use of private capital, size can be a significant hindrance in the “bankability “of projects using regular financial metrics. There should be a move to establish a different project feasibility/assessment framework to address this particular issue if there is to be an encouragement of use of private funds.

Briefing: Sustainable Transport Global Outlook Report and Sustainable Transport Conference

The Sustainable Transport Global Outlook Report by the High-level Advisory Group on Sustainable Transport (HLAG-ST) is currently being developed under penholdership of UN-DESA. The report will be launched at the end of 2016.

Stephanie Rambler (DESA) presented an overview of the UN Secretary-General's High-level Advisory Group on Sustainable Transport established in 2014 to provide global messages and recommendations while promoting integration of sustainable transport into relevant intergovernmental processes. Currently, the HLAG-ST is writing their "Global Sustainable Transport Outlook Report" which sets forth a global analysis of the sector along with key recommendations moving forward. Frank Wefering (DESA) outlined the main sections of the draft Outlook Report which include policy development and implementation (need for integration, people-centred approach which focuses on resilience), financing (investment needs of up to 3 trillion annually, improved financing criteria, use of green climate funds), and technology (innovations in fuels, vehicles, and data collection).

Mr. Muhammet Atayev, Director of the Institute of Strategic Planning and Economic Development, Ministry of Economy and Development of Turkmenistan noted that his country will host the Secretary-General's Sustainable Transport Conference during the last quarter of 2016. Describing the transport dynamic in Turkmenistan, he noted efforts to diversify the economy, deepen the manufacturing sector, build railways and introduce special programmes of action. To promote transport corridors, Mr. Atayev explained how the UN General Assembly plays a role. Geographically, Turkmenistan connects Central Asia and Europe and has 7.4% GDP growth year - transport plays a significant role in the development he said.

Session Three: Policy development and implementation

Context: Sustainable transport is affordable, efficient, safe, low-carbon, and climate resilient. The key characteristics of sustainable transport are i) a strategic and long-term perspective reflecting the emphasis of the sustainable development concept on fulfilling the needs of future generations as much as those of the current one, ii) a holistic approach calling for the integration between sectors, between institutions, as well as between transport modes, iii) a participatory approach, and iv) a focus on monitoring and evaluation. In many developing countries, authorities and communities require sound policy and governance structures as well as basic technical and financial capacities as an initial prerequisite for their move towards sustainable transport.

Mr. Jose Holguin-Veras, Rensselaer Polytechnic Institute – Enhancing Freight Mobility?
Correction: No, We need to Enhance the Economy

Mr. Holguin-Veras explained how freight activity is the key physical expression of the economy – it produces externalities such as pollution, congestion and pavement damage. The aim is to maximize the benefits (employment, economic activity) while minimizing the negative consequences of freight by moving to more sustainable systems. To foster sustainable urban freight systems in developing countries he suggested management of infrastructure, traffic, logistics and land use complemented by vehicle-related strategies and pricing and taxation incentives. Planning guides such as "Improving Freight system performance in metropolitan areas" by the Transportation Research Board are useful resources.

Ms. Lake Sagaris, Pontificia Universidad Católica de Chile, Policy and sector integration – country example

Ms. Sagaris noted the importance of addressing behavioural change as central to sustainable transport. Based on collaborative research from India, Chile, Europe and North America, she recommended thinking about "sustainable" transport as an "ecology of modes", rather than a single mode, such as buses or trains, which alone cannot fulfil the diverse functions necessary to guarantee equal access to

jobs, health and other urban benefits. This approach focuses on the “intermodal”, that is the *interconnections* between *sustainable modes*, particularly walking-cycling-public transport. Cycling has diverse formats, many closely related to employment, among them cycle-taxis, public bike share and rentals, bikes on buses (with racks) or Metros, etc. Technology, especially phone applications, can greatly improve intermodal connections, as demonstrated by experiences with rickshaw services in several India cities. To achieve these objectives, cities must move beyond paternalistic “consultations”, which often lead to conflict, rather than consensus. Indeed, progress requires a clearer definition of *social sustainability* and a deeper understanding of the need for *deliberative, consensus-building participatory methods of governance*.

