Energy and Mobility

Terms of reference (April 2020)

Working Group Leads: Sustainable Energy for All (SEforALL) and UK Department for International Development (DFID) - High Volume Transport (HVT)

Context

SuM4All's recent "Global Roadmap of Action toward Sustainable Mobility" (GRA) outlines more than 180 actions for countries and cities to consider in order to achieve sustainable mobility. This new working group under the SuM4All umbrella will be led by Sustainable Energy for All (SEforALL) and the DFID-High Volume Transport (HVT) Applied Research Programme to implement action on **low emission** mobility specifically addressing the nexus between transport, energy and climate.

The Energy and Mobility Working Group will consider the energy implications of the transition to a low carbon and sustainable transport system. It will focus on the impact of a shift to new mobility solutions and business models[1] and electric vehicles (EV) on energy demand. It will consider alternative and transitional energy sources for urban transport such as electricity, biofuels (vegetable oil, biodiesel, bioethanol) alcohol (methanol, ethanol), and gaseous fuels (natural gas, liquid petroleum gas, and hydrogen).

Starting from the GRA, the group will undertake a systematic review[2] of how to **implement** and **measure the effectiveness** of following three GRA policy measures to reduce greenhouse gas emissions (GHG) and promote low emission mobility.

GRA Policy Measure	Policy Measure Description
Promote public discussion on new mobility solutions (in collaboration with the E-mobility working group)	Promote public discussion with civil society about new mobility solutions to generate new ideas, innovations and tools.
Expand public transport infrastructure	Expand the public transport network adjusted to demand requirements, with an emphasis on equitable access and considering the most appropriate modes in each context, including bus, rail, demand-

[1] New mobility services range from shared mobility such as car, bike and ride-sharing services to multimodal, door-to-door trip planning and mobility as a service. They complement city public transport services by providing mobility solutions for the first and last mile, reaching less dense or underserved areas and developing integrated ticketing or payment services, providing attractive and comprehensive mobility options also for those whose needs haven't been fulfilled by traditional public transit services and thus channelling some new demand and customers for public transportation system.

[2] A systematic review aims to provide a complete, exhaustive summary of current literature relevant to a research question. The first step in conducting a systematic review is to create a structured question to guide the review. The second step is to perform a thorough search of the literature for relevant papers. The Methodology section of a systematic review will list all of the databases and citations indexes that were searched such as Web of Science, and any individual journals that were searched. The titles and abstracts of identified articles are checked against pre-determined criteria for eligibility and relevance to form an inclusion set.

	responsive service, cable-propelled transport and ferry transport.
Plan for Integrated Multimodal Transport Networks	Plan for the optimal location of transport corridors, linear facilities, and hubs from a multimodal network perspective, based on the analysis of freight origins and destinations, including a rail network development plan

While the GRA has a strong focus on the transport sector, this working group will focus on the energy and transport nexus for each of these three GRA policy measures. The geographic country focus will be identified within low-income groups in Asia, Africa and Latin America.

Complementarity with other Working Groups: Implementation of these policies may support other policy measures, such as those related to data sharing reviewed by the Enabling Data Sharing for Sustainable Urban Mobility working group. In order to avoid the duplication of efforts, the Energy and Mobility working group will not focus on the use of EV; this will be addressed by another working group "Sustainability of the E-mobility model".

Actions

The Energy and Mobility Working Group will undertake the following activities:

- **Develop a policy guide and tools to support decision-making** and risk management at government levels to improve transport infrastructure investments. In particular, it will consider the energy implications of transport decisions such as the impact of a shift to new mobility solutions and EV on energy demand;
- **Develop training materials** focused on improved infrastructure investments based on analysis of available case studies and appropriate energy and transport system designs (infrastructure investments aimed at "Expanding public transport infrastructure" and "Planning for Integrated Multimodal Transport Networks" GRA policy measures);
- **Organize and develop with partners workshops** to highlight lessons learned from available case studies and share GRA measures focused on access to urban (urban includes local communities and secondary cities) mobility through improved public transport and integrated multimodal transport networks. These workshops will be targeted to policy makers, stakeholders and practitioners in the energy and mobility fields;
- **Increase understanding of sustainability aspects** (especially climate) in the broader field of access to sustainable urban mobility and their nexus with energy, e.g. through participation in conferences, hosting webinar related to transport and energy nexus, development of articles;
- Identify **priority urban areas** where these tools can be promoted and implemented.

Outcomes

Through this working group, we hope to **accelerate action in the energy and urban mobility field** through:

a. Sharing GRA measures focused on access to sustainable urban mobility;

b. Improved infrastructure investments aimed at obtaining cleaner and more efficient public transport systems (including the use of fuel switching and renewable energy) and integrated multimodal transport networks, through workshops, development of decision-making tools and partner coordination.

Working Group Members: UK Department for International Development, FIA Foundation, International Civil Aviation Organization, International Maritime Organization, International Road Federation, Institute for Transportation and Development Policy, International Union of Railways, Islamic Development Bank, Paris Process on Mobility and Climate, Research for Community Access Partnership, REN21, Sustainable Energy for All, United Nations Department of Economic and Social Affairs, United Nations Economic and Social Commission for Asia and the Pacific, United Nations Economic Commission for Europe , World Road Association, and the World Bank.