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### Emerging issues in transport:

Transport and the Millennium Development Goals

## Transport and the Millennium Development Goals

### Note by the secretariat

#### *Summary*

While the Millennium Development Goals do not include specific references to transport, it is now widely accepted that transport infrastructure and services play a critical role in addressing the Goals.

The document provides a summary of perspectives on how transport infrastructure and services affect poverty and the Goals, and draws on examples of selected programmes from countries in the Asia and Pacific region. It then highlights the ways in which the secretariat's activities could contribute to the achievement of the Millennium Development Goals during the next phase of the Regional Action Programme for Transport Development in Asia and the Pacific (2012-2016).

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## I. Introduction

1. In 2000, the world's leaders gathered to adopt the United Nations Millennium Declaration, whereby governments recognized that "...we have a collective responsibility to uphold the principles of human dignity, equality and equity at the global level". A central tenet of the Millennium Declaration was a commitment by Governments to reduce extreme poverty within a specified time frame, expressed in the form of eight Millennium Development Goals and monitored through a set of 21 targets and 60 indicators. The eight Millennium Development Goals are as follows:

- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV and AIDS, malaria and other diseases
- Goal 7: Ensure environmental sustainability
- Goal 8: Develop a global partnership for development

2. Ten years later, in September 2010, the United Nations High-level Plenary Meeting of the General Assembly on the Goals was held to review the status of all eight goals. Some indicators were found to have improved significantly: for example, for all developing regions, it was estimated that overall poverty rates had fallen from 46 per cent in 1990 to 27 per cent in

2005, due mainly to the impressive reduction of poverty in East Asia.<sup>1</sup> Globally, however, it was acknowledged that there had been insufficient progress in areas such as child mortality, maternal health and environmental sustainability.

3. In the Asian and Pacific region, some targets have been achieved, such as: the reduction of gender disparities in primary, secondary and tertiary education; HIV prevalence; the consumption of ozone-depleting substances; stopping the spread of tuberculosis; and halving the proportion of people without access to safe drinking water. However, as table 1 shows, the region is still lagging behind in areas such as the percentage of underweight children, completion of primary education, child and maternal health, and basic sanitation.<sup>2</sup>

Table 1  
Country groups on and off track for the Millennium Development Goals

Goal	1	2	3	4	5	6	7
	\$1.25 per day poverty Underweight children	Primary enrolment Reaching last grade Primary completion	Gender primary Gender secondary Gender tertiary	Under-5 mortality Infant mortality	Skilled birth attendance Antenatal care (≥ 1 visit)	HIV prevalence TB incidence TB prevalence	Forest cover Protected area CO2 emissions ODP substance consumption Safe drinking water Basic sanitation
Asia-Pacific	▶	■	■	■	■	■	■
Excluding China and India	■	■	■	■	■	■	■
South-East Asia	■	■	■	■	■	■	■
South Asia	■	■	■	■	■	■	■
Excluding India	▶	■	■	■	■	■	■
Pacific Islands	■	■	■	■	■	■	■
Excluding Papua New Guinea	■	■	■	■	■	■	■
North and Central Asia	■	■	■	■	■	■	■
Excluding Russia	■	■	■	■	■	■	■
LDCs Asia-Pacific	■	■	■	■	■	■	■

■ Early achiever    ▶ On track    ■ Slow    ◀ Regressing/No progress

Source: ESCAP Staff calculations based on the United Nations Millennium Development Goals Database.

<sup>1</sup> For the latest information on the implementation of the Millennium Development Goals, see [www.un.org/millenniumgoals/pdf/MDG%20Report%202010%20En%20r15%20-low%20res%2020100615%20-.pdf](http://www.un.org/millenniumgoals/pdf/MDG%20Report%202010%20En%20r15%20-low%20res%2020100615%20-.pdf) and its statistical annex at <http://mdgs.un.org/unsd/mdg/Resources/Static/Data/2010%20Stat%20Annex.pdf>.

<sup>2</sup> Economic and Social Commission for Asia and the Pacific, *Paths to 2015 – MDG Priorities in Asia and the Pacific*, Asia-Pacific MDG Report 2010/11 (2010). Available from [www.mdgasiapacific.org/files/MDG\\_RegionalReport20102011.pdf](http://www.mdgasiapacific.org/files/MDG_RegionalReport20102011.pdf).

