

**Expert Group Meeting on Enhancing Rural Transport Connectivity to
Regional and International Transport Networks**

9-10 July 2019, UNCC, Bangkok

Outcome Document

1. The Expert Group Meeting on Enhancing Rural Transport Connectivity to Regional and International Transport Networks was organized by ESCAP on 9-10 July 2019 at the United Nations Conference Centre, Bangkok. Representatives from 8 ESCAP member States, international organisations and resource persons attended the meeting. All presentations can be found on the ESCAP website (<https://www.unescap.org/events/expert-group-meeting-enhancing-rural-transport-connectivity-regional-and-international>). The current document summarizes the key points raised in the discussions.
2. Many parts of rural Asia have undergone a remarkable transformation over the past two decades. While agriculture remains a critical sector, new rural industries are offering off-farm employment, and more and more people are engaging in social and economic activities beyond their village boundaries. Migration from rural areas to cities and even to other countries has become a livelihood strategy for millions of Asian households. However, rural areas are still home to a large proportion of the region's poor population. Almost two in five people living in rural areas still experience multidimensional poverty despite an increase in average rural household incomes in most countries.
3. Access to income generating opportunities, education, and information, can help rural residents diversify their livelihoods and reduce their vulnerability. Such access is partly mediated by rural transport connectivity. Rural transport connectivity is therefore necessary to achieve several Sustainable Development Goals, including poverty reduction, eradication of hunger, gender equality, access to education, access to health care, and other goals.
4. The meeting noted that while “first/last mile” rural transport connectivity is critical, rural transport networks should also be seen as part of a wider transport network. It is therefore important to consider “integrated transport network development” and how to improve “vertical connectivity”, i.e. connectivity between micro, meso and macro level networks. There are several types of “vertical connectivity”, such as a) Infrastructure connectivity; b) Service connectivity, c) Connectivity between micro infrastructure (e.g. rural roads) and macro level nodes (e.g. border crossings, major stations), and d) Connectivity between macro infrastructure (e.g. highways) and micro level nodes (e.g. local markets). Looking at these various networks as an integrated system allows policymakers to identify ways to strengthen links between different network levels.
5. Representatives from Bangladesh, Cambodia, China, India, Kazakhstan, Nepal, Thailand and Viet Nam highlighted recent developments in their rural transport strategies and programmes. In several countries, central government have set national targets for connecting rural settlements based on population size and distance from roads or time to travel. Other countries also have sector-based or local government-based road plans and targets. Some countries have already achieved a high density and are focusing on upgrading the quality of their networks. Using labour-based approaches, some countries use road development programmes to provide local employment, although they are also aware that such programs must be designed to meet the needs of female workers as well as male. Some countries are actively improving engineering specifications to make their rural roads safer and more environmentally sustainable.

6. Representatives from the Asian Development Bank, World Bank India Office, Institute of Developing Economies and Japan External Trade Organization (IDE-JETRO), Asian Institute of Technology (AIT), Asian Institute of Transport Development (AITD), Research for Community Access Partnership (ReCAP), Chiangmai University, Birla Institute of Technology and Science, Pilani (BITS Pilani), Toyota Tsusho Nexty Electronics (Thailand) Co., Ltd., and independent consultants also made presentations on a range of areas where governments could strengthen policies on rural transport connectivity.
7. Connectivity to higher level networks, such as highways and railways, could open up isolated and remote areas close to international borders and other natural barriers and help these areas to realize their economic potential. Countries in the region are already promoting macro-level regional connectivity for trade (for example, Cambodia, China, Kazakhstan, India, Bangladesh and Viet Nam); these initiatives could also look at connections to local areas. Cambodia, for example, is planning to build a national road along its border to promote cooperation and development with neighbouring countries. Research by IDE-JETRO has found that large scale projects, such as the High-Speed Rail link being built between Thailand, Lao PDR and China, could yield benefits for countries involved, including transit countries, via the railway stations.
8. Some countries incorporate connectivity between networks in their prioritization methodologies for deciding investments in rural roads. Bangladesh, for example, has developed a methodology which incorporates connectivity to “growth centres” and higher network levels, social facilities, and other important nodes as part of the multi-criteria analysis. Strengthening coordination between national highways, secondary roads and rural road authorities could enhance the benefits of transport network development for the local people.
9. The meeting noted the critical importance of maintenance and effective asset management systems for rural roads. Kazakhstan, for example, has recently established a road asset quality centre. Some governments reported that the gap between demand and available budget appears to be getting smaller. Governments reported using a variety of mechanisms to finance new rural road projects as well as maintenance, including taxes from vehicles, diesel and gasoline, as well as community voluntary contributions in the form of land and labour. In India, contractors who build the PMGSY roads are responsible for providing maintenance for five years, after which it becomes the responsibility of state governments.
10. The meeting noted that the Rural Access Index (RAI) is used for measuring progress under SDG 9.1., which is to “Develop quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, with a focus on affordable and equitable access for all.” It measures the proportion of the population living within 2 km of the nearest road in good condition. However, take up has been slow in countries, partly because of challenges of data collection. In this regard, Recap has been working with the World Bank to consolidate existing and proposed methods for data collection and revise the measurement approach, including using new technologies such as remote sensing. One way the RAI could be used by countries is to estimate the costs of meeting connectivity standards set by a government. However, one of the weaknesses of the RAI is that it does not reflect the degree of inaccessibility of the population (how far they are from the road). An alternative measure, called the Rural Inaccessibility Score (RIS), has been developed by researchers at BITS Pilani and is being piloted in India. Individual countries also have their own connectivity indicators: China, for example, is aiming to connect all villages via public bus services by 2020.
11. The meeting noted that transport projects impact various people differently, and not always in a positive way. For example, research conducted by AIT on the impact of highways on rural communities in the Lao People’s

