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**Policy options and actions for expediting progress in
implementation: transport**

Report of the Secretary-General

¹ E/CN.17/2010/1.

Summary

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I. Introduction

II. Policies for development of sustainable transport

6. Transport and mobility are essential preconditions for economic growth, social development and global trade. However, they are also often associated with significant environmental impacts, including atmospheric pollution; thus, they pose major challenges for the achievement of sustainable development.

Box 1: Key issues in transport and sustainable development at a glance	
Rural transport	1 billion people in developing countries do not have access to an all-weather road.
Transport and social responsibility	An estimated 75 per cent of maternal deaths could have been prevented through timely access to child-birth related care.
Urban transport	By 2025 more than half of the population in the developing world will be living in cities.
Roads and highways	More than 60 per cent of the world's paved roads are in high-income countries.
Road safety	Around 1.2 million people die each year in road accidents. 90 per cent of these deaths occur in the developing world.
Railways	Between 2000-2005, global rail freight grew by 25 per cent and land passenger traffic grew by about 19 per cent.
Shipping and ports	Maritime transport moves more than 90 per cent of world trade by volume.
Air transport	Around 35 per cent of international trade by value is carried by air transport.
Transport, logistics and facilitation	Trade-associated transport costs in land-locked and in small island developing countries are much higher, and the volume of trade is much lower than in coastal countries.
Transport dependence on fossil fuels	Transport relies on oil and petroleum products for 95 per cent of the energy use.
Air pollution	Transport is a significant contributor to local air pollution and associated public health impacts
Climate change	Transport is responsible for 23 per cent of global energy-related greenhouse gas emissions, and its contribution is increasing rapidly.

Source: Adapted from World Bank: Transport Modes and Topics (webpage)

7. Economic activity, globalization, national and international trade and transport are closely interlinked. In spite of gradual gains in produc

Box 2: Rural transport infrastructure for poverty eradication and sustainable development: The experience of India

In the year 2000, 30 per cent of India's 855,042 villages (or 300 million people) were still without all-weather roads and lacked access to basic services and markets. Hence, the Government launched the Prime Minister's Rural Roads Programme "Pradhan Mantri Gram Sadak Yojana (PMGSY)", implemented by the National Rural Roads Development Agency (NRRDA) with domestic and international funding provided through the national Central Road Fund (CRF). The target of the programme was to provide access through the construction of all-weather roads to all rural villages and communities inhabited by more than 500 persons (or than 250 persons in mountainous tribal regions). Under the programme, 375,000 km of rural all-weather roads were built and 372,000 km of existing rural roads were up-graded, benefiting a total of 178, 000 villages. The Programme realized the following achievements:

- Poverty reduction:** According to a recent report, for every 1 million Rupees spent on rural roads, 163 people were lifted out of poverty.
- Income rise:** Household incomes of those gained access to roads rose by 50 to 100 per cent.
- Market prices:** Farmers received better prices for their products as they could access markets directly, cutting out intermediaries and reducing the spoilage of perishable products.
- Agricultural productivity:** Agricultural and animal husbandry practices were modernized; improved seeds, fertilizers, and veterinary services became available; Yields of paddy almost tripled from an average of 0.6 tons per acre to 1.7 tons per acre.
- Rural employment:** Access to jobs improved, new (micro) businesses started up, diversifying the rural economy.
- Capacity building:** Training of local population (e.g. local contractors) enabled income rise an

<p>Social impacts: Communities and individuals were empowered through mobility such as increased networking and family visits.</p>

Source: Indian Prime Minister's Rural Roads Program (PMGSY), Rural Roads Project Vulnerability Framework, Draft, 2010 and World Bank website and brochure: "Rural Roads - A lifeline for villages in India, connecting hinterland to services and markets"