4. As the 2015 “deadline” for achieving the Millennium Development Goals approaches, this is an opportune moment to reflect on the contribution that the transport sector, both public and private, can make towards these goals. This document first provides a summary of perspectives on how transport infrastructure and services affect poverty and the Goals and then reviews selected programmes from countries in the Asian and Pacific region. It then highlights the ways in which the secretariat’s activities contribute to the achievement of the Goals during the next phase of the Regional Action Programme for Transport Development in Asia and the Pacific (2012–2016).

## **II. Contribution of the transport sector to achieving the Millennium Development Goals**

5. While the Millennium Development Goals do not include specific references to transport, it is now widely accepted that transport infrastructure and services play a critical role in addressing the Goals. Transport infrastructure and services provide physical access to domestic and international markets as well as jobs, thereby improving people’s potential to increase income and consumption levels. This allows them to accumulate private and social assets, which in turn can increase their productivity and reduce their vulnerability to shocks. A recent study undertaken by the Asian Institute of Transport Development on the impact on rural populations of one section of National Highway number two in India showed, for example, that the construction of the highway resulted in an increase in non-farm activities, higher workforce participation, an increase in school enrolment and better literacy levels.<sup>3</sup>

6. As the majority of the poor in Asia and the Pacific still live in rural areas, rural transport infrastructure and services play a particularly important role in addressing poverty and food security (Goal 1). For agrarian producers, improved market access can lead to increased surpluses due to higher producer prices, lower production and transport costs, reduced spoilage in the marketing chain, higher value crop substitution and better market information. For example, a World Bank policy research working paper on rural roads and local market development in Viet Nam found that local markets benefited significantly from rural road rehabilitation.<sup>4</sup>

7. Transport infrastructure and services also facilitate access to schools, medical clinics, hospitals, cultural and religious institutions, and other facilities which contribute to their capabilities (Goals 2, 3, 4 and 5). In some countries, such as Fiji and Nauru, free or subsidized bus and van services are provided to school children as part of the Governments’

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<sup>3</sup> Asian Institute of Transport Development, *Socio-economic Impact of National Highway on Rural Population* (New Delhi, 2010).

<sup>4</sup> Ren Mu and Dominique van de Walle, “Rural roads and local market development in Vietnam,” World Bank Policy Research Working Paper (Washington, D.C.: World Bank, 2008).

policies to achieve Goal 2, Universal primary education.<sup>5</sup> Conversely, the lack of or inadequacy of such infrastructure and services affects the ability and willingness of teachers and medical staff to access remote or isolated communities, and also increases the cost of supplying educational and medical supplies.

8. Even where transport infrastructure and services are physically available, access to them is tempered by cost and reliability. Transport costs are a function of many factors, including distance, terrain, quality of infrastructure, age and type of vehicle and the degree of competition in the transport service market. In both rural and urban areas, the poor spend a greater proportion of their income on transport costs, which can significantly inhibit mobility, for example, when transport costs are high or health centres are difficult to reach, poor people fail to seek health-care services altogether.

9. In many cases, there is a correlation between transport cost and time. Modern transit systems, such as urban mass transit systems, are usually more expensive than slower or less convenient forms of transport such as non-motorized transport. The level of accessibility to transport systems can also have a direct impact on the cost of land or rent, forcing people in lower income quintiles to move further away and thereby increasing their time spent in transit. Time constraints are a determinant of school attendance and enrolment rates, use of health facilities, access to employment opportunities, and general well-being.

10. Time is also determined by access to and ownership of transport technologies, such as vehicles. Studies on the relationship between gender and transport have shown that women are less likely to have access to and use transport technology than men, and are, therefore, at a disadvantage in terms of a range of resources such as markets, jobs, education and health facilities, information sources, and innovative technologies.

11. Cultural norms also affect the degree of access to transport services, particularly in societies where women do not normally travel alone or where they risk sexual and/or other forms of harassment on public transport. Such customs impact participation by women in the labour force as well as their access to facilities and services. This, in turn, affects their income and well-being (Goal 3). Women have also been found to have different patterns of transport use in terms of mode of transport, purpose of journey, travel times and modal changes.