*Mr. Vinicius de Tomasi Ribeiro, State Member of Parliament, Brazil, **Focusing on people and quality of life – country example***

Mr. Riberio described how the people of Porto Alegre, in 2013, demanded that "if fares don't go down society is going to stop." This protest led to a social movement that included the importance of transport for education. In Porto Alegre (and in most developing country cities) transport mobility relates to income – the rich tend to use cars and the poor walk or use public transport. Now transport fares in Porto Alegre are discounted for elderly, students, and disabled. The social movement has highlighted that urban mobility is the most modern way to educate citizens. Even though sustainable transport is a local issue, he stressed the important role of the federal government to establish and enforce a (sustainable) transport policy framework..

*Mr. Amorn Kitchawengkul, Bangkok Metropolitan Administration, Thailand - **Road safety: challenges in growing cities***

Mr. Kichawengkul described the growing traffic congestion problems in Bangkok where 18 million riders commute every day – 37% of them in private cars. With the Bangkok Action Plan based on the Sathorn Model, the city is introducing a mass transit rail network, increasing small boat transit on the city's canal system, and increasing pedestrian walkways and bike share. The aim is to include all social groups and to vastly increase road safety – by stopping drunk driving, introducing a 25 mph speed limit, improving road conditions and traffic lights and connecting buildings and mass transit via sky walks.

Needs and Challenges

Though provide many important benefits, walking and bicycling still remain as peripheral issues in the overall transport policy, planning and development. There have been growing traffic accidents across many developing countries involving the two-wheelers and motorcycles. Lack of proper licensing system and vehicle inspection and maintenance (I/M) have further compounded the problem. Car subsidies are given by governments, which contradicts efforts for traffic safety and public transport. Involving civil society is crucial – there should be funding available to support civic organisations to engage in transportation decision making.

Session Four: How to trigger and maintain funding for sustainable transport

Context: Governments will need to enhance actions and access to funding at a much higher level than is currently available to achieve such universal access. This is particularly true in the developing world. In 2013, the eight largest Multilateral Development Banks pledged \$175 billion until 2022 to fund more safe and sustainable transport. Innovative financing mechanisms, fiscal instruments, as well as cooperation and partnership between the public and private sector are being introduced to

foster sustainable transport and channel transport demand in the direction of sustainable transport modes.

*Mr. Zhi Liu, Peking University – Lincoln Institute, Centre for Urban Development and Land Policy - **Public-private partnerships and innovations in financing – attracting sustainable financing for large scale infrastructure and rural systems***

It is clear that as the economy grows in developing countries, investment is needed for transport infrastructure. Mr. Liu focused on the measures to fill the infrastructure finance gaps, which include increasing existing stocks' performance; reducing subsidies and setting efficient service tariffs; attracting Public Private Partnership (PPP) investment; removing PPP impediments; developing domestic financing instruments; and maintaining the levels of investment commensurate with the levels of economic growth. Mr. Liu indicated that impediments to PPPs exist in many developing countries. These includes lack of clear PPP policy and program; weak governmental institutional capacity; legal constraints; lack of bankable projects and poor business climate in the lowest-income countries; and decentralization of revenues and investment responsibilities in some developing countries. Major effort is needed to remove these impediments.

*Nancy Vandycke, World Bank - **Capturing climate financing***

Ms. Vandycke explained how during COP21 Paris Action Agenda, transport was an important theme. However, there were a lot of initiatives and their links and relationships were not clear. In order to create coherence and a common transport narrative, the World Bank identified “Sustainable Energy 4 All” as a possible structure to apply to the transport community. She outlined a possible structure called “Sustainable Mobility for All” that would coordinate actions around a common vision based on the principles of access for all, efficiency, safety and climate respect. This structure will be presented at future transport meetings to gauge interest. In terms of climate funding, she said the transport sector is lagging behind – for example only 13% of the Clean Technology Funds are going to climate. There is a proposal to create a dedicated transport stream within the Clean Climate Fund.