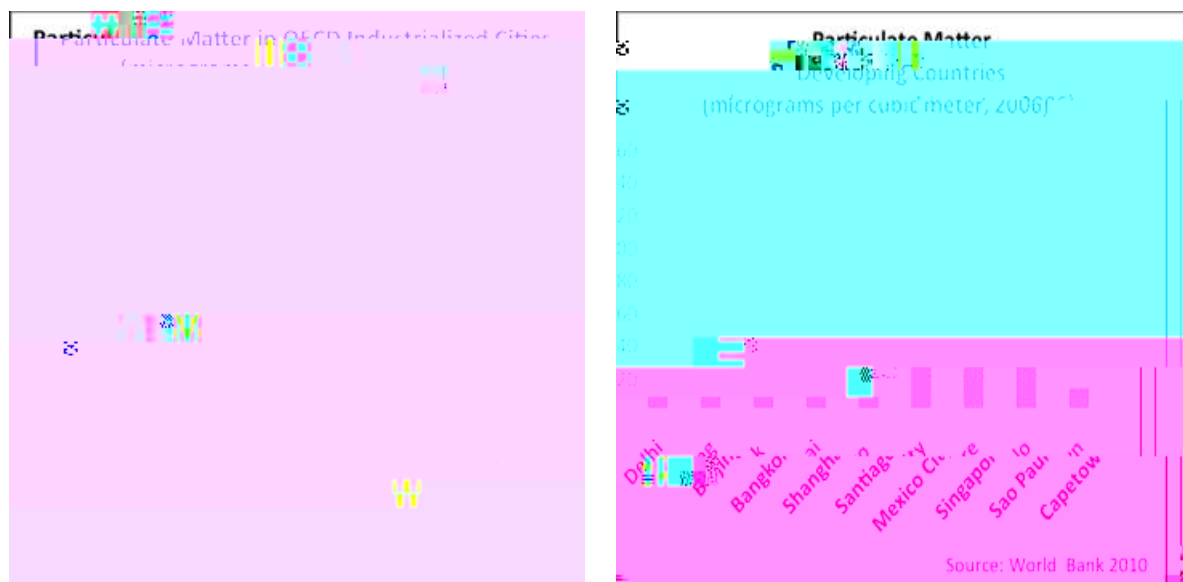
12. Greater investments in integrated rural development programmes, including providing adequate access to all-weather roads contributes to poverty reduction, thus paving the way for achieving the poverty MDGs by 2015. As appropriate, national sustainable development strategies and plans should include construction and improvement of rural roads to be designed and constructed with the active participation and involvement of the communities concerned. In this endeavour, the local communities should be supported with capacity building, technical support, as well as with financial assistance from both domestic and international sources.. The particular needs of least developed and land-locked developing countries, especially in sub-Saharan Africa, as well as of Small Island Developing States (SIDS) require urgent attention.

B. Promoting urban public transport for sustainable development

13. Transport poses great challenges in many of the rapidly growing metropolitan and other urban areas of developing countries where lack of adequate planning and poor public transport services result in economic losses due to traffic congestion, high consumption of fuels and air pollution, with associated negative impact on public health.

14. The World Health Organisation's "Healthy Cities Air Management Information System" indicates that many cities suffer from poor urban air quality, with particulates, nitrogen oxides and sulphur oxides at times exceeding recommended maximum levels by a factor of up to four. Figures 1 and 2 provide a comparative overview on local air pollution in selected cities.

Figure 1 and Figure 2



15. Comprehensive, coherent and effective transport policies and measures are urgently needed to address the growing challenges of urban transport. Policies will need to comprise a package of measures, including: (a) improvement and expansion of urban public transport systems that are more affordable, safe, clean, reliable, time-saving and environmentally sound; (b) facilitation and encouragement of non-motorized transport modes in urban centres, including greater use of walking and cycling for short-distance trips in good weather; (c) coherent regulatory measures to regulate the use of private motor vehicles as well as commercial urban transport service providers, such as operators of small buses, vans, taxis, three-wheelers or pedicabs; and (d) integration of transport considerations in urban development planning in order to ensure more sustainable urban transport systems in the future by reducing the need for travel and the intra-urban travel distance in cities that are yet to be built.

16. In many cities of developing countries, city administrations have recognized the advantages of bus rapid transit (BRT) systems. One hundred and fifty two cities already have BRT systems which are characterized by buses that run on segregated lanes parallel to local traffic. In comparison with light rail transit or subway systems, BRT systems are much less capital intensive whilst still achieving high transport efficiency. Enhanced BRT systems offer climate-controlled buses with platform-level entry, pre- or post-fare payment and global positioning systems to inform customers of expected waiting times and transfer connections. Modern BRT systems can accommodate to ten times more passengers compared to mixed traffic.