Democratic Republic found that women's mobilities in some communities were reduced following the construction of the road. In this regard, it is important to view transport as a means and not an end for socioeconomic development. Social benefits as well as economic benefits should be incorporated into project appraisal. Data should also be disaggregated for different groups, particularly men and women. "Road + (plus) projects", i.e. projects which incorporate additional social and economic development components, fosters rural development more effectively than road projects alone. Complementary policies are needed to deliver benefits to everyone in the rural community. With the support of the World Bank and ADB, governments are providing road building employment in the local community, in particularly women labours. As women are often the primary unpaid-care takers for children and seniors, and the lowest paid workers, further evidence-based analysis is required to assess the long-term benefits to the community as whole.

12. The meeting noted that road safety is becoming an increasingly serious issue in rural areas, particularly following the construction of new rural roads and the increase of economic developments along existing rural roads. As noted by AITD, where people do not have experience with motorized vehicles, they are at greater risk at being involved in crashes. The impacts may be particularly severe for communities near or on major roads. It was also noted that the points where rural roads meet feeder roads has a higher risk of traffic crashes and should be given extra attention.
13. The meeting noted that there is tremendous scope for strengthening cooperation between road agencies and other government entities, for example agencies responsible for road safety, social protection, education and so on. Such coordination could also potentially mitigate the negative impacts of large-scale infrastructure projects on rural communities. However, governments offices still largely think and operate in silos. Further discussion amongst the relevant stakeholders is needed on how transport networks could benefit rural residents more.
14. The meeting noted that many programmes on rural transport connectivity are reaching a mature stage, and information and knowledge about effective policies and management were now accumulating. However, there is no single repository for this information at present. Some governments have a limited capacity to collect and analyse data. Some also noted that although data is available, it is often held by different agencies and not shared. The development of a common Geographic Information Systems (GIS) or other data platforms could help improve information sharing.
15. The meeting noted that with the expansion of telecommunications and new applications of "big data" for transport research, there may be scope for using user-generated data to monitor traffic flows or even road conditions. In Thailand, for example, researchers at AIT, University of Tokyo and IDE-JETRO have used taxi and commercial truck "probe" (GPS) data from Toyota Tsusho Nexty Electronics to study the connectivity of Thai cities. Although this research is primarily focused on urban transport, these approaches could be adapted to study rural transport patterns in the future.
16. The meeting noted that with greater digital connectivity, more residents in rural areas are also using the internet for selling and buying goods. In this regard, rural logistics and strengthening agricultural supply chains were important areas to develop. For example, research at Chiangmai University is looking at infrastructure improvements and trade facilitation measures which were being implemented along the Bangkok to Kunming highway, which are expected to open up new opportunities for Thai fruit traders to export to China.

17. The meeting noted that there is a need to strengthen cooperation between policy-makers, researchers, and organisations involved in rural transport, particularly in exploring a) methodologies for integrating vertical connectivity into rural transport planning; b) data collection and analysis; and c) strengthening coordination among stakeholders.
18. The meeting expressed its strong desire to continue this multi-stakeholder dialogue on rural transport connectivity in the future.
19. The meeting thanked the organizers of the meeting and the various presenters who contributed to the stimulating discussions, which would feed into the ESCAP Monograph Series on Inclusive and Sustainable Transport.