

SECTOR ASSESSMENT (SUMMARY): TRANSPORT

Sector Road Map

I. SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES

1. Physical power, transport, water supply, and sanitation infrastructure that is necessary for socioeconomic development is generally in poor condition and poorly managed in Kiribati.¹ Infrastructure is required in key population centers and in potential economic growth centers to increase services and lower the economy's cost structure. Many infrastructure services are inefficiently delivered, costly to provide, and are charged to users at below-cost prices. The Government of Kiribati has limited ability to increase public investment. Poor infrastructure raises costs to businesses, constrains employment creation, and so contributes to poverty. Poor access to basic public services is a main cause of hardship in Kiribati and a contributor to poor health outcomes. Poor or inaccessible services undermine willingness to pay and create a downward spiral in service provision.

2. A main difficulty in assessing the sustainability of infrastructure sectors in Kiribati is the fact that capital is, in effect, treated as a free good. All infrastructure sectors receive periodic injections of capital, which are then allowed to run down over time. Periodic injections of capital are typically substantial relative to Kiribati's gross domestic product. Requests for capital contributions of this magnitude create the impression that infrastructure services in Kiribati are not sustainable without ongoing donor support.

3. Kiribati has relied on the donor community to fund major infrastructure investments. In 2008, about 11 kilometers (km) of main road in Betio and Bairiki were upgraded at a cost of about A\$14 million, financed by a grant from the Government of Japan. A development budget (separate from the annual government budget and not requiring appropriation) is prepared annually, presenting estimates for capital projects that the government wants to implement and which are aligned with the Kiribati Development Plan (KDP) 2012–2015. Such projects are based on the ministries' operational plans, which are intended to operationalize the KDP.

4. The bulk of investment in infrastructure continues to come from external development partners. The development fund is financed mostly by overseas development partners, which include the Asian Development Bank (ADB); Australia; the European Union; the Forum Secretariat; Japan; New Zealand; the Secretariat of the Pacific Communities; Taipei, China; United Nations agencies the World Bank, , and the World Health Organization. The government contributes a relatively minor amount to the development budget. The government and development partners jointly subsidize about a third of operating expenditures. This reliance on development partners is unsustainable in the medium term. Future investments will need to be funded through user fees (public enterprises' own sources) or through explicit government subsidies. Hence, the government needs to ensure that its financial commitments to the infrastructure sectors are carefully prioritized and that, wherever possible, consumers face the full cost of the service.

5. Severe constraints to infrastructure development are imposed by (i) the small land area; (ii) geographic dispersion across 5,000 km of ocean; (iii) remoteness from major markets, with

¹ This summary is based on the Pacific Regional Infrastructure Facility. 2009. *Kiribati: Infrastructure Sectors Review*. Sydney. Available on request.

associated high external transport costs; (iv) high vulnerability to natural forces, including climate change and a rise in sea levels; and (vi) scarce natural resources. In the roads subsector, isolation and lack of economy of scale contribute to high construction and maintenance costs and logistical problems in implementation.

6. **Road network and condition.** The road network is very small, comprising about 546 km of main roads (119.4 km of which are sealed) and 262 km of minor roads (13.8 km of which are sealed). The main sealed roads are on South Tarawa (41.6 km) and Kirimati (84.0 km), while the unsealed roads are scattered across 20 islands. (North Tarawa is considered separate from South Tarawa). Kirimati has the largest network, with 84 km of sealed and 102.8 km of unsealed roads. While the lightly travelled roads of Kirimati are in relatively good condition, the heavily used South Tarawa roads are deteriorating rapidly and the impact of their poor condition is nationally significant.

