

SECTOR ASSESSMENT (SUMMARY): TRANSPORT (ROAD TRANSPORT)¹

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. Sri Lanka's population is concentrated in settlements clustered along the coast and interior market towns that dominate the rural landscape.² About 85% of Sri Lanka's population (20.3 million in 2012) lives in rural and peri-urban areas, i.e. outside legally demarcated municipal jurisdictions. More than one fourth of the population lives within 1 kilometer (km) of the coast, a strip of land constituting only 5% of the country's area.³

2. Sri Lanka's strategic location at the crossroads of regional maritime transport routes has contributed to its growth as a trading center. In 2011, the transport sector contributed 12% to the country's gross domestic product, up from 7.9% in 2005. International hubs are being developed in Colombo and Hambantota, and the country's future sustainable growth requires that an efficient inland transport system be developed to move people and goods. Roads are the dominant mode of inland transport in Sri Lanka, carrying about 95% of passenger traffic and 98% of freight traffic. Development of road transport is widely recognized as a key factor in promoting regionally balanced development and reducing poverty. The share of road transport in total public sector capital investment increased from 12% in 2005 to 30% in 2011. About SLRs124 billion was invested in road transport at the national, provincial, and local levels in 2011. Public investment in road transport grew from 0.8% of gross domestic product in 2005 to 1.8% in 2011.

3. **Road agencies and the road network.** The central government is responsible for transport policy and interprovincial road transport infrastructure, while provincial governments are responsible for provincial roads and intraprovincial road transport services. The private sector provides all road freight services, with a mix of private (77%) and public (23%) operators providing bus passenger transport. National-level oversight of road transport is provided through four ministries: Ports and Highways, Transport, Private Transport Services, and Local Governments and Provincial Councils.

4. The road network is dense and well laid out, providing basic access to population and economic centers. The network is among the densest in Asia, as the ratio of road km to population exceeds the related indicators in neighboring countries. The 132,693 km road network in Sri Lanka is classified into national, provincial, and local roads according to functionality and management responsibility. National roads, comprising about 11,922 km of class A roads (trunk roads) and class B roads (main roads), are managed by the central government through the Road Development Authority (RDA). The provincial road network, comprising 15,975 km of class C and D roads, is managed by the provincial councils. About 80,000 km of roads are managed by local authorities, while approximately 24,000 km of roads are owned by irrigation, wildlife, and land development authorities.

¹ This summary is based mainly on three documents (available on request): (i) Road Development Authority. 2007. *National Road Master Plan (2007–2017)*. Colombo; (ii) Ministry of Finance and Planning. 2012. *Annual Report 2011*. Colombo; and (iii) ADB. 2011. *Country Partnership Strategy: Sri Lanka 2012–2016*. Manila. Supplementary information was provided by the Road Development Authority.

² Department of Census and Statistics, Ministry of Finance and Planning. 2012. *Population Atlas of Sri Lanka 2012*. Colombo.

³ World Bank and United Nations Habitat. 2012. *Turning Sri Lanka's Urban Vision into Policy and Action*. Washington, D.C.

5. **Travel demand and road safety.** While significant progress has been made in developing the road network, travel demand to facilitate social and economic activities has also increased significantly. The number of vehicles in Sri Lanka grew at an average annual rate of 11% during 2004–2011. The national average vehicle ownership rate in Sri Lanka was estimated to be about 152 vehicles per 1,000 persons in 2011. Rapidly expanding travel demand has caused issues relating to both travel speed and road safety. Average travel speed on the national road network fell from 40 km per hour in 2007 to 33 km per hour in 2011. There has been a steady increase in all categories of road accidents since 2008, reflecting the massive rise in new vehicle registrations and sustained traffic growth. About SLR300 million in public funds is allocated annually for traffic management and road safety activities, most of which are conducted by the National Traffic Police. A midterm prognosis, based on the increasing trend in accidents and World Health Organization's road safety profile of Sri Lanka, suggests no significant improvement in the road safety record will occur by 2017.⁴ It is estimated that to maintain the current levels of transport services, road capacity would need to be doubled every 8–10 years.

6. **Road asset management.** To manage the national road network, RDA has deployed a comprehensive road asset management system in its planning division. The planning division operates (i) a commercial off-the-shelf application, the Highway Information Management System (HIMS), to manage the road inventory and condition database; (ii) uses the Highway Development and Management (HDM) model to estimate budget requirements and to program works; and (iii) runs a vehicle equipped with an automatic data collection system to inspect road conditions. However, the work program of the line divisions—such as design, works, and maintenance—is not fully harmonized with the planning division's program. The World Bank is assisting RDA redefine its business process to improve internal efficiency.