12. In 2006, the secretariat prepared a background document on “Transport and the Millennium Development Goals” for the Ministerial Conference on Transport in which it described the various contributions that transport can make under each Goal including the potential negative effects

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<sup>5</sup> United Nations Children’s Fund, *Nauru: A Situation Analysis of Children, Women and Youth* (Suva: UNICEF Pacific Office, 2005). Available from [www.unicef.org/pacificislands/Nauru\\_Sitan\\_Report\\_Latest\\_pdf.pdf](http://www.unicef.org/pacificislands/Nauru_Sitan_Report_Latest_pdf.pdf); Fiji, United Nations Development Programme, “Millennium Development Goal 2 - Varanise no longer walks to school”, available from [www.undp.org.fj/index.php?option=com\\_content&task=view&id=106&Itemid=157](http://www.undp.org.fj/index.php?option=com_content&task=view&id=106&Itemid=157) (accessed 22 June 2011).

(table 2).<sup>6</sup> The table lists the various contributions which transport infrastructure and services can make to selected targets of the Millennium Development Goals.

Table 2

### Contribution of transport to the achievement of the Millennium Development Goals

Millennium Development Goal and targets	Contribution of transport
<b>Goal 1. Eradicate extreme poverty and hunger</b>	
Target 1. Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	<ul style="list-style-type: none"> <li>• Stimulates economic growth, raises agricultural and urban productivity, generates surpluses, facilitates diffusion of new technology and spread of new ideas and innovations</li> </ul>
Target 2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger	<ul style="list-style-type: none"> <li>• Facilitates access to employment and product market</li> <li>• Generates employment</li> <li>• Facilitates growth of secondary and tertiary sectors</li> <li>• Promotes tourism along major transport corridors</li> <li>• Improves food security by increasing food production and distribution through increased efficiency of the supply and marketing chain</li> </ul>
<b>Goal 2. Achieve universal primary education</b>	
Target 3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	<ul style="list-style-type: none"> <li>• Facilitates access to school for rural children</li> <li>• Facilitates delivery of school supplies</li> <li>• Prevents isolation of rural communities, attracts teachers and helps to ensure their regular attendance</li> </ul>
<b>Goal 3. Promote gender equality and empower women</b>	
Target 4. Eliminate gender disparity in primary and secondary education, preferably by 2005, and to all levels of education no later than 2015	<ul style="list-style-type: none"> <li>• Facilitates access to school and regular attendance, particularly for girls</li> <li>• Reduces time, the burden of women in carrying out their essential tasks and frees more time for personal welfare</li> <li>• Promotes women's mobility and reduces their constraints for social networking</li> </ul>
<b>Goal 4. Reduce child mortality</b>	
Target 5. Reduce by two thirds, between 1990 and 2015, the under-five mortality rate	<ul style="list-style-type: none"> <li>• Facilitates access to health facilities and services</li> </ul>

<sup>6</sup> *Transport and the Millennium Development Goals* (E/ESCAP/MCT/SGO/7), available from [www.unescap.org/ttdw/MCT2006/Documents/English/MCT\\_SGO\\_7E.pdf](http://www.unescap.org/ttdw/MCT2006/Documents/English/MCT_SGO_7E.pdf).

Millennium Development Goal and targets	Contribution of transport
	<ul style="list-style-type: none"> <li>Assists in combating major preventable diseases by allowing the transport of vaccines and providing access to health service personnel, particularly in rural areas</li> <li>Increases road accident-related deaths and injuries (negative effect)</li> </ul>
<b>Goal 5. Improve maternal health</b>	
Target 6. Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	<ul style="list-style-type: none"> <li>Provides access to health facilities and services, and medicines and supplies</li> <li>Facilitates child delivery at a health facility</li> </ul>
<b>Goal 6. Combat HIV/AIDS, malaria and other diseases</b>	
Target 7. Have halted, by 2015, and begun to reverse the spread of HIV/AIDS	<ul style="list-style-type: none"> <li>Encourages access to sustained health services</li> <li>Facilitates implementation of programmes to eradicate major diseases</li> <li>Aggravates spread of HIV/AIDS (negative effect)</li> </ul>
Target 8. Have halted, by 2015, and begun to reverse the incidence of malaria and other major diseases	
<b>Goal 7. Ensure environmental sustainability</b>	
Target 9. Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	<ul style="list-style-type: none"> <li>Assists in promoting resource efficiency by providing services for waste recycling</li> <li>Facilitates access to natural resources, such as forests and mineral resources (can be a negative effect)</li> <li>Generates negative externalities due to pollution, congestion, depletion of natural resources, accidents and other effects (negative effects)</li> <li>Supports disaster management, preparedness and post-rehabilitation activities</li> </ul>
Target 10. Halve, by 2015, the proportion of people without sustainable access to safe drinking water	
Target 11. Have achieved a significant improvement in the lives of at least 100 million slum-dwellers by 2020	
<b>Goal 8. Develop a global partnership for development*</b>	
Target 12. Develop further an open, rule-based, predictable, non-discriminatory trading and financial system	<ul style="list-style-type: none"> <li>Facilitates access to and from landlocked countries and regions</li> <li>Facilitates internal and external trade, improves the efficiency of supply chains</li> <li>Promotes the integration of isolated economies with regional and global flows of trade and investment</li> </ul>
Target 13. Address the special needs of the least developed countries	
Target 14. Address the special needs of landlocked countries and small island developing States	

