A. Sector Performance, Problems, and Opportunities

1. Timor-Leste’s Strategic Development Plan, 2011–2030 (SDP) aims to sustain economic growth and fast track economic development to achieve a modern and diversified economy with high-quality infrastructure.\(^2\) The SDP is organized around four strategic pillars: (i) social capital development, (ii) infrastructure development, (iii) economic development, and (iv) institutional development. From 2011-2020, public investment (including roads) is intended to create the conditions needed for the private sector to drive growth. An efficient and safe transport system is essential to achieving the SDP goals.

2. The poor condition of roads is a constraint to inclusive development. Economic growth since 2007 has led to a concentration of opportunities in Dili. Diversification of economic activity beyond Dili would help spread the benefits of petroleum wealth more widely, and enabling the provision of services outside the capital would support growth of the rural economy. Poverty would be reduced, particularly in rural areas, by connecting the poor to markets and increasing access to basic public services.

3. Timor-Leste has approximately 8,700 kilometers (km) of roads. The road network is dense in comparison to other low-income countries around the world. The network comprises 1,440 km of national roads; 745 km of district roads; 716 km of urban roads; and approximately 5,800 km of rural roads, of which 1,700 km are considered core rural roads. Many of the noncore rural roads are only accessible by motorcycle. Only 5%–10% of the national road system is in good condition, with almost 60% of national roads, 76% of district roads, and 60% of core rural roads in poor or bad condition; the noncore rural roads are in worse condition. Timor-Leste’s unstable geology and climate are a challenge to the provision of land transport. The country is mountainous, with steep slopes prone to landslides in heavy rains. Climate change forecasts indicate there will be higher intensity rainfall events, resulting in more landslides. Increased flooding poses risks to bridges, and sea level rise poses a risk to coastal roads and bridges.

4. Most travel within Timor-Leste is by road. Approximately 70% of the population resides in rural areas, and 88% of the rural population lives within short walking distance of a road providing access to schools, health centers, markets, and employment. In rural areas, vehicle ownership is low and public transport is infrequent. Children walk an average of 30 minutes to school, although this can be considerably more in isolated areas. Many people living outside market towns walk two or more hours to reach their destinations.

5. Traffic levels are generally light. Less than 240 km of the 2,185 km of national and district road network have average daily traffic greater than 1,000 vehicles, and fewer than 20 km support more than 3,000 vehicles per day. The highest volumes of traffic are on roads in and near Dili, where growth in traffic is greatest. Traffic congestion is beginning to emerge. Vehicle registrations grew by 28% per annum during 2010–2013. Motorcycles are the fastest growing vehicle class.

6. The land transport sector suffers from human and institutional capacity constraints on planning, project implementation, and maintenance. The National Directorate of Roads, Bridges


and Flood Control in the Ministry of Public Works, Transport and Communications has only 20 engineers. The SDP has set a challenging agenda for investments in land transport up to 2020. However, government planning processes currently fail to properly consider the suitability, timing, or priority of projects recommended in the SDP. Government sector plans often reiterate SDP goals, intermodal alternatives are generally not considered, and the quality of implementation is poor due to inadequate planning and preparation. Asset maintenance has generally been inadequate since independence in 2002, raising the risk that recently improved assets will quickly deteriorate. While large sums have been allocated for road rehabilitation and upgrading, relatively minor amounts have been provided for road maintenance.

7. The National Directorate of Land Transport (DNTT) provides drivers licenses, vehicle registration, and public transport route licenses. The DNTT performs all licensing and registration tasks itself using outdated processes. Vehicle registration fees range from $55 for motorcycles to $145 for large trucks, which are low compared to neighboring Pacific and Southeast Asian countries. The DNTT's annual revenue from drivers’ licenses, vehicle registration, and public transport licensing was $2.1 million in 2014. It does not retain its revenues, but instead turns them over to the Ministry of Finance. If retained, the DNTT’s current level of revenue could cover its operating expenses but would fall far short of the amount needed for road maintenance.

8. The DNTT has a large staff performing the clerical functions of vehicle registration and drivers’ licensing adequately, although modern methods and outsourcing would bring improvements. The DNTT is also responsible for overseeing safety, coordinating traffic regulations and enforcement, designing and maintaining road signs and signals, managing public transport terminals, and planning. However, the DNTT does not have sufficient capacity to carry out these duties effectively. A larger operating and capital budget and outsourcing could expand the DNTT’s capacity.

9. The private sector in Timor-Leste also has capacity constraints. There are many small labor-based construction businesses, but few possess heavy equipment. There are only two domestic consulting engineering firms capable of providing project design and supervision services. Foreign firms are therefore generally required for construction and project management. The domestic private sector is, however, well placed to develop through subcontracting or joint venture arrangements with foreign firms. Labor-based methods are used for maintenance and rehabilitation of rural roads, and provide employment opportunities for local communities.

10. Timor-Leste has one of the highest death rates from road accidents in Asia and the Pacific. The government has yet to address road safety systematically, and increasing motorcycle ownership is a major safety issue. While some road safety regulations exist, enforcement is poor (with the possible exception of motorcycle helmet usage).

B. Government's Sector Strategy

11. The SDP is the main guide for investment in the transport sector, and the National Directorate of Roads, Bridges and Flood Control’s operational planning is based on this. The SDP’s objectives include the (i) rehabilitation of all national and district roads, (ii) widening of these roads to international standards, (7 meters width) (iii) rehabilitation of all rural roads, (iv) construction of new bridges, and (v) development of a comprehensive maintenance program. The SDP envisages the development of a national highway ring road by 2030 that will eventually have two lanes in each direction.