Needs and Challenges

Capital cannot be expected to come from public sources only and will have to increasingly source from private sources. How to do this, is a key question. Increasing use of PPPs is one way of doing this, combined with new innovative financing mechanisms. Climate financing is currently in vogue and increasing in volume and can be an interesting additional capital stream to help catalyze larger private investments that are to be redirected towards sustainable transport. Climate finance itself is however relatively limited and in itself not sufficient. Climate finance could also be used for innovation, proof of concept, early market development and overall risk taking that private sector cannot. There is a greater need for an overall systemic approach, focused on improving efficiencies of transport systems and shifting increasingly towards environmentally more benign solutions. Instead of emphasizing the environmental drivers and reasons for a shift towards sustainable transport, we should perhaps rather emphasize the development needs (to provide suitable and affordable mobility options to the population to allow for economic development) and see the environmental dividends as the co-benefits (instead of the end goal, as it is often now pitched, especially coming from the environmental community).

Session Five: How to harness and promote access to new technologies

*Mr. M Ramsekhar, Delhi Integrated Multi-Modal Transit System Limited - **Promising technological developments***

Mr. Ramsekhar asked “How can we do more with less by using smart mobility?” When it comes to technological innovations, there is no one size fits all model – it the situations varies from city to city and depends on the level of development, the willingness to reform, resource availability and a city’s aspirations. Interactive communication technology is making bus systems more efficient and user-friendly (with the ability to track the bus location, data collection to make routes and schedules more effective). Big data and analytics, e-commerce, mobile computing and location based services are leading to an exciting re-thinking of business models and institutional architecture. These are exciting times he said.

*Mr. Subash Dhar, UNEP DTU Partnership - **Advances in clean fuels and vehicles***

Currently in developing countries, motorisation, trip rate and trip lengths are comparatively low according to Mr. Dhar. However, the trend is for a rapid increase in car ownership and mobility demand which could lead to increased CO2 emissions. There are gains to be made if transport policies are aligned with climate policies and this alignment can achieve more for the SDGs and also put transport sector on a low carbon path. Mr. Dhar shared data from OECD countries which show that fuel efficiency policies and technology advances (hybrid cars, alternative drive train technology, smaller engines) have improved fuel economy in line with the Global Fuel Economy Initiative (GFEI) targets. However, the average fuel economy in developing countries has not demonstrated a major improvement therefore more needs to be done. He also highlighted that Kaya Framework is an excellent tool to analyse the fuel reduction at a systemic level through interventions on both demand side (akin to avoid and shift strategies) and supply side (akin to improve strategies). *Needs and*

Challenges

In many developing countries, cars have decent pollution control standards, however the available fuel is very low quality. Vehicle inspections and maintenance (I/M) are also needed. Freight is a transportation “orphan” – it could be improved with regional cooperation as freight is transported across borders and countries are affected by each other’s policies, standards, rules and regulation. It is critical that the quality of available fuel in market matches the engine standard of in-use or new vehicles to reduce pollution and health impacts. Intelligent transport system (ITS) can provide many benefits ranging from pollution or emission reduction to safety to local economy or employment generation. Embedding technology into the institutional framework is needed along with the right price signals. The Kaya Framework is an excellent tool to analyse the fuel reduction system.

Recommendations

Based on the dialogue throughout the sessions as well as the wrap up session, the Expert Group Meeting produced recommendations that will help advance the promotion and uptake of sustainable transport worldwide. These recommendations discussed by the over thirty participants will serve as valuable input to the development of the Global Outlook Report by the High-Level Advisory Group on Sustainable Transport.

The recommendations are cutting across many complementary themes and action areas of relevance to sustainable transport:

Urgency of Action

- **There is an urgency** in the transport sector for quick win actions in the period 2016-2020 to bring the sector onto a sustainable path. An international **roadmap** should be initiated to **decarbonize the transport sector**.
- A **'zero net emission economy'** early in the second half of the 21st century should be targeted to keep the average global temperature increase by 2050 well below 2 degrees Celsius.
- There is a real opportunity to seize the momentum generated by the SDGs, the Paris Agreement, Habitat III and the SG's HLAG on Sustainable Transport, however it is important to build on existing efforts while working in a partnership mode.