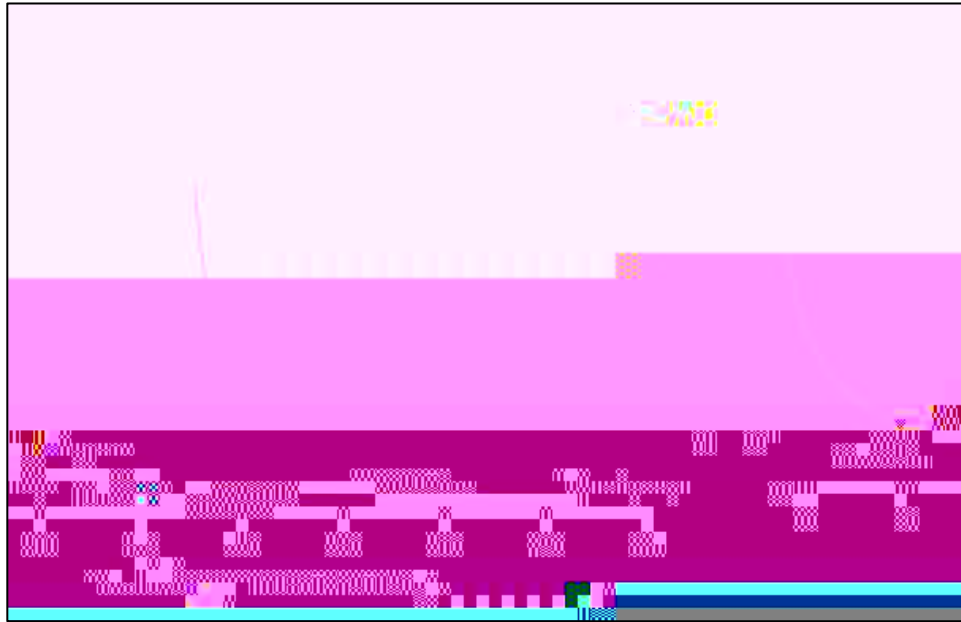
17. BRT and other urban public transport systems offer many direct and indirect local, national and global benefits. A recent study for Mexico City which estimated and monetized BRT system costs and benefits, demonstrated that the sum of public benefits,

including economic time saved, avoided health problems, and fuel costs, by far exceed the costs of the BRT system. In addition, BRT and other public transport infrastructure investments help to avoid significant amounts of GHG emissions. Several initiatives, including the Partnership for Low Carbon Sustainable Transport (SLoCaT), and studies have been launched recently to explore the eventual inclusion of BRT and other public transport projects as nationally appropriate mitigation actions (NAMAs) in a future climate change agreement and emission trading system.

18.