\* For a full list of targets under Goal 8, see [www.un.org/millenniumgoals/global.shtml](http://www.un.org/millenniumgoals/global.shtml).

### III. Review of country experiences from the region

#### A. Integrated rural development programmes and approaches

13. In the 1950s and 60s, rural road development projects were a major component of rural development programmes. While this led to the construction of many kilometres of roads, many of these roads fell into disrepair due to a lack of resources and skills for maintenance. Another weakness of these programmes was that they were implemented using a top-down approach and did not involve people, particularly the poor, in their planning or implementation. As participatory approaches to development planning became popularized in the 1990s, community participation became an explicit objective of several integrated rural development programmes, such as in the Aga Khan Rural Support Programme in Pakistan and the Dhading-Ghorka project in Nepal.<sup>7</sup> In the 1990s, ESCAP also implemented a pilot project to develop participatory planning tools for rural infrastructure in two zones of Oudomxai province within the Lao People's Democratic Republic. The project was designed to fit in and cooperate closely with the Integrated Rural Accessibility Planning approach of the International Labour Organization.<sup>8</sup>

14. The International Labour Organization's Integrated Rural Accessibility Planning approach is a local level planning procedure which emphasizes local community involvement at all stages of implementation. Government officials and local people plan small-scale investments by mapping local infrastructure, such as pathways, roads, education and health facilities, energy, water and economic centres, and by collecting data on basic needs and mobility indicators. Accessibility scores for each facility are then calculated and priority projects are identified. In its simplest form, accessibility is measured by distance to settlements and the size of the population; more complex approaches assign values to priority sectors.

15. In the 1990s, many governments in the region, including Cambodia, India, Indonesia, the Lao People's Democratic Republic, Nepal, the Philippines, Thailand and Viet Nam, adopted Integrated Rural Accessibility Planning approaches at the local government level around the same time that they implemented decentralization programmes, though different countries use different indicators to prioritize projects (table 3).<sup>9</sup> More recently, the Integrated Rural Accessibility Planning approach was pilot-tested in Bhutan and Mongolia (2005) and incorporated into Indonesia's National Program for Community Empowerment (Program Nasional Pemberdayaan Masyarakat).

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<sup>7</sup> Economic and Social Commission for Asia and the Pacific, *Transport and Communication Interventions in the Alleviation of Poverty* (ESCAP, 1997), available from [www.unescap.org/publications/detail.asp?id=471](http://www.unescap.org/publications/detail.asp?id=471).

<sup>8</sup> Economic and Social Commission for Asia and the Pacific, *ESCAP-UNDP Guidelines for Participatory Planning of Rural Infrastructure* (ESCAP, 1999), available from [www.unescap.org/publications/detail.asp?id=557](http://www.unescap.org/publications/detail.asp?id=557).

<sup>9</sup> ILO-ASIST, Report on 3<sup>rd</sup> Technical IRAP Meeting, Bangkok, 27-28 March 2003, available from [www.ilo.org/public/english/employment/recon/eiip/download/ratp/ratp09.pdf](http://www.ilo.org/public/english/employment/recon/eiip/download/ratp/ratp09.pdf).