Sustainable transport narrative

- The **benefits of sustainable transport** over traditional transport and following a 'business as usual' approach need to be effectively communicated to all stakeholder groups. A global narrative for sustainable transport should be developed, built around access for all, efficiency improvements, safety and climate change mitigation.

Access

- The pledge by the World's leaders to **'leave no one behind'** implies keeping a focus on the poorest and underserved members of society often living in **rural areas** of developing countries.
- **Basic needs** should be fulfilled **through basic** (transport) **infrastructure** first.
- **Equitable access** should become a guiding principle for assessing infrastructure investments.

Safety

- The focus on road safety should be strengthened and communicated as key element of sustainable transport. Particular focus should be placed on innovative and **effective road safety solutions** in developing countries where the share of people killed and seriously injured in traffic is highest.
- Michael Replogle quote: **'Nobody should pay the death penalty for making a mistake in traffic.'**

Policy

- A **holistic and integrated approach** among levels of governments, sectors, neighbouring authorities, urban and rural communities, transport modes, and the short- and long-term should be pursued.
- Sustainable transport policy should be **people centred** by prioritizing public transport, safe multi-modal systems including bike lanes while also promoting energy and fuel efficiency.
- Many cities, particularly in developing countries, have limited authority. National governments should develop **national policy, incentive and enforcement frameworks** to guide local sustainable transport action.
- **Financial and technical capacities** of cities need to be strengthened to allow for the implementation of national and local policies.
- **Regional integration** and collaborative work should be promoted to simplify border crossings and to develop freight corridors promoting trade and development (particularly important for land-locked countries). Multi-lateral development banks should work as facilitators to improve regional integration through transport.
- **Freight transport** should be **integrated** in sustainable urban transport/mobility plans.
- National and local policies should focus on enabling **behavioural change** towards the use of low-carbon and sustainable transport modes: cycling, walking, and public transport.
- The **integration of transport and land use** should be intensified which requires more transparency around land use decision making. Lake Sagaris quote: 'Where we place our schools is a sustainable transport measure.'

Financing and investment

- A **modified methodology to assess investments and projects** should be developed.
- Delivering infrastructure and providing equitable access, especially in rural areas of many developing countries, calls for the development and use of **new investment assessment criteria** properly taking account of hunger, perishable food loss, right to education, health, and safety to ensure that the basic needs of the poor and underserved are met first. Investment assessment criteria should account for the long-term benefits of sustainable transport.
- **Mobilization of resources for transport investment** should include mobilization and efficient use of domestic resources, attracting foreign direct investment (FDI), better and targeted use of Official Development Assistance (ODA), promotion of public-private partnerships, south-south cooperation, and increased use of innovative financing including blended financing.
- **Funding sources** for sustainable transport should be **diversified**. National strategies to facilitate Public-Private Partnerships should be developed. The leverage factor for private sector investments should be reduced to generate more private sector investment.
- Thorough **transport demand analyses** should be carried out to enable informed strategic investment decisions.
- Financing from international financial institutions (IFIs) is important, but **country ownership of transport policy** and local control how the funds will be allocated are crucial components for success.
- There is a need for a diverse composition of stakeholders and **increased funding to NGO's and neighbourhood/community organizations** to advance sustainable transport. Investment should be made to promote a 'healthy civil society ecology.'
- There is a need to stop promoting large investment projects that cost more and to move towards sustainable systems (this could include reviewing the incentive structures in large banks which reward large expensive projects rather than lower cost interventions).

Capacity Building

- The international community needs to assist in particular least developed countries (LDCs), land-locked developing countries (LLDCs) and small island developing states (SIDS) by providing **technical and capacity-building assistance** on transport access, connectivity, infrastructure development and maintenance, and logistics.
- The **sharing of lessons learned and best practices** both within and across regions should be encouraged to ensure that existing opportunities are explored and exploited.

Technology

- Technology should be used to enhance the **performance and governance of transport systems**.
- **Clean fuels and vehicles** are important for sustainable transport. These two aspects of sustainable transport should be better aligned, for example through national policies, but also an alignment of climate and sustainable development.
- International development assistance should be **complemented by technical assistance**.