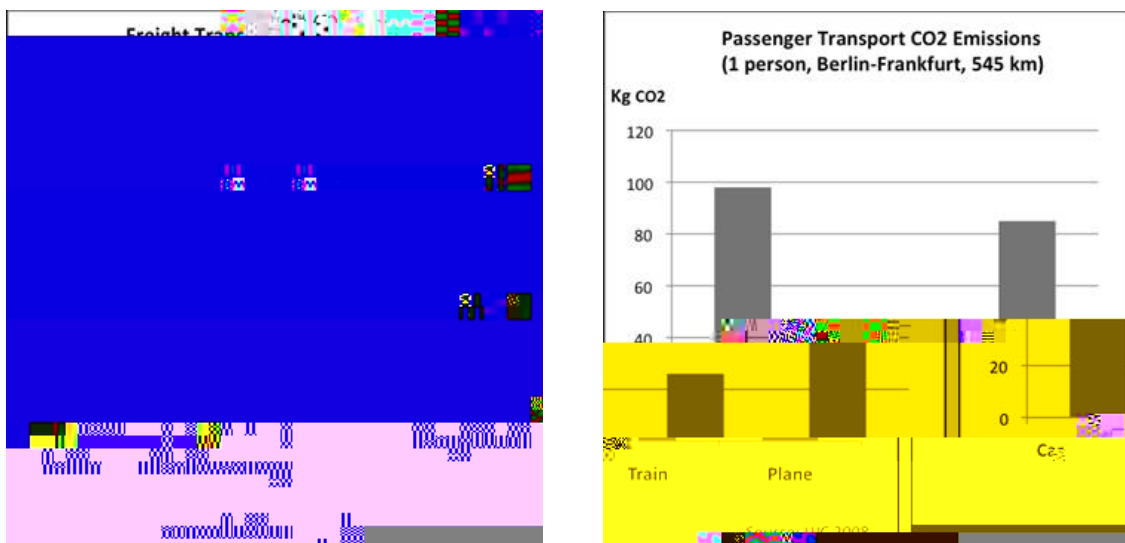
Figure 3

Urban Density and Transport Related Energy Consumption



27.

Figure 4 and Figure 5



30. In densely populated urban areas and city centres, and with the appropriate infrastructure and support, walking, cycling and public transport should become the preferred transport modes. For high-volume passenger and freight transport over long distances or between commercial centres and cities, railways and waterways often offer environmentally preferable transport options.

31. Where appropriate infrastructure and transport options exist, railways and waterways offer low carbon options for passenger or freight transport. In Europe, travelling by rail is 3 to 10 times less CO₂ intensive than road or air transport. Whereas railways account for a 7 to 10 per cent of transport market share, the contribution of rail to European Union (EU) transport sector emissions is below 2 per cent. In addition and as a part of its sustainable development policies and programmes, the EU rail sector has committed itself to reduce specific emissions from rail transport by 30 per cent over the 1990-2020 period.

vehicle manufacturers. GFEI also supports developing countries in establishing their own fuel economy policies.

38. The Partnership for Clean Fuels and Vehicles of UNEP has successfully assisted many developing countries in reducing vehicular air pollution through the promotion of lead-free, low-sulphur fuels and cleaner vehicles standards and technologies. Enforcement of fuel quality standards and improvements can significantly reduce urban

47. Clean fuel, alternative vehicle and advanced information technologies are available mostly in industrialized countries. In most developing countries, no or only limited capital is available to finance the necessary research and technology development. Much greater sharing and transfer of cleaner transport technologies to developing countries will be needed if sustainable transport systems for all are to be realized.

E. Improving transport safety

48. Safety is an important dimension of sustainable transport. Every year, 1.2 million people are killed and an additional 50 million people are injured as a result of road crashes, with about 90 per cent of such accidents taking place in low- and middle-income countries. According to a WHO report, it is estimated that annual economic losses related to road traffic injuries amount to some US\$ 518 billion and cost Governments between 1 and 3 per cent of their nation's gross national product. Unless immediate measures are taken, road accidents are predicted to become the fifth leading global cause of death by 2030.

49. At its Sixty-fourth session, the General Assembly adopted Resolution 64/255 on improving global road safety. The resolution welcomes the declaration adopted at the first Global Ministerial Conference on Road Safety, held in Moscow on 19 and 20 November 2009, and proclaims the period 2011-2020 as the "Decade of Action for Road Safety". All Member States were invited to define their own national road traffic casualty-reduction targets, formulate national strategies, and implement the corresponding regulatory initiatives, including regulation on seat belts, child restraint, helmets, drunk-driving and speeding. Vehicle and driver registration, training and inspections are all fundamental to road safety.

58. Receding polar ice may make new Arctic sea lanes navigable by commercial shipping, possibly cutting the distance between ports in North-East Asia and ports in Northern or Central Europe or on the North American East coast by up to 4000 nautical miles. Further international collaborative study could facilitate an assessment of potential future benefits and the environmental safeguards needed.

59. Travel for domestic and international tourism is a rapidly growing service industry creating employment and income opportunities. However, tourism is often associated with high energy consumption. With growing environmental awareness, eco-friendly forms of travel and leisure, including hiking, biking and boating, are becoming increasingly popular in a growing number of countries. This is particularly true in Europe, where public investment in the required infrastructure, including short- and long-distance hiking trails, bicycle paths and other recreational facilities, is relatively advanced. Agro- and eco-tourism can significantly contribute to the economic revitalization of rural and peripheral areas, and thus contribute to sustainable development.