Table 3  
Examples of IRAP applications and accessibility indicators<sup>10</sup>

Country	Main level of application	Structure	Accessibility indicator (AI)
India	Gram Panchayat	National, state, district, block, Gram Panchayat (sub-district) and village. A Gram Panchayat consists of 5 to 15 villages.	$AI = n \times T + \text{weight factor}$ (for quality), where $n$ is number of households and $T$ is travel time
Indonesia	Sub-district	National, province, regency, sub-district, desa and dusun (village). A sub-district consists of 5 to 15 desa.	$AI = \sum I_i \times B_i / NI$ , where $I_i$ = accessibility factor $I$ (1, 2 or 3), $B_i$ = weight of the factors representing importance, $NI$ = number of accessibility factors
Nepal	Village Development Committee	National, District Development Committee (DDC), Village Development Committee (VDC) and village. A VDC consists of 9 wards (villages).	$AI = n \times T \times d$ , where $n$ is number of households, $T$ is travel time and $d$ represents a difficulty factor
Philippines	Municipality	National, region, province, municipality and village. A municipality generally consists of 10-20 villages.	$AI = n \times T$ , where $n$ is number of households and $T$ is travel time

16. Integrated Rural Accessibility Planning also emphasizes the use of locally available resources, thereby increasing the impact of infrastructure investments on local development, poverty reduction and employment creation. This involves, however, a different set of institutional and regulatory frameworks than those used for national roads, which is why the approach also focuses on institutional capacity development and training programmes for local government officials and people in a wide range of areas including contract management for construction and maintenance, labour-based construction methods, quality assurance and fiscal management.<sup>11</sup>

## B. National transport programmes with accessibility targets

17. China, India and Viet Nam are currently implementing national transport development programmes aimed at meeting road accessibility targets for rural areas, where the majority of their poor population live (table 4). These programmes focus on road construction and use time-bound targets which are measurable by the distance of populated areas to roads, particularly paved or all-weather roads. In the case of China, roads have

<sup>10</sup> Krishna S. Pribadi, presentation at the Workshop on Rural Transport Policy and Management, Yogyakarta, Indonesia, 23-25 February 2011.

<sup>11</sup> Geoff Edmonds and Bjørn Johannessen, *Building Local Government Capacity for Rural Infrastructure Works* (Bangkok: ILO, 2003). Available from [www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/genericdocument/wcms\\_104894.pdf](http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/genericdocument/wcms_104894.pdf).

been constructed with most of the funding coming from the Government but also through the private sector. In India, new road construction is financed by the Central Government, but State Governments are responsible for maintenance. India's PMGSY programme also aims to provide a minimum 100 days of guaranteed wage employment per year to households.

18. Bhutan, the Lao People's Democratic Republic, and Nepal, meanwhile, are currently implementing national programmes to construct and improve infrastructure for selected regions or provinces. The Government of Nepal, for example, is currently implementing phase II of its Rural Access Programme in seven out of its 75 districts. Similarly, the Government of Bhutan is planning a follow up of its Rural Access Project in selected Dzongkhags (districts), using credit from the International Development Agency of the World Bank.

Table 4

**Examples of national transport infrastructure development programmes with accessibility targets**

Country	Target/objective
<b>National programmes with national targets</b>	
China: Five-Year Plan	Road accessibility for 95 per cent of towns and 93 per cent of villages by 2005; 11 <sup>th</sup> Five-Year Plan for 2006-2010 set out to link the paved road network with: (i) all townships and villages in the eastern region; (ii) all townships and 88 per cent of villages in the central region; and (iii) 90 per cent townships and 50 per cent villages in the western region.
India: Prime Minister's Rural Roads Program (PMGSY)	Launched in 2000 to connect all villages with more than 1,000 people (500 in case of hill states and tribal and desert areas); currently target to connect villages with 500 people (250 in case of hill states and tribal and desert areas)
Viet Nam	Basic road access for 80 per cent of poor communities by 2005 and 100 per cent by 2010
<b>National programmes targeting specific regions or districts</b>	
Nepal: Rural Access Programme, phases I and II	To promote road transport infrastructure as a means of improving the livelihoods and economic development of the poor in seven out of 75 districts. It follows a phased approach to road construction, using labour-intensive methods, where blasting and heavy machines and equipment are not used at all.

## C. Some lessons learned from recent experiences in the region

### 1. Infrastructure is important but needs to be maintained<sup>12</sup>

19. For countries in the Asian and Pacific region, there is still a great unmet demand for transport infrastructure.<sup>13</sup> The construction and maintenance of national highways, railways, inland water transport, and intermodal connections and facilities such as dry ports, should remain a priority to support the expansion of domestic economies and international trade. Investment in cross-border infrastructure, such as links to border crossings and their facilities, will also be required in order to facilitate the movement of passengers and goods across borders. However, in order to expand opportunities for their industries and allow populations to participate in this trade, domestic transport networks, including feeder, provincial and district roads, need to be more closely integrated into national transport networks.