7. At the provincial and local authority levels, road asset management practices vary with staff capacity and resource availability. Several provinces (e.g., Northern Province, North Central Province, and Eastern Province) have established their own road asset management systems, with external support from development partners. Other provinces manage the road network in a reactive manner. In general, technical standards and performance targets are not well defined.

8. A road maintenance trust fund was established in 2005 to provide a sustainable source of funding for routine and periodic maintenance. Originally established under the Ministry of Finance and Planning through a deed of trust, the fund was reconstituted in 2010 directly under the Ministry of Ports and Highways. A technical secretariat was established with adequate staffing (core staff includes the head of the secretariat, a highway engineer, and a finance and administration manager) and funding through its operating budget. The secretariat works closely with the RDA Planning Division in setting priorities and making allocations from the maintenance trust fund. Fund utilization has been satisfactory, at 94%–100% of the allocations. Periodic maintenance coverage rose from 516 km in 2007 to 1,800 km in 2012. Routine maintenance operations covered 7,000–8,500 km of core maintainable network per year in 2012, excluding roads under construction or in the defect liability period. The fund has served a useful purpose by protecting budget allocations for maintenance, and raising awareness of the critical importance of maintenance. It is envisaged that the fund will be expanded to cover the roads managed by provincial and local road agencies.⁵

⁴ World Health Organization. 2013. *Global Status Report on Road Safety 2013*. Geneva.

⁵ Department of National Planning, Ministry of Finance and Planning. 2013. *Unstoppable Sri Lanka 2020: Public Investment Strategy 2014-2016*. Colombo.

9. With assistance from the Asian Development Bank (ADB), the government has piloted performance-based maintenance in different ways, with mixed results. Since 2009, a consistent approach has been used in most ADB-funded road projects, which combines rehabilitation or improvement works plus 5 years of performance-based maintenance into a single contract. The bidding documents and contract administration have been gradually improved for procuring and implementing performance-based maintenance. Early observations include the following: (i) the bidding documents and contracts need to be carefully structured to ensure the contractor will complete the maintenance period, (ii) the performance-based payment mechanism requires capacity development of both road agencies and contractors, and (iii) the maintenance contracts help the road agencies secure funds for long-term maintenance.

10. As a result of the enhanced road maintenance and nationwide investment into road improvement, the road network's physical condition has improved. The proportion of national roads in good condition rose from 35% in 2007 to 48% in 2011, those in fair condition dropped from 19% to 11%, and roads in poor condition declined from 46% to 41%. However, the condition of provincial and local roads is much worse than that of national roads, with the "last kilometer" connection to rural communities entailing high travel costs and long travel times.

11. **Challenges and opportunities.** The country faces a challenge in enhancing the capacity of and mobility provided by the national road network at an acceptable and sustainable level. Introducing new road maintenance approaches will help RDA identify the most appropriate road management scheme. Options include an output- and performance-based road contract model, which would enable RDA to transition from being a project implementation agency to an asset management agency. However, external assistance will be required to set up the system and build capacity in RDA and the industry.

12. In rural areas, the poor transport infrastructure has hindered the spread of economic activities and access to basic health and education resources. Continued expansion of transport infrastructure to widen access to markets and economic opportunities and to health and education services is required to support inclusive growth and poverty reduction.

13. In terms of capacity development, RDA has received significant external assistance during road project implementation, but most provincial and local road agencies have poor capacity and disorganized road asset management. While RDA can further build its road asset management, project management, and contract administration capacity, it has begun informally transferring skills and knowledge to provincial and local road agencies, with good results. A skills transfer program from RDA to provincial and local road agencies is required to ensure that experience and knowledge developed to date in Sri Lanka is maintained and disseminated.

2. Government's Sector Strategy

14. A two-tier sector strategy has been adopted by the government to provide nationwide connectivity: (i) establishing a trunk road network covering a number of expressways and a well-connected national road network, and (ii) completing a rural road network to connect the rural population to trunk roads that are linked to socioeconomic activity centers.