7. Prolonged wet weather and ever-heavier traffic volumes have accelerated road damage on South Tarawa since 2014 and, while parts of the network were rehabilitated in 2008, the remaining sections of paved roads have reached the end of their economic life. This profoundly affects the lives of the entire population since virtually all inhabitants live close to and depend in many ways on the main road. Average travel speed is reduced to 20 km per hour and vehicles are forced to navigate large, deep depressions that fill with water during the rainy season. About 6,000 vehicles per day use the main road at the Betio causeway—3,000 in each direction, with many vehicles such as minibuses making multiple trips back and forth along the same section of the road. Taxi operators have reportedly stopped services to avoid further damage to vehicles. In the dry season, dust along unpaved sections causes upper respiratory tract problems. Large pools of stagnant water present another public health risk as breeding grounds for mosquitoes. South Tarawa residents cannot escape these problems. The atoll is generally no more than 100 meters wide and almost all residents live, work, or study in dwellings, small businesses, and schools that line either side of the road for almost its entire length.

8. A lack of routine drainage maintenance and a failure to make timely pothole repairs have allowed formerly paved sections of the road to be reduced to a gravel surface. No periodic maintenance or resealing has been done. Moreover, the roads are more than 20 years old, are past their design life, and would be overdue for rehabilitation even after proper care.

9. Road use in South Tarawa has grown by 4% annually since 2010 with 6,000 vehicles now travelling the busiest roads in Betio and Bairiki each day, 40% of them privately owned minibuses that provide public transportation. The government hires these minibuses and uses its own buses to transport government personnel to and from work at a cost of about A\$1.5 million per annum. The few heavy vehicles, e.g., fuel tankers and container transporters, contribute significantly to the erosion of the road edges, but the subgrade is strong because of the underlying coral gravel, and pavement rutting has not occurred.

10. Capital developments in South Tarawa and the outer islands are undertaken by the Ministry of Public Works and Utilities (MPWU). Individual island councils have responsibility for maintenance. However, limited resources mean that the roads are not generally maintained.

11. To ensure proper maintenance in the future, the project can make use of an opportunity presented by the South Tarawa road network's small size and heavy traffic to rationalize the management and financing of the sector. Adequate financing of sector needs will be required along with steps to encourage contractor development. About A\$300,000 in tolls is collected annually on the Betio causeway to fund its maintenance. This is considerably more than the

total annual road maintenance needs of South Tarawa, and the fund has a balance of A\$2.5 million. Fuel tax and annual registration fees are low, and the creation of a general road maintenance fund that would be financed entirely by road users is feasible. A logical next step that the government appears willing to consider is the establishment of a land transport authority to bring all road sector management functions under one organization. The World Bank intends to finance a diagnostic analysis, prepare recommendations, and support implementation of reforms alongside the joint implementation of an investment project with ADB.

II. GOVERNMENT'S SECTOR STRATEGY

12. The existing institutional arrangements for road sector management are fragmented and fail to provide an adequate level of service. Most roads receive little or no maintenance, and the vehicle population growth on South Tarawa will inevitably lead to a rapid deterioration of the road pavement. Maintenance is unplanned and reactive. The budget allocation of approximately A\$80,000 per year is inadequate since it also covers the maintenance of sea walls. The sector is compact, however, which means that comprehensive rehabilitation can be carried out in a single intervention. Capacity building and institutional reform are essential to ensure that future maintenance is adequately performed and financed. Virtually no private sector capacity for road maintenance now exists, but the government plans to encourage such capacity. The MPWU intends to gradually become an asset manager, outsourcing implementation of works to contractors. It will take considerable time to develop a capable private sector, but small-scale outsourcing such as community-based road maintenance is feasible.

13. In South Tarawa, the responsibility for maintenance of the main roads lies with the civil engineering division (CED) of the MPWU, while the responsibility for access and feeder roads is with the Betio and Teinainano urban councils. In addition to the CED, the MPWU comprises the construction division (responsible for government buildings), the technical design division, the energy unit (responsible for data collection and street lighting), and the water unit (responsible for outer-island water supplies). The MPWU employs about 80 staff, none of whom are fully qualified civil engineers. About one-third of the 37 positions at the CED are vacant, but it is reasonably well equipped for maintenance of unsealed roads and general works (including sea walls), with two backhoe excavators, two graders, two steel-wheeled rollers, two rubber-tire rollers, and four tipper trucks, all provided by donors. The urban councils have no capacity for maintenance.