Evidence-based decision making

- Transport authorities as well as governments at all levels should strengthen **monitoring & evaluation** of transport projects and measures in order to enable informed and evidence-based decision making.
- New **indicators of sustainable transport** should be developed and used.
- There is a need for **more research** to deliver evidence of sustainable transport benefits. Particularly for rural areas of developing countries, more research and evidence is needed on rural transport to help stimulate more investment and to combat rural stagnation

Participant Biographies

Dr. Liu Zhi

Director Peking University - Lincoln Institute Center for Urban Development and Land Policy

Mr Liu Zhi is Senior Fellow and China Program Director with the Lincoln Institute of Land Policy and Director of Peking University – Lincoln Institute Center for Urban Development and Land Policy. Prior to this, Mr Liu had been with the World Bank for 18 years, with operational experiences in East Asia, South Asia and Latin America. He managed a number of investment lending projects and economic sector studies in the infrastructure and urban sectors. In 2010, he served as vice chair of Global Agenda Council for the Future of Transportation, World Economic Forum.

Mr. Azmi Abdul Aziz

President and Group Chief Executive Officer, Prasarana Malaysia Berhad Kuala Lumpur, Malaysia

Azmi Abdul Aziz has over 30 years of experience in the public and private sectors in the public transport industry. Azmi has immense and outstanding intellect in public transport with his contribution to the public transportation sector that encompasses policies and operations of public transport systems and services. Azmi was appointed as Group Managing Director of Prasarana Malaysia Berhad on January 1, 2015. As Group Managing Director of Prasarana Malaysia Berhad, Azmi's vision is to bring the group to new heights and transform the country's public transport services with Prasarana's primary role as an integrated public transport provider for intra-city rail and bus services remaining as its driving mission.

Mr. Muhammetgeldi Atayev

Director of Institute of Strategic Planning and Economic Development
Ministry of Economy and Development of Turkmenistan

Mr. M. Ramsekhar

Executive Director and Joint-CEO, Delhi Integrated Multi-Modal Transit System Limited

Ramsekhar is a development practitioner with 28 years of hands-on experience of leading large and complex organizations in the government, public sector, private sector, and in consulting and joined DIMTS, a multi-disciplinary transportation services and solutions provider in August 2014. Prior to that, he worked as CEO of IPE Global, a multi-sector development consultancy operating in India and two dozen countries. He was earlier CEO of CRISIL Risk and Infrastructure Solutions, a risk and policy advisory solutions provider for governments, regulators and private sector entities in infrastructure and financial services across Asia and Africa.

Mr. Sengsavang Phandanouvong

Director Department of Transport, Ministry of Public Works and Transport Vientiane, Lao PDR

Mr. Sengsavang Phandanouvong currently works as a Senior Advisor the Lao Logistics Group Co., Ltd to advise and support the private involvement and participation on the implementation of the Transport and Logistics Policy and related Strategic Plans of the Government (PPP) to comply with the implement of the government policy to migrate from Land Locked to Land Linked country; and to actively contribute to growth of national economy. His current work is dealing with container yard and transit warehouse, cross-border and transit transport and logistics management and training projects.

Mr. Amorn Kitchawengkul

Deputy Governor, Bangkok Metropolitan Administration

Mr. Amorn Kitchawengkul is a Deputy Governor of Bangkok, the capital city of Thailand. He is responsible for many aspects of city management, significantly the traffic management and infrastructure of Bangkok City. Before taking charge as Deputy Governor, he had several experiences in transport management as a Managing Director of the Krungthep Thanakom Co., Ltd., the holdings enterprise of the Bangkok Metropolitan Administration.

Dr. Maurice Niaty-Mouamba

Transport Expert, AU Commission, African Union Commission

Dr. Maurice Niaty-Mouamba is a Transport Economist and the former Minister of Transport of The Republic of Congo, as well as a former Member of Parliament. He is also the president of « Solidarité Internationale pour la Recherche et les Transports en Afrique Sub-Saharienne » the first African transport network which is strongly committed in transport research, training and consulting. Finally, he works as a Transport and Infrastructure Consultant at the African Union Commission (AUC).