B. Enhancing policy coherence, integration and stakeholder participation

60. Most governments have many options and tools to directly and indirectly influence business and consumer decision making on transport and mobility. It is essential to ensure that these policies, including fiscal policies, such as taxation and subsidization, are implemented in a consistent and coherent manner.

policies, (c) share and disseminate good practices, and (d) enhance monitoring and reporting mechanisms in implementation.

64. Many fiscal policy tools, including taxation and subsidies, can significantly influence costs and prices of fuels, transportation tariffs and vehicles and should, therefore, be applied in a very consistent, coherent and market conforming manner. It is essential to avoid situations in which the effects of one policy measure counteract the intended effects of another.

65. There is a perception that investments in and the maintenance of public transport, including urban public transport, require high subsidies, some of which may not always be justified. The public policy debate often disregards the fact that there are many large hidden subsidies benefitting private car users in urban areas.⁷

66. Public transport, notably public buses, often remain stigmatised as the “poor man’s car”. It is essential to ensure that urban public transport is safe, clean, fast, environmentally sound and affordable. Ideally, public transport tariffs should be lower than the marginal costs of using private motor vehicles. Only where and when these conditions are met, can public transport be expected to become the preferred transport choice for all.

67. Transport policy making tends to affect the interests of many stakeholders who

It aims at ensuring fuller and more effective integration of the LLDCs into the global economy through the implementation of specific actions to be undertaken by all relevant stakeholders in five priority areas, namely: (a) fundamental transit policy issues, (b) infrastructure development and maintenance, (c) international trade and trade facilitation, (d) international support measures, and (e) implementation and review.

70. In accordance with the provisions of the relevant United Nations General Assembly resolutions, including Resolution 64/214 of 21 December 2009, developments affecting transit and land transport to and from the 30 LLDCs in Africa, Asia and Latin America is being periodically reviewed by the Office of the United Nations High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS), and the secretariat of the United Nations Conference on Trade and Development (UNCTAD). Several recent studies have shown that many of the LLDCs and their minimal manufactures exports were most seriously affected by the recent global financial and economic crisis.

71. Small island developing States (SIDS) and their prospects for sustainable development are also often negatively affected by diseconomies of scale in trade and transport, leading to higher per unit transport costs, which in turn lead to low trade volumes. Low trade volumes often do not justify investment in technologies and transport infrastructure. In order to address these interrelated challenges, SIDS require immediate and substantial international support, including through retaining market access preferences for their exports, grants or concessionary financing for transport, information technologies and communication equipment, as well as assistance in accelerating the use of renewable energy, making tourism sustainable and better tapping the potential of island cultures.

72. Intergovernmental agreements on cross-border road and rail transport networks and the related trade facilitation agreements, such as those facilitated by the Economic and Social Commission for Asia and the Pacific (ESCAP), the Economic and Social Commission for Western Asia (ESCWA) and the ECE, have played an important role in enhancing sustainable development and cooperation at regional level. Similar efforts have been proposed for intergovernmental and inter-agency collaboration in Africa with a view to elaborate and conclude an intergovernmental agreement on a trans-African highway.

73. After preparatory work carried out under the auspices of the United Nations Commission on International Trade Law (UNCITRAL), the United Nations Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea was adopted by the United Nations General Assembly in December 2008. The new Convention, which requires 20 ratifications to enter into force, was opened for signature at a special signing conference held in Rotterdam, the Netherlands, in September 2009 and will be known as the “Rotterdam Rules”. Policymakers will need to consider the merits of the new Convention and decide whether it complies with their expectations.

D. Promoting employment, development and sustained economic recovery

74. The transport sector employs millions of

development due to comparatively high transport costs, resulting

- k. Strengthen transport infrastructure and services by enhancing transport data collection and analysis and modern information technologies;
- l. Provide greater incentives for innovation, research and deployment of advanced transport technologies to achieve a “greener”, more energy and resource efficient economy and a sustainable low-carbon future;
- m. Facilitate international collaborative research, sharing of experiences, capacity building and technology transfer to make transport systems in developing countries more sustainable;
- n. Encourage voluntary initiatives and programmes to offset greenhouse gas emissions from transport to reduce its net environmental impacts.