20. Some organizations and researchers have criticized the preference of governments and international financial institutions to focus on road construction projects. In particular, they point out that many of the region's cities have expanded their road networks without due regard to other aspects of urban planning, social impacts, environmental effects including air pollution, and congestion. Furthermore, insufficient attention is paid to the maintenance of roads, with the risk that road construction projects result in a net drain of resources for the agency or department responsible for the road.<sup>14</sup>

21. In this regard, transport planners and policymakers may wish to consider ways to maximize the usage and lifespan of existing infrastructure. For example, greater attention should be given to intermodal linkages, such as between roads and railways (for long-distance transport), between major modes and intermediate modes, and between individual and mass transit transport systems through the integration of paratransit and non-motorised transport. Maintenance programmes for roads could be improved, for example, by adopting appropriate standards, particularly for low volume roads, allocating sufficient resources to conduct both spot checks and routine maintenance, and stricter quality assurance mechanisms.

22. However, in rural areas, roads remain the most practical and cheapest transport links with the larger transport network and have proved beneficial for local economies and poverty reduction. For example, a cost-benefit analysis of road upgrading projects in the Lao People's Democratic

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<sup>12</sup> See also document E/ESCAP/MCT.6 for a discussion on financing road maintenance.

<sup>13</sup> Estimates vary, but in 2009 the Asian Development Bank and Asian Development Bank Institute estimated that between 2010 and 2020, Asia needed to invest \$8 trillion in overall national infrastructure, including transport, energy and communications. A Joint Study of the Asian Development Bank and the Asian Development Bank Institute, *Infrastructure for a Seamless Asia* (2009). Available from [www.iadb.org/intal/inalcdi/PE/2009/03979.pdf](http://www.iadb.org/intal/inalcdi/PE/2009/03979.pdf).

<sup>14</sup> Economic and Social Commission for Asia and the Pacific, *Transport and Communications Bulletin for Asia and the Pacific*, No. 75 (2005), contains case studies on the issue of financing road maintenance; available from [www.unescap.org/ttdw/PubsDetail.asp?IDNO=181](http://www.unescap.org/ttdw/PubsDetail.asp?IDNO=181).

Republic found that the provision of dry-season-only roads to areas that had previously lacked roads had a real gross domestic product impact that was six times as large as that associated with upgrading existing dry-season roads to all weather roads.<sup>15</sup>

## **2. Policies to support transport services need to be strengthened**

23. The history of transport development in the region has shown that infrastructure is a necessary but insufficient condition to create an enabling economic and social environment for poor or isolated communities. The benefits from investment in infrastructure will only be realized when transport services become cheaper, quicker, more frequent or more reliable.<sup>16</sup> Moreover, to achieve the goal of poverty reduction, the poor must be participants in the transport system.

24. The cost of transport services depend, in part, on the level of demand for those services. Low levels or irregular demand patterns discourages transport service providers from providing services, which, in turn, depresses investment in those areas. One study talks about the need for a “critical mass” of users, operators and suppliers to exist in order for transport services to become widely available.<sup>17</sup> This challenge, as demonstrated in the case of inter-island shipping services in the Pacific, is facing countries at the international, as well as national and sub-national levels, particularly in areas with low population density.<sup>18</sup>

25. Recognising that market forces alone will not respond to the needs of communities with low population density, Governments in both developed and developing countries have responded in the past by providing public subsidies, both to transport service providers and directly to individuals. In Thailand, for example, the State Railway of Thailand and the Bangkok Mass Transit Authority have provided free train and bus services on selected routes since 2008. Transport planners and policymakers must weigh up the trade-off between directly targeted actions, such as subsidized routes to poorer urban or rural areas, and inclusive actions, such as general subsidies for public transport.

26. Transport authorities can also influence transport service provision through regulations and legislation. Responsibilities for these regulations are shared by different government bodies (central, provincial, local, and sometimes a combination of various authorities). Policies which increase competition amongst transport operators and service providers are likely to

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<sup>15</sup> Jayant Menon and Peter Warr, “Does road improvement reduce poverty? A general equilibrium analysis for Lao PDR”, October 2006 (Draft). Available from [www.adbi.org/files/cpp.road.improvement.paper.pdf](http://www.adbi.org/files/cpp.road.improvement.paper.pdf).