12. The SDP emphasizes road rehabilitation and upgrading in the first 10 years (i.e.,
2011–2020) to address many years of underinvestment and neglect. However, it gives little prominence to longer-term maintenance requirements. The SDP specifies in particular, “repairing roads to a condition in which they can be maintained”.

13. The Ministry of Public Works, Transport and Communications’ annual work plan for 2013 proposed rehabilitating and upgrading 1,914 km of national, district, and urban roads; rehabilitating 1,279 km of rural roads; and undertaking periodic and routine maintenance on 1,720 km of rural roads. The work plan also included 2,640 meters of bridge rehabilitation or construction on national and district roads. However, the plans lack detailed feasibility studies, designs, and bidding documents, and therefore could not be implemented.

14. The National Directorate of Roads, Bridges and Flood Control has to date received very little money for road maintenance in the State Budget. It received $4.4 million for road maintenance in 2013, $1.1 million in 2014, and $0.9 million in 2015. A number of government and donor funded training and rural development programs, combined with specific grants from the Government of Australia, cover additional rehabilitation and uncertain amounts of periodic maintenance, especially on rural roads. However, the Sixth Constitutional Government, which assumed office in February 2015, places more emphasis on asset management. The Ministry of Public Works, Transport and Communications reestablished a dedicated maintenance unit in 2015 with a view to implementing more systematic nationwide maintenance. This is particularly important as new or substantially rehabilitated assets are created. Planning for scaled-up maintenance activities is receiving development partner support, including from the Asian Development Bank (ADB).

15. In 2011, the government established the Infrastructure Fund to finance major infrastructure projects in conformity with the SDP, subsector plans, and individual project briefs. However, nominated projects are generally not adequately designed, and implementation is poor. Unlike normal consolidated funds, the Infrastructure Fund allows for multiyear budgeting, a clear advantage for infrastructure planning and implementation. However, due to lack of capacity in the National Directorate of Roads, Bridges and Flood Control, such projects are often classified as emergency works which are contracted using single-source procurement, bypassing the preparatory due diligence that would normally be employed.

16. On the country’s south coast, transport planning and strategy have largely been left to the Ministry of Petroleum and Natural Resources, and Timor Gap (the national oil company). The rationale is that transport infrastructure is needed predominantly to support development of the petroleum sector and associated industries. However, the scale of planned road and port development appears to exceed the short- and medium-term transport requirements. In Oecusse, transport planning is delegated to the special economic zone authorities, and there appears to be a similar issue of plans for transport investment that exceed likely short to medium term requirements.

17. Progress has been made in preparing guidelines and regulations for land acquisition for public purposes, and affected persons are generally protected from involuntary resettlement. Processes for compensation exist and are followed in practice, although the corresponding legislation has not yet been approved. Most environmental impacts from road construction projects are minor, site-specific, and temporary. Nonetheless, ADB has helped the government develop an environmental assessment and review framework, and continues to assist the National Directorate of Environment with capacity development.

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3 Footnote 2 pp74
C. ADB Sector Experience and Assistance Program

18. ADB has been active in the land transport sector since 2000, when it was responsible for implementing multi-donor-funded emergency infrastructure rehabilitation projects. Until 2009, ADB and other development partners focused assistance on periodic maintenance and rehabilitation of existing roads. With strong growth in the economy, and under the guidance of the SDP, ADB has taken a transformational approach by supporting reconstruction and upgrading of the more heavily trafficked roads, where such actions were economically justified. Since 2011, the grant-financed Road Network Development Sector Project ($46 million) and the loan-financed Road Network Upgrading Project ($40 million) have been implemented, leading to the upgrading of 102 km (7%) of the national highway network by the end of 2015. The Road Network Upgrading Sector Project (originally $50 million) will upgrade a further 178 km, such that by the end of 2018, ADB will have directly supported the upgrading of 280 km (20%) of the national road network. The World Bank and Japan International Cooperation Agency have current projects that cover the upgrading of about 220 km by the end of 2018.

19. ADB has also supported capacity development under the ongoing Infrastructure Project Management technical assistance, which aims to improve budget execution rates through capacity substitution, and through supporting the capacity development requirements of individuals through scholarships and other training. Support for road maintenance planning is ongoing. A complementary Infrastructure Management technical assistance is also ongoing and aims to improve strategic planning and management of the Ministry of Public Works, Transport and Communications. A road safety initiative will be implemented under the Road Network Upgrading Sector Project to improve institutional arrangements through creation of a national road safety council or similar organization.

20. During the country partnership strategy period, existing road upgrading projects will continue, with the Road Network Upgrading Sector Project upgrading works scheduled to be completed by the end of 2018. However, performance-based maintenance components will be ongoing until 2020, providing an opportunity to embed systematic road maintenance practices to manage the new roads. This will include roads upgraded with the support of other development partners, and it is expected to extend to more than 40% of the most heavily trafficked routes. Future ADB assistance will involve a decline in support for upgrading of national roads, as the development partner-financed program will have covered the majority of economically justifiable upgrading requirements. ADB will continue supporting the transport sector through institutional efficiency and capacity improvements, and through measures to promote sustainability, including regulation, safety, and cost recovery.

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6 ADB. 2013. Democratic Republic of Timor-Leste: Road Network Upgrading Sector Project. Manila. (Sovereign Project 46260-002, $40.00 million Ordinary capital resources loan and $10.00 million Asian Development Fund loan, approved on 19 September 2013).
Problem Tree for Road Transport [nonurban]