

SECTOR ASSESSMENT (SUMMARY): TRANSPORT (ROADS TRANSPORT [NONURBAN])¹

1. Sector Performance, Problems, and Opportunities

1. **Geography and transport.** Timor-Leste comprises the eastern half of the island of Timor, which lies across the Timor Sea from Australia (to the south), and borders Indonesia's East Nusa Tenggara Province to the west. The country has a land size of 15,000 square kilometers (km) and has a population of about 1,070,000. The terrain is mountainous and dominated by a central mountain range that divides the island from east to west. The lowlands along the north coast are narrow and offer less agricultural potential than the wider plains along the south coast.

2. Statistics on composition and share of transport sector by modes are sketchy. While yearly statistics on imports and exports are not segregated by transport mode, they indicate that imports averaged about \$0.5 billion per year during 2013–2015, and exports declined from a peak in 2012 of \$76.893 million to \$38.440 million in 2015. The export and import data indicate that nearly 90% of Timor-Leste's exports (primarily coffee) are to Canada, the United States, and Western Europe, with only about 2% to neighboring Indonesia; nearly 20% of its imports are from Indonesia.² The road subsector therefore provides land transportation within the country for goods distribution, passenger movements, and cross-border imports from Indonesia; sea transportation is the primary mode for imports and exports.

3. Timor-Leste has an extensive road network estimated at 8,000 km long, half of which comprises undeveloped rural tracks. About 1,400 km of national roads connect the capital, Dili, and 12 municipalities, while another 900 km of district roads link major population centers to the national roads. A road survey conducted in 2015 found that 34.6% of national roads were in good condition, 25.9% in fair condition, and the rest in poor or very poor condition.³ A deteriorated road network makes journeys longer, vehicles costlier to operate, and rural communities more isolated. It also diminishes income from agriculture and other productive sectors, which can depress social conditions. Poor transport links exacerbate the constraints on economic growth of small and isolated markets in Timor-Leste.

4. **Institutions.** Key institutions directly involved in regulating and managing the road subsector are (i) the Ministry of Public Works, Transport and Communications, under which the National Directorate of Land Transport is responsible for (a) land transport regulation, and (b) providing driver licensing and vehicle registration and inspection services, traffic management standards and operations, public transport permitting and terminal management, control of vehicle overloading, and subsector planning; (ii) the National Directorate of Roads, Bridges and Flood Control (DRBFC), which is responsible for road and bridge planning, maintenance, construction and improvements, and protecting road and bridge infrastructure from flooding; and (iii) the National Directorate of Road Safety, which was established under the Ministry of Interior in early 2016 to be responsible for planning, coordinating, and implementing national road safety policy and application of road safety law.

5. Other regulatory and oversight agencies and stakeholders that play a key role in subsector management include the Administrative Council of Infrastructure Fund, the National Development Agency, the National Procurement Commission, and the Major Projects Secretariat. Each of these organizations has a mandate to regulate and manage state investments and budgets for

¹ This summary is based on sources mentioned in footnotes 2, 3, 4, and 5.

² Government of Timor-Leste, General Directorate of Statistics. 2015. *Timor-Leste in Figures, 2015*. Dili.

³ Government of Timor-Leste. 2015. *Rural Road Master Plan*. 2015.

subsector development, operation and maintenance (O&M), and management.

6. **Road upgrading and maintenance.** A 25-year period of conflict from 1975 to 1999 suppressed any significant investment in maintenance and rehabilitation of the road network in Timor-Leste prior to independence in 2002. Progressive deterioration leading to poor road conditions continued over most of the first decade of independence. Timor-Leste lacks sufficient funds to maintain the core road network, where routine maintenance alone is estimated to require about \$10 million per year. During 2004–2010, allocations for road maintenance declined 6.5% and fell as a share of overall road budget from 40.6% in 2004 to only 2.1% in 2010.⁴ The DRBFC established its maintenance division in 2015 with 17 full-time staff supported by an ongoing 3-year capacity development program for road maintenance by the Japan International Cooperation Agency. Institutional setup and responsibilities for road network O&M are still evolving and weak. The DRBFC has no presence and workforce to manage O&M activities at the regional level. Although responsibilities for rural roads have been decentralized to regional municipalities, these municipalities lack capacity and it is not clear to what extent they have taken full ownership in terms of planning, budgeting, and execution. Therefore, the DRBFC continues to respond to emergencies and urgent maintenance needs.