<sup>16</sup> John Howe, Transport and Poverty Reduction (undated). Available from <http://ti-up.dfid.gov.uk/uploads/public/documents/Key%20Documents/transportandpovred.doc>.

<sup>17</sup> World Bank, “Improving Rural Mobility: Options for Developing Motorized and Nonmotorized Transport in Rural Areas”, World Bank Technical Paper No. 525 (Washington, D.C., 2002). Available from [www.animaltraction.com/StarkeyPapers/Starkey-Ellis-Hine-Ternell-ImprovingRuralMobility-twu-48.pdf](http://www.animaltraction.com/StarkeyPapers/Starkey-Ellis-Hine-Ternell-ImprovingRuralMobility-twu-48.pdf).

<sup>18</sup> See also document E/ESCAP/MCT.2/10 and E/ESCAP/MCT.2/INF/5 for a discussion on franchising of domestic shipping services.

bring transport prices down, thereby improving public access to them. Taxes and duties on imports also have a significant effect on transport operators, particularly through the prices of vehicles, spare parts and fuels.

27. At the same time, transport authorities can also make more extensive use of regulatory tools and legislation to make transport services safer and more accessible to users. Many countries in the region, such as China, Indonesia, Japan, Malaysia, Pakistan, the Philippines, the Republic of Korea, Sri Lanka, Thailand, Turkey, and Viet Nam, for example, have introduced national legislation or accessibility standards for public transport and in some cases, roads, pavements and public areas.<sup>19</sup>

### **3. Transport needs of the poor should become central to transport policymaking policies and strategies**

28. Many transport programmes in the 1950s and 60s did not have the expected impact on poverty and accessibility because they were largely designed by external aid agencies and central or provincial government officials. The spread of participatory approaches such as Integrated Rural Accessibility Planning and associated tools in the 1990s meant that by 2000, community participation in identifying and designing transport investment had become more common. By 2000, international financial institutions such as the World Bank and the Asian Development Bank were also becoming more focused on poverty reduction as a policy objective. Partly in response to external criticism that their projects were having a negative impact on the poor, they strengthened oversight mechanisms such as environmental, social, health and gender impact assessments and, since the mid-2000s, have been designing and financing transport projects which feature explicit poverty reduction objectives.

29. The ability of transport planners and policy-makers to respond to the Millennium Development Goals is still constrained by several factors, including a lack of understanding about the different needs of the poor and mechanisms to collect this information. For example, poverty due to the lack of opportunity because of geographic location or lack of access to infrastructure and services may differ in nature from chronic poverty due to disabling factors at the individual or household level, such as gender, caste or disability. Different types of poverty will require different policy responses.

30. Transport policymakers and planners are starting to work more closely with officials in other ministries as well as with external stakeholders, such as non-governmental organizations, academia and the media, in order to fill in the gaps of their own knowledge and develop transport programmes which respond to the needs of the poor. The use of analytical tools to compare transport and policy outcomes, particularly spatial mapping technologies such as Geographic Information Systems, are also having an impact on the ability of transport policymakers and planners to respond to the Millennium Development Goals.

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<sup>19</sup> Economic and Social Commission for Asia and the Pacific, *Disability at a Glance 2010: A Profile of 36 Countries and Areas in Asia and the Pacific* (ESCAP, 2010). Available from [www.unescap.org/sdd/publications/Disability/Disability-at-a-Glance-2010.pdf](http://www.unescap.org/sdd/publications/Disability/Disability-at-a-Glance-2010.pdf).

#### **IV. Transport and the Millennium Development Goals in the context of ESCAP**

31. As a regional commission, one of the main roles of ESCAP is to support regional cooperation mechanisms and institutional frameworks to promote regional integration and inclusive development. ESCAP also has a strong technical cooperation programme to build the capacities of Governments in formulating and implementing inclusive and sustainable development policies. Taking all that into account, the secretariat proposes to link its work on transport and the Goals more closely with other priority areas under the Regional Action Programme for Transport Development in Asia and the Pacific. These priority areas are presented below.