Mr. Bernard Dzawanda

Senior Transport Economist, COMESA, Lusaka, Zambia

Bernard Dzawanda is the Senior Transport Economist for COMESA with over 20 years experience in the transport industry. His portfolio at COMESA covers all modes of transport. Prior to joining COMESA, he was the Executive Director of the Southern African Railways Association (SARA) for 8 years. He was Chief Planning Manager for the National Railways of Zimbabwe for 5 years prior to joining SARA. Bernard has participated in various regional and international conferences on transport, logistics and development where he also made presentations.

Ms. Mounia ELLIQ

Conseillère technique de Mme la Ministre Déléguée,
Chargée de l'Environnement, Ministère de l'Energie, des Mines, de l'Eau et de l'environnement

Mr. Peter Njenga

Executive Director and Coordinator, East and Southern Africa International Forum on Rural Transport and Development

Peter Njenga is currently working as the Executive Director for the International Forum for Rural Transport and Development (IFRTD) a global network organization based in Kenya and also chairman of KENA Consult, a company specializing in spatial planning and land use policies in Africa and based in South Africa. His areas of specialization include: Transportation Planning, Rural Accessibility Planning, Spatial Planning and Land Use Policies; Rural and Urban Planning; Agriculture, transport and regional development; Nexus between Planning Poverty Reduction and MDGs and SDGs; Knowledge Management and Networking Policy Advocacy and Communication and outreach to stakeholders

Mr. George Nicholson

Director of Transport and Disaster Risk Reduction Association of Caribbean States

George Nicholson has worked in the arena of engineering for the last 17 years in several capacities. In 2013 he joined the Association of Caribbean States, an intergovernmental organization facilitating functional cooperation within the region, as Director for Transportation and Disaster Risk Reduction with responsibility for oversight of the regional agenda of the Greater Caribbean. Prior to his engagement at the ACS, Mr Nicholson served in various capacities in public service in Jamaica most recently as the Director of Technical Services for the Ministry of Transport Works and Housing.

Mr. Jean Maxy Simonet

Senior Chief Executive, Ministry of Public Infrastructure & Land Transport

Mr. Jean Maxy SIMONET has been appointed as Senior Chief Executive of the Ministry since January 2015 of the Ministry of Public Infrastructure and Land Transport of the Republic of Mauritius. He is the Administrative Head of that Ministry which comprises of two distinctive divisions, the Public Infrastructure Division and the Land Transport Division.

Mr. Juanjo Mendez

Secretario de Transporte, Gobierno de la Ciudad de Buenos Aires

Juanjo Mendez, economist graduated in the Universidad Católica Argentina is the Secretary of Transportation for the Buenos Aires City Government, since December 2015. Previously, as Chief of Staff of the Department of Transportation, he was part of the team responsible for the strategic planning of the Sustainable Mobility Plan for Buenos Aires.

Dr. Subash DharUNEP DTU Partnership

Dr. Subash Dhar works extensively in the energy and transport sector. His research interests include sustainable transport, low carbon development, technology transfer and climate change with a focus on contributing to the science required for policy making and he has extensively published on these topics. He joined UNEP DTU Partnership in April 2008 and works within the Cleaner Energy Development group. He is the Regional Coordinator for Asia and CIS countries in the Technology Needs Assessment project. He was a contributing author for fifth assessment of Intergovernmental Panel on Climate Change (IPCC).

Mr. José Holguín-VerasWilliam H. Hart Professor, Director VREF CoE for Sustainable Urban Freight Systems, Director CITE

José Holguín-Veras is the William H. Hart Professor of Civil and Environmental Engineering at the Rensselaer Polytechnic Institute. He is the Director of the Volvo Research and Educational Foundations' Center of Excellence on Sustainable Urban Freight Systems. He is the recipient of the White House's 2013 Champion of Change Award in honor to his research on off-hour deliveries, and a member of the United States Department of Transportation's National Freight Advisory Committee.