14. The Highway Authority, administered by the Ministry of Communications and Transport and Tourism, is responsible for general road safety and is the approving authority for road features such as speed bumps and bus stops as well as permits to excavate the road. While called an authority, the body is simply a joint administrative arrangement between the MPWU and the Ministry of Communications and Transport and Tourism.

15. The urban councils are responsible for collection of annual vehicle registration fees. The councils retain the fees and do not generally undertake, or commission others to undertake, road maintenance. The councils are also responsible for setting public transport fares. The police have responsibility for licensing drivers and enforcement of traffic rules and vehicle fitness regulations. Regulations for roads and road transport, where they exist, are outdated. The government levies duty on imported vehicles and fuel, and the levies are directed to general revenue.

16. Kirimati has its own CED under the Ministry of Line and Phoenix Islands. This CED is responsible for the whole road system and for maintaining the airport runway and apron, and is

also responsible for the seawalls and for dredging the lagoon channel to allow its use by small ships. The division has nine staff.

III. ADB SECTOR EXPERIENCE AND ASSISTANCE PROGRAM

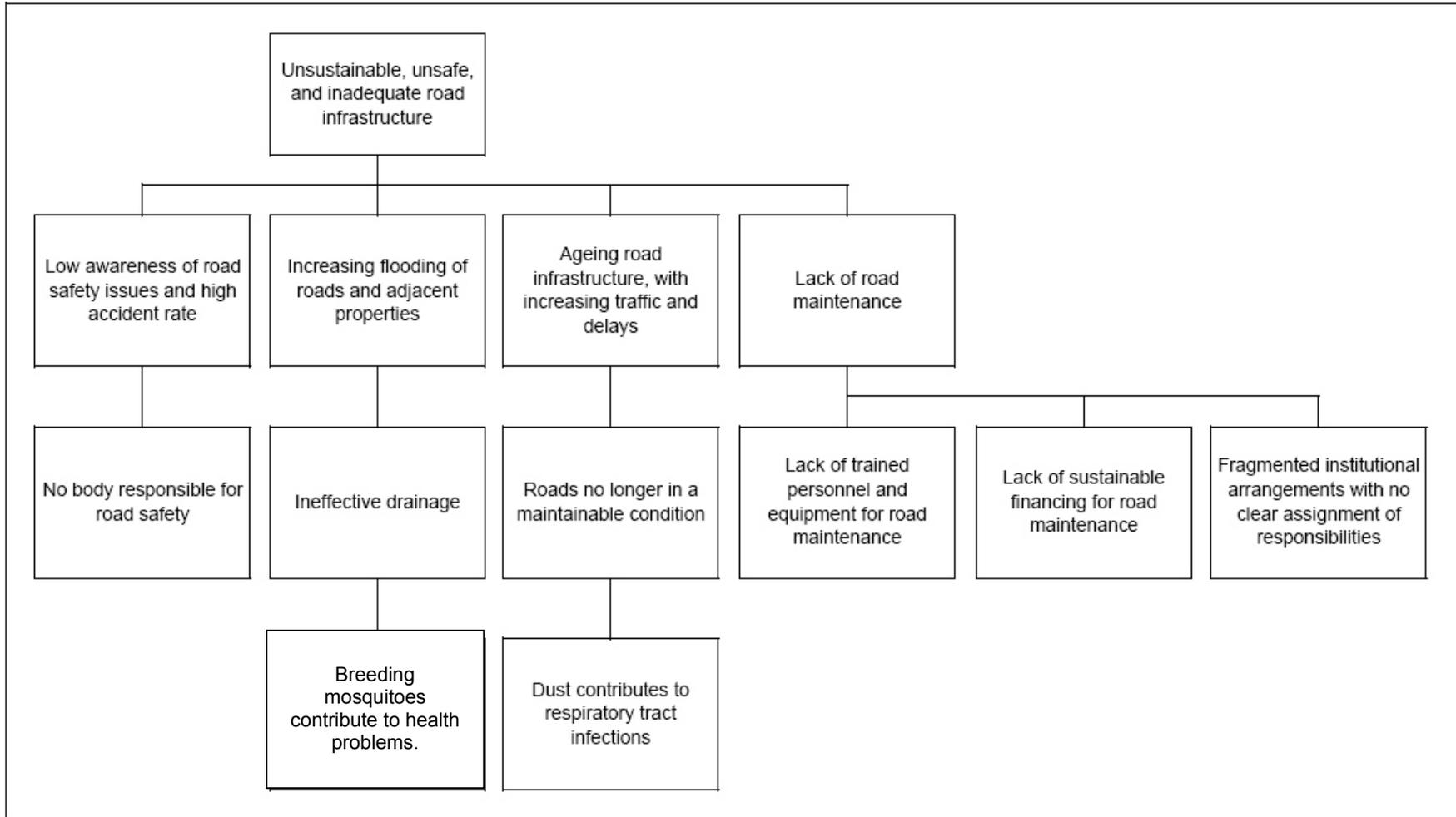
17. ADB has supported the Kiribati infrastructure sector since 1976. Its most recent experience was the Sanitation, Public Health, and Environmental Improvement Project, approved in 1998 and completed in 2005.² The MPWU project management unit was meant to work closely with the consultants in design and supervision of project civil works but added little value to these activities, mainly because of staff shortages and competing priorities. Similar weaknesses are expected when implementing future projects, and project design must ensure that the implementing agency receives adequate support. The technical assistance attached to the project supported the restructuring of a public utilities board, but the board has yet to take full advantage of the opportunities presented by the changes. While some restructuring milestones were achieved, the board is still subsidized by the government and exhibits little accountability for its levels of service, delivery, and efficiency. Caution is therefore required if substantive reforms, such as the creation of a land transport authority, are to be supported, even though they are essential to improve sector efficiency.