32. *Transport infrastructure development:* As intraregional trade increases, land transport will play an increasingly important role in moving goods and passengers within Asia. The Asian Highway and Trans-Asian Railway are already providing connectivity in this regard. The development of an intergovernmental agreement on dry ports and the subsequent development of dry ports across the region can have a potentially positive impact on socio-economic development of the areas where dry ports are located (document E/ESCAP/MCT.2/3). One area that needs to be further analysed is the degree of connectivity between these international networks and feeder roads, and how this connectivity can be enhanced.

33. *Farm-to-market logistics:* Many countries in the ESCAP region are still predominantly agricultural. One of the conditions for countries to participate in the commodities and food trade is the availability of adequate logistics infrastructure and services, including warehousing and consolidation facilities such as refrigerated and temperature controlled facilities and modal transfer installations. Linking provincial and rural road systems through a network of dry ports, supplemented by specific facilities geared to facilitating the transport of fresh food, would be a step in this direction. Trade and transport facilitation measures will also contribute to reducing prices and expanding the reach of agricultural exports, as well as reducing the costs of inputs such as fertilizers. Under a new United Nations Development Account project on bridging the gaps in achieving the Millennium Development Goals, the secretariat is planning several activities relating to rural transport logistics and farm-to-market transport processes.

34. *Road safety:* Road accidents and fatalities have a serious impact on all road users, especially the poor and vulnerable groups in society. Pedestrians, cyclists and motorcyclists account for the majority of traffic deaths in low- and middle- income countries; in Dhaka, for example, pedestrians alone comprise almost 75 per cent of road accident fatalities. Road accidents and fatalities can have a devastating effect on poorer households, especially if they involve the main breadwinner of the household. Under the framework of the ESCAP Road Safety Goals, Targets and Indicators for the Decade of Action, 2011-2020, the secretariat will assist countries in achieving their road safety targets, including, among other methods, through the monitoring of data on vulnerable road users, as described in document E/ESCAP/MCT.2/8.

35. *Special challenges of landlocked developing countries and small island developing States:* Target 8c of Goal 8 intends to “Address the special needs of landlocked developing countries and small island developing States”. The transit transport challenges facing landlocked developing countries are being addressed within the framework of the Almaty Programme of Action, particularly in the areas of transport infrastructure development (E/ESCAP/MCT.2/3) and transport facilitation (E/ESCAP/MCT.2/4). Meanwhile, during the next phase of the Regional Action Programme for Transport Development in Asia and the Pacific, the secretariat is proposing to study the issue of inter-island shipping with a focus on small island developing States (E/ESCAP/MCT.2/10).

## V. Issues for consideration

36. While the Millennium Development Goals do not include specific references to transport, it is now widely accepted that transport infrastructure and services play a critical role in addressing the Goals. Many countries in the region suffer large spatial inequalities with regards to income, wealth and opportunity. This is due to a lack of all-weather roads to villages, infrequent or unreliable transport services to outlying areas and islands, poor access to deeper hinterlands and weak rural-urban connectivity. Poor maintenance of infrastructure, particularly roads, reduces their asset value and adds to the time, costs and safety risk to users. There is tremendous potential to enhance the contribution of transport interventions to efforts to achieve the Millennium Development Goals. To realize this potential, Governments must integrate poverty reduction and Goal-related policy objectives into their transport programmes and projects during the early stages of formulation and programming.

37. At the regional level, Governments are invited to provide further guidance on the following elements suggested for inclusion in the Regional Action Programme for Transport Development in Asia and the Pacific, phase II (2012-2016).

Immediate objective: to encourage the inclusion of Millennium Development Goals considerations in the planning and implementation of regional transport interventions.

### Outputs:

1. Studies and workshops on mainstreaming the Millennium Development Goals considerations into transport planning and policies as appropriate, in particular, in infrastructure development, farm-to-market logistics, food security, and road safety;
2. The exchange of experiences between member countries regarding the development of transport infrastructure and services to provide rural communities with physical access and connect them to national and regional trunk road systems;
3. Preparatory activities in support of the 10-year review of the implementation of the Almaty Programme of Action in 2013.

Indicators of achievement:

1. Measures taken by member States to mainstream Millennium Development Goals into transport programmes and policies, with particular focus on relevant areas of the Regional Action Programme.
  2. Adoption of recommendations from the regional input document at the global meeting on the 10-year review of the implementation of the Almaty Programme of Action.
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