7. The DRBFC scopes and plans road projects and presents them in budget submissions that involve the Major Projects Secretariat, the National Development Agency, and the Administrative Council of Infrastructure Fund for projects over \$1 million. With considerable lengths of new and rehabilitated roads being developed, the DRBFC's road maintenance capacity and systems need rapid advancement. Against its maintenance budget requests of \$25 million each year, the DRBFC has received two cycles of road maintenance budget so far, first in 2015 for \$4.0 million and second for \$3.8 in 2016. The DRBFC is unable to utilize allocations in a timely manner, as its institutional setup remains unclear and weak, and its procurement process to outsource to private domestic contractors is lengthy. The DRBFC outsources emergency works on a direct contracting basis and primarily relies on external assistance to develop its O&M capacity.

8. **Road safety.** A World Health Organization report estimated the number of road fatalities at 19.5 per 100,000 population (for a total of 219 fatalities) in 2013.⁵ The World Health Organization methodology factors in road crash casualty reporting limitations to predict realistic casualty rates and allow comparison of rates between countries. In 2013 Timor-Leste was ranked 90th out of 180 countries on the number of fatalities per 100,000 population, and 19th out of the 46 countries with a gross national income per capita of \$2,000–\$6,000. The economic consequences of road crashes are estimated at 1%–3% of gross national income, or \$24 million–\$72 million for Timor-Leste. Without proper and proactive management, road crash and fatality rates could increase as (i) rapid economic growth leads to more vehicles on the roads and (ii) the increasing length of better roads leads to higher speeds.

9. **Land transport management.** The vehicle fleet in Timor-Leste grew rapidly during 2010–2013, with first-time registrations indicating annual growth of 28%. Three-quarters of registered vehicles were motorcycles, which grew at an annual rate of 31% during the period. As of 2013, there were 8,788 personal vehicles and 48,143 motorcycles. During 2010–2015, growth in vehicle registrations averaged about 10% overall, with motorcycle registrations increasing by 15%. During 2012–2015, the highest growth came in the light trucks category, where the number of

⁴ ADB. 2011. *Validation Report for Project Completion Report for Timor-Leste Road Sector Improvement Project*. Manila.

⁵ World Health Organization. 2013. *Global Status Report on Road Safety*. Geneva.

registrations increased from 555 in 2012 to 1,500 in 2015. It is estimated that 60% of all trips in Timor-Leste involve public transport, while 20% are by motorcycle and 20% by car and truck.

10. Private sector operators provide the country's land transport services, with the government's role limited to licensing and setting basic vehicle and road safety requirements. However, enforcement of regulations is poor. Minibuses and taxis provide passenger services in the urban areas. Minibuses and light and medium-sized trucks are licensed to carry both passengers and freight in the rural regions, but trucks are generally used where road conditions are poor. A small number of heavy trucks transport containers and large equipment loads, but the narrow roads and difficult terrain severely limit their use. Accessible and affordable public transport is essential for those without access to other means of transport, although falls below reasonable needs and expectations. There is a lack of public transport terminals, defined routes, consistency on fares and freight charges, and reliable scheduled services. In addition, long-distance and local services are not integrated, there is no reliable ticketing system, and vehicles providing public transport are old and offer a low level of comfort and cleanliness.

2. Government's Sector Strategy

11. Road infrastructure development is a prominent feature of the government's strategic development plan (SDP), 2011–2030, which states, "Timor-Leste will undertake substantial and long-term investment in roads to maintain our current road network, including a major program of road rehabilitation, repair and improvement. New roads will only be built if they serve important economic or social objectives".⁶ The SDP envisions that for road infrastructure, priorities are to (i) deliver a comprehensive roads maintenance program, (ii) rehabilitate all existing roads, (iii) construct new bridges to provide all-weather access on major routes within 5 years and on the remainder of national and district roads by 2030, (iv) build the road infrastructure required to support the development of the south coast, and (v) establish national ring road standards and establish a ring road to these standards by 2030. The SDP aims to fully rehabilitate all national and district roads to an international standard by 2020 along six major corridors,⁷ improve all rural roads to a minimum standard by 2015, construct and/or replace 3,200 linear meters of bridges throughout the nation, and build new four-lane national ring road highway by 2030.

12. The Ministry of Public Works, Transport and Communications is preparing a transport sector master plan (TSMP). The TSMP is expected to set out a policy, strategy, institutional, management, and investment planning framework for Timor-Leste's land, sea, and air transport subsectors. The priority areas proposed in the TSMP are (i) establishment of national land transport authority; (ii) revisions and complementary regulations in land transport, particularly in the areas of (a) right-of-way control and management in both urban and rural areas, (b) road traffic regulation and management, including in urban areas, (c) road safety planning, coordination, and implementation, and (d) public transport regulation and management; and (iii) establishment of a road maintenance and rehabilitation funding source and associated governance arrangements. The Asian Development Bank (ADB) is assisting with finalization of the draft TSMP for consideration by the Council of Ministers expected in 2018.