18. ADB is working closely with the World Bank and the governments of Australia and New Zealand in the infrastructure sectors. The current road rehabilitation project is jointly financed by ADB, the Government of Australia via the Pacific Regional Infrastructure Facility (PRIF), and the World Bank. Financing from Australia and PRIF will enable the project to deliver economies of scale to road construction.³ Similarly, the PRIF partners are working closely to develop a water and sanitation project for South Tarawa.

² ADB. 1998. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Republic of Kiribati for the Sanitation, Public Health and Environment Improvement Project*. Manila.

³ The Sustainable Towns Project aims to improve the capacity of the South Tarawa urban councils to manage infrastructure assets, including roads, and to develop a sustainable community of 150 dwellings in Temaiku.

Problem Tree for Transport



Source: Asian Development Bank.

Revised Sector Results Framework (Transport, 2010–2016)

Country Sector Outcome		Country Sector Outputs		ADB Sector Operations	
Sector Outcomes with ADB Contribution	Indicators with Targets and Baselines	Sector Outputs with ADB Contribution	Indicators with Incremental Targets (baselines zero)	Planned and Ongoing ADB Interventions	Main Outputs Expected from ADB Contributions
More efficient movement of goods and people	Increase in average travel speed to 40 km per hour by August 2016 (2010 baseline: 20 km per hour)	The road network in South Tarawa is improved, safer, and well maintained.	Beneficiaries from new or rehabilitated roads (42,000) Length of paved roads in maintainable condition increased to 40 km by 2016 (2008 baseline: 7 km)	<p>Planned key activity areas National and feeder roads (100% of funds)</p> <p>Pipeline projects with estimated amounts</p> <p>Ongoing projects with approved amounts Road Rehabilitation Project (\$12 million)</p>	<p>Planned key activity areas 33 km of national and feeder roads to be rehabilitated</p> <p>Pipeline projects 33 km of national and feeder roads to be rehabilitated</p> <p>Ongoing projects None</p>

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