15. The government wants to boost road transport investment to ensure that the road network will be planned, maintained, constructed, and developed to (i) meet current and expected future demand in the transport of passengers and freight; (ii) improve the quality of roads by using effective and innovative modern design, construction, and maintenance techniques; (iii) reduce travel time and operating costs while facilitating greater mobility and

improving accessibility; (iv) support the country's economic development by considering the government's future socioeconomic development plans and policies; (v) assess existing infrastructure capacity, and add capacity to the road network through road widening and improvement, and construction of new roads; (vi) improve the institutional capacity of road administrations; (vii) ensure required actions are taken to protect the environment; and (viii) develop the local road construction industry.⁶

16. The approximately SLR124 billion invested into road network development at national, provincial, and local levels in 2011 represents a six-fold increase in nominal terms compared to the SLR19 billion spent in 2005. By 2016, the development policy framework proposes to sustain a public investment level of SLR175 billion–SLR200 billion per year, which would thereafter help to develop and maintain the modern road network.

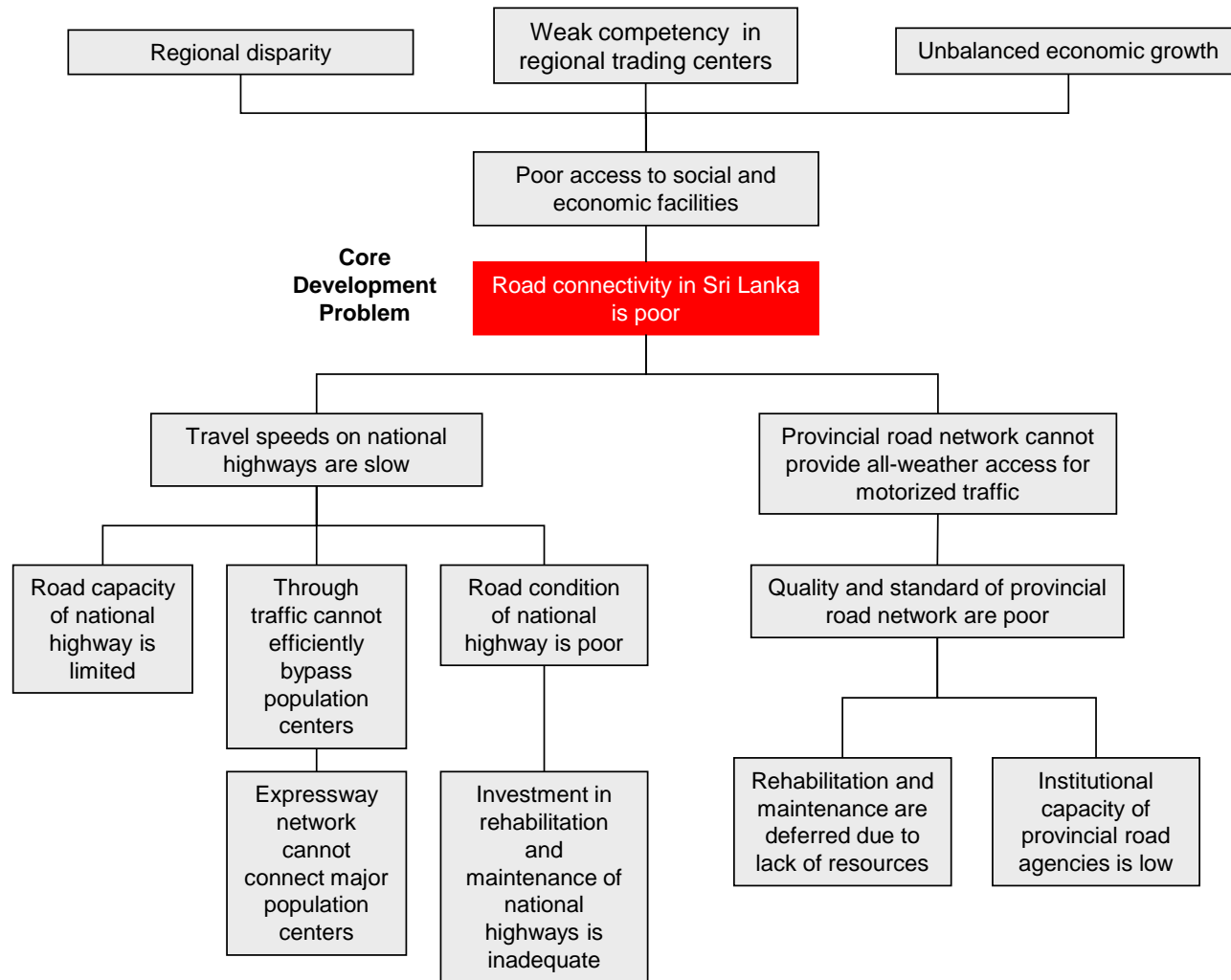
3. ADB Sector Experience and Assistance Program