Dr. Lake SagarisAssistant Adjunct Professor, Pontificia Universidad Católica de Chile
Director, Laboratorio de Cambio Social (Laboratory for Social Change), Pontificia Universidad Católica de Chile

Lake Sagaris is an internationally recognized expert on cycle-inclusive urban planning, civil society development, and participatory planning theory and practice. An award-winning writer and editor, she began her working life in Chile in 1980, as a freelance journalist with the London Times, Toronto Globe and Mail, Miami Herald, and other media. She holds a Master's of Science (University of Toronto 2006) and a PhD in Urban Planning and Community Development (University of Toronto 2012). Her current work uses participatory action research methods and community-government partnerships to advance toward more sustainable transport, with a strong focus on social justice, inclusion and resilience. These experiences have led to awards in Chile and abroad, and presentations in diverse venues in Latin America, Europe, Canada, the US, and India.

Mr. Vinicius De Tomasi Ribeiro

Vinicius De Tomasi Ribeiro graduated in Architecture and Urbanism at the University of Caxias do Sul and specialized later on in Business Management. He is the director of GO Project of Solution and also holds a position as a University Professor of Architecture and Urbanism Course. He was the City Councillor, Municipal Secretary of Planning and Municipal Secretary of Traffic, Transport and Mobility, President of Graphics and Arts State Company and is now State Representative. He was the author of the project of law to create a State Plan on Urban Mobility and the Law that created the Metropolitan Region of the "Serra Gaucha".

Choudhury Rudra Charan MohantyEnvironment Programme Coordinator/Expert, UNCRD/ UN DESA

Choudhury Rudra Charan Mohanty is currently working as the Environment Programme Coordinator/Expert at UNCRD/UN DESA, since 2003. His main responsibilities at UNCRD includes implementation of three major initiatives and processes at regional and global level– (i) promotion of Environmentally Sustainable Transport (EST) in Asia; (ii) promotion of 3R (reduce, reuse, recycle) in Asia and the Pacific; and (iii) International Partnership on Expanding Waste Management Service of Local Authorities (IPLA) – a SDG partnership. Prior to his UNCRD/UN DESA assignment, he worked in the United Nations Environment Programme/Regional Resource Centre for Asia and the Pacific (UNEP/RRC. AP) as a Senior Programme Officer/Head of Environment Assessment and Reporting coordinating various national state of environment assessments and the Asia-Pacific segment of UNEP's flagship global environment assessment process.

Ms. Anjali Mahendra

Senior Research Associate at the WRI Ross Center for Sustainable Cities at the World Resources Institute.

Ms. Mahendra leads research on urban transport and land use policy, strategies to manage urban expansion, climate change mitigation, and health impacts of transport. She is currently co-leading development of the World Resources Report on Cities, a flagship WRI publication, focusing on solutions for more equitable access to urban services. Her prior role was as Head of Research and Practice at the India office of EMBARQ, the sustainable transport initiative of WRI. She has published widely on urban transport issues and serves as lead expert in discussions about the targets and methodologies for the new sustainable development goal on cities (Goal 11). She has a forthcoming chapter on transport access in the book 'Companion to Planning in the Global South.' Anjali has worked as a researcher and consultant on projects in the U.S., Latin America, Europe, and India. Trained as an architect in India, she holds master's degrees in City Planning and Transportation, and a Ph.D. in transport policy, all from the Massachusetts Institute of Technology.

Ms. Ekaterina Noskova

Expert from the Russian Federation, Mission of the Russian Federation to the UN

Dr. Igor B. Runov

International Road Transport Union to the UN

Since June 2013 Mr. Runov is the Head of the IRU Permanent Delegation to the UN in New York City, USA. Before, since September 2001 he was the Head of Permanent Delegation of the International Road Transport Union (IRU) in the CIS region and since February 2010 the IRU Under Secretary General. In his current capacity Mr Runov is promoting liberalization and harmonization of road transport regulations with international law and UN based standards, developing security standards, overlooking implementation of 1975 TIR Convention on a vast geographical area. In 2005 he initiated the IRU New Eurasian Land Transport Initiative (NELTI) aimed at establishing regular commercial haulage between China, SEA and Europe along several designated routes. In 2010 under his leadership a new project – Model Highway Initiative was launched.