⁶ Government of Timor-Leste. 2011. *Timor-Leste Strategic Development Plan, 2011–2030*. Dili. p. 72.

⁷ These six corridors are as follows: along the north coast: (i) Dili–Manatuto–Baucau road link (118 km), (ii) Dili–Liquica–Bobonaro road (230 km); along the south coast: (iii) Suai–Cassa–Hat Udo–Betano–Natarbora–Viqueque–Beaco; on the north to south axis: (iv) Manatuto–Natarbora road link (81 km), (v) Dili–Aileu–Maubisse–Aituto–Ainaro–Cassa; and in the enclave district of Oe-Cusse Ambeno: (vi) Pante Makassar–Oesilo, Pante Makassar–Citrana, Oesilo–Tumin.

3. ADB Sector Experience and Assistance Program

13. While the Government of Timor-Leste can draw on its Petroleum Fund to finance transformative investments, its capacity to design and implement complex projects is still being developed. ADB provides 60% of official development assistance to Timor-Leste and is the lead development partner in the transport sector. ADB's financial contribution in the transport sector has amounted to \$317.15 million in grants, loans, and technical assistance, representing 82.42% of cumulative ADB assistance to Timor-Leste since 1999. ADB's support through the Road Network Development Sector Project in 2005 moved beyond emergency assistance to support wider road subsector development.⁸ Subsequently, ADB provided loans and technical assistance to support the government's 10-year (2010 to 2020) plan for core road network through network upgrading projects.⁹ ADB has helped to rehabilitate or upgrade about 103 km of national roads, and a further 281 km of district and national roads are due to be upgraded by 2019.

14. ADB's sector approach in developing the road subsector has so far been effective and well aligned with the government's SDP to fully rehabilitate and upgrade all national and district roads by 2020 (para. 11), but improvements have yet to reach corridors along the south coast identified in the SDP. With nearly half of the national road network under improvement, the pressing issue is a lack of adequate O&M financing, institutional framework, capacity, and systems. Under ADB's Road Network Upgrading Sector Project, performance-based maintenance is being piloted.

15. Other major development partners in the road transport subsector include the European Union, the Japan International Cooperation Agency, and the World Bank. The European Union has provided more than \$50 million through three rural development programs, each with a rural road rehabilitation component. It will also continue to help build small-scale local road construction capacity. Since 2000, the Government of Japan has provided more than \$35 million in grants for transport—about half for road improvements and for project studies and training in the sector, including capacity building in road maintenance and preparing guidelines and manuals for road maintenance. In May 2011, the World Bank approved a \$20 million grant to start the rehabilitation of the national road between Dili and Ainaro.

16. ADB's development program in Timor-Leste will continue to emphasize knowledge, systems, innovation, and technical expertise to accompany traditional financial support. The country partnership strategy, 2016–2020 supports the government's efforts to develop a sustainable non-oil economy by improving service delivery and strengthening the business environment.¹⁰ The strategy has an emphasis on quality design and the efficient implementation of infrastructure projects. The indicative lending pipeline for 2017–2019 includes the following: (i) the 57 km Baucau–Viqueque road project that will link the north corridor to the south corridor, which was programmed in 2017; and (ii) the Sustainable Road Transport Project to further support the government to (a) improve national road corridors, (b) continue building road O&M capacity, (c) strengthen institutional and regulatory frameworks, and (d) scale up maintenance works.¹¹

⁸ ADB. 2005. *Report and Recommendation of the President to the Board of Directors: Proposed Asian Development Fund Grant to the Democratic Republic of Timor-Leste for the Road Sector Improvement Project*. Manila (Grant 0017-TIM).

⁹ ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Asian Development Fund Grant to the Democratic Republic of Timor-Leste for the Road Network Development Sector Project*. Manila (Grant 0180-TIM). ADB. 2012. *Report and Recommendation of the President to the Board of Directors: Proposed Loans to the Democratic Republic of Timor-Leste for the Road Network Upgrading Sector Project*. Manila.

¹⁰ ADB. 2016. *Country Partnership Strategy: Timor-Leste, 2016-2020*. Manila

¹¹ ADB. 2017. *Country Operations Business Plan: Timor-Leste, 2017-2019*. Manila.

Problem Tree for Transport