17. In Sri Lanka, ADB's major development partners in road transport are the People's Republic of China, Japan International Cooperation Agency, and the World Bank. The development partners coordinate their strategies and collaborate on key focus areas. With respect to institutional and capacity strengthening, a coordinated strategy delegates institutional capacity strengthening to ADB, strengthening the capacity of domestic contractors to the Japan International Cooperation Agency, and road maintenance to the World Bank. The development partners harmonize project design and implementation arrangements, including sharing project preparatory studies, ensuring wide geographic coverage while avoiding overlap and spreading the benefits equitably, and coordinating implementation arrangements in line with the resource capacity of the government agencies.

18. With the end of the long period of civil conflict, ADB assistance in road transport has refocused on improving nationwide connectivity. ADB and the government agreed in the country partnership strategy, 2012–2016 that ADB's assistance in the transport sector will contribute to the sector outcome of improving nationwide connectivity for the movement of people and goods. For national roads, ADB will assist by addressing the requirements of improving the existing national road network, prioritizing road links with forecasts of viable traffic and links of critical importance to reducing traffic congestion, and improving overall network efficiency. ADB and other development partners have covered all areas of concern with respect to provincial roads. ADB will also explore ways, including by attracting private sector participation, to support the government's effort to develop a cohesive network of trunk routes built and maintained to consistent standards, while giving due consideration to road safety and climate change adaptation. This is a strategic shift to an approach based on programs and strategies. ADB will pursue a more environmentally sustainable transport strategy in order to achieve intermodal balance, while rationalizing the roles of each transport mode and reducing the burden on road transport.

⁶ Government of Sri Lanka, Ministry of Finance and Planning, Department of National Planning. 2010. *Sri Lanka: The Emerging Wonder of Asia: Mahinda Chintana – Vision for the Future*. Colombo.

Problem Tree for Transport, and Information and Communication Technology (Road Transport)



Sector Results Framework (Transport, and Information and Communication Technology [Road Transport], 2011–2016)

Country Sector Outcomes		Country Sector Outputs		ADB Sector Operations	
Outcomes with ADB Contribution	Indicators with Targets and Baselines	Outputs with ADB Contribution	Indicators with Incremental Targets	Planned and Ongoing ADB Interventions	Main Outputs Expected from ADB Interventions
Improved nationwide connectivity for movement of people and goods	<p>Number of beneficiaries from new or rehabilitated rural or provincial council roads increased by 600,000 (2011 baseline: 0)</p> <p>Average travel speed on priority national roads increased to 49 km per hour by 2016 (2011 baseline: 40 km per hour)</p>	Nationwide road transport network expanded, improved, and maintained	<p>1,200 km of national roads rehabilitated by 2016 compared with 2011</p> <p>2,500 km of provincial roads rehabilitated by 2016 compared with 2011</p> <p>Total length of expressways increased to 190 km by 2016 compared to 90 km in 2011</p> <p>Percentage of priority national roads with International Roughness Index above 5.5 decreases to 25% by 2016 (2011 baseline: 30%)</p>	<p>Planned key activity areas National and provincial road network (90% of funds) Road transport policies and reform (10% of funds)</p> <p>Pipeline projects with estimated amounts Expressway Connectivity Investment Program (Tranche 1): \$150 million</p> <p>Ongoing projects with approved amounts Northern Road Connectivity Project: \$154.4 million</p> <p>Eastern and North Central Provincial Road Project: \$70 million</p> <p>Additional Financing for National Highways Sector Project: \$85 million</p> <p>Additional Financing for Northern Road Connectivity Project: \$98 million</p> <p>Southern Road Connectivity Project: \$75 million</p>	<p>Planned key activity areas 580 km of national roads and 800 km of provincial roads rehabilitated and/or improved; and preparatory activities for pipeline projects to be funded by the government, ADB, or other development partners</p> <p>Pipeline projects 30 km of national roads and 180 km of provincial roads rehabilitated and/or improved</p> <p>Ongoing projects 580 km of national roads and 620 km of provincial roads rehabilitated and/or improved</p>

ADB = Asian Development Bank, km = kilometer.
Source: Asian Development Bank.