Mr. Jerzy Wisniewski

Director, Fundamental Values Department

To date: member of the Board of Directors at International Union of Railways (UIC) - Director for Fundamental Values Department responsible for cooperation and supporting the UIC core activities such as railway infrastructure, passengers and freight transportation - paying special attention to the transversal issues like: sustainable development, safety, security, expertise development and research coordination. From 2006 to 2009: nominated PKP expert on planning and operations including crisis management for railway infrastructure, dedicated case: an advice on West-East freight railway corridors.

Ms. Nancy Vandycke

Lead Economist World Bank

Dr. Nancy Vandycke is the Lead Economist of the Transport and Information and Communications Technology Global Practice of the World Bank, Washington DC, USA. Prior to joining the World Bank in 1999 as an Economist, Dr. Vandycke was a Lecturer at the University of London, UK, and at Georgetown University, USA. She spent several years as a Research Associate at the Russian-European Center for Economic Policy in Russia, and at the Centre for Economic Performance in the United Kingdom. She was also an Advisor to the Belgian Chair at the International Monetary Fund in Washington, DC. She holds a Doctorate in Economics from the London School of Economics.

Mr. Ramón Cruz

Institute for Transportation Development Policy (ITDP)

Ramón Cruz has over 15 years of experience intersecting the fields of sustainability, transportation, urban planning, environmental policy and climate change. In the past he was Senior Policy Analyst at the Living Cities Program of the Environmental Defense Fund, Vice President for Energy and

Environment at the Partnership for New York City and most recently Vice President of the Environmental Quality Board (environmental regulatory agency) in Puerto Rico. He has been a consultant for the World Bank, the Natural Resources Defense Council and the German Agency for International Cooperation (GIZ). Since 2009, he has worked for ITDP's Global Policy Program in different processes in the United Nations: UNFCCC, Post-2015 agenda, Commission on Sustainable Development, the Rio+20 process and the Partnership on Sustainable Low Carbon Transport.

Mr. Marcel Alers

United Nations Development Program

Marcel Alers is UNDP's global Head of the Energy, Infrastructure, Transport and Technology team. Marcel is an experienced development professional with 27 years of experience in environmental and energy management. He has a broad range of expertise and experience. He first joined UNDP in 1999, focusing on GEF funded project development and developed a significant portfolio of clean energy projects, including a large number of energy efficiency projects in particular in the buildings sector.

Mr. Sandagdorj Erdenebileg

Chief Policy Development, Coordination, and Reporting, Service UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States.

Mr. Lukasz Wyrowski

Economic Affairs Officer, Sustainable Transport Division United Nations Economic Commission for Europe

Lukasz Wyrowski, holds a master in management and investments, after several years with private sector in the field of management joined United Nations in 2005, held expert positions and managed programmes on industrial safety, environmental monitoring and assessment, green economy and sustainable development, transport economics with focus on urban transport. Currently co-manages programmes on road safety and road transport. Co-author of position papers and publications on green economy, urban transport and road safety.

Mr. Mohammad Reza Salamat

UN DESA/DSD

Mr. Mohammad Reza Salamat joined the United Nations, Division for Sustainable Development (DSD) of the Department of Economic and Social Affairs (UN-DESA) in January 2002, as an expert on climate change policy and sustainable development. He gained his BA on "Political Science" in 1986, and his Master's Degree in "International Relations" with a focus on "environmental matters" in 1996, both in Tehran, Iran. During 2008-2012, Mr. Salamat became a member of the "Secretary General's Climate Change Support Team" (CCST), which was a small team of professionals who provided policy advice to the UN Secretary General Ban Ki-moon in support of his strategic interventions in the global climate change debate. In February 2015, Mr. Salamat was selected as the head of the "Small Islands, Developing States, Oceans and Climate Branch" of the Division for Sustainable Development of UN-DESA. He is also currently the team leader for the "sustainable transport" theme within the same Division. He is also the Editor-in-Chief of the quarterly United Nations Journal on Sustainable Development (NRF).