



ROAD MANAGEMENT IN PAPUA NEW GUINEA

An evaluation of a decade of Australian support 2007–2017

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“THE IMPORTANT THING IS TRANSPORT; WE NEEDED TRANSPORT TO TAKE OUR COPRA AND COCOA TO THE MARKET. WHEN THEY BUILT THIS ROAD, IT PROVIDED AN IMPORTANT SERVICE FOR US. THE WOMEN ALSO HAD A CHANCE TO MAKE THEIR OWN MONEY THROUGH SELLING SWEET POTATO, TARO AND OTHER THINGS LIKE BETEL NUT AND MUSTARD. IN ORDER FOR THEM TO GO TO THE MARKET THEY HAVE TO USE THE ROAD. THE ROAD BROUGHT ABOUT DEVELOPMENT, THIS THING THEY CALL DEVELOPMENT IS THE ROAD.”

—Village chief, quoted in TSSP Independent Socio-Economic Performance Story Impact Study

THE EVALUATION

Spending on improving roads in Papua New Guinea (PNG) has been a major component of Australia’s official development assistance to PNG over the last decade, and comes close to three-quarters of a billion dollars. This evaluation assesses the management and effectiveness of this spending through the Australia–PNG Transport Sector Support Program (TSSP), which has been the major vehicle for Australian assistance.

Australia’s contributions through TSSP have been important. Over the last decade, TSSP has maintained around 2,000 km of roads, which amounts to roughly a quarter of PNG’s national roads and close to a half of national priority roads—the country’s most economically important roads. TSSP has delivered a long-term program of maintenance in the Autonomous Region of Bougainville, helping it to recover from civil war. TSSP has rebuilt vital infrastructure in Oro province, re-establishing access to markets and services after a devastating cyclone destroyed bridges and other infrastructure in 2007. TSSP has provided quality technical assistance, which is an important source of capacity for sector agencies. Finally, TSSP has improved the quality of information about the state of roads in PNG, helping to raise the level of policy debate about how to best look after them.

Key Facts

- **Establishing and maintaining a road network in a country like PNG is extremely challenging** due to its difficult terrain and geology, high rainfall, and sparsely distributed population.
- **Only 68 per cent of the rural population of PNG live within two kilometres of an all-season road.** This isolates millions of Papua New Guineans from markets, opportunities to earn income, and health and education services. Bad roads are a constraint to growth and a major cause of poverty and hardship.
- **PNG has 30,000 km of roads, 8,738 km of which are ‘national’ roads and the responsibility of PNG’s National Government.** All other roads are ‘non-national’ and the responsibility of lower levels of government.
- **PNG’s roads are in poor condition.** Almost 60 per cent of national roads are considered to be in very poor condition. Just 13 per cent of national roads are in good condition.
- **The poor state of roads is due to a combination of low levels of funding and deficient road management.** Government funding for road maintenance has been limited, despite the importance of maintenance being acknowledged by successive PNG Governments.
- **Historical underfunding of routine road maintenance is exacerbated by PNG’s current fiscal challenges.** Road conditions over the sealed portion of the priority national network are predicted to decline if levels of Government funding continue at their present rate.
- **Donors play an important but declining role in the transport sector.** Australia’s influence is expected to decline in the long run, as PNG spending and funding from other donors increase.

FINDINGS

Design

TSSP's focus on the maintenance of PNG's 4,300 km of national priority roads is sound. These roads provide the greatest economic and social benefit to the greatest number of people in PNG.

TSSP has been unable to sustain its support at previous levels at a time when PNG's fiscal challenges have increased the importance of donor support for routine maintenance.

Given the very high costs of underfunding routine maintenance, DFAT should reverse the commitments it has made since 2013 to transition from routine and periodic maintenance to 'high-impact, complex capital works'.

There is underfunding of the sector given needs and the allocation of PNG budget resources favours new work over maintenance. Given the large potential pay-offs from TSSP support to improve sectoral planning and budget preparation, this work should continue.

Capacity development

TSSP's capacity-building approach, consisting of targeted technical assistance combined with a program of works implemented through government systems, provides the best prospects for influencing PNG Government policies and implementation.

TSSP has had a powerful influence on sector policies. However, there is little evidence of any measurable improvement in the technical and organisational capacity of the Department of Transport and Infrastructure (DoTI) or the Department of Works and Implementation (DoWI).

Supporting the private sector

There are opportunities to strengthen TSSP's support for small-scale contractors in a way that would not add significantly to the cost of project management and supervision services. Care should be taken to ensure continuity of workflow to small contractors to avoid the boom-bust cycles that can occur when there is a lack of continuity of support.

Program efficiency and impact

Improved roads have positive economic and social impacts on the lives of affected communities and road users in PNG, with women benefiting as much as men.

TSSP analysis has shown that savings in road agency and road user costs are potentially very large, but only when there is sustained commitment to a maintenance strategy. Without that, the benefits of money spent on individual TSSP-supported projects will soon dissipate.

Road safety and gender

TSSP's initial efforts to assess safety risk through road safety surveys, and to address the main shortcomings in conjunction with maintenance treatments, are well founded.

In the absence of dedicated resources over the last two years, gender has become largely invisible in project reporting. More can be done to highlight gender impacts of the program without necessarily applying significant additional resources.

Monitoring and evaluation

Despite support from multiple donors, including the ADB, Australia and the World Bank, DoWI's Road Asset Management System (RAMS) has previously failed to become institutionalised as a key building block for planning and management of the road transport sector. This has meant there has been no reliable basis for monitoring progress against shared objectives for improvement of the condition of national priority roads. TSSP has worked to address this weakness by completing a comprehensive survey of the condition of national roads. This has produced accurate data on the condition of the road network, and a better foundation for decision-making in the sector.

Mutual obligations

There has been a decline in the coverage in DFAT performance reports on the PNG Government's performance in fulfilling its commitments. Recent public reports have contained no direct commentary on the PNG Government's performance in taking responsibility for routine maintenance.

Donor funding still accounts for 36 per cent of transport sector resources, and Australian support is a significant share of that amount. On this basis, there is scope for DFAT to exercise stronger leadership with like-minded donors in lobbying for budget allocations that sensibly reflect empirical analysis of projects that will provide the best social and economic returns for the resources invested.



Highlands Highway near Goroka. Much of the national road network is in a poor condition. Sections of road like this one are not uncommon. Photo: Matthew Dornan

RECOMMENDATIONS

DFAT management has agreed, or agreed with qualification, with all of the recommendations. The full evaluation report, including the management response, is available at dfat.gov.au/ode.

Design

- Reaffirm maintenance of the national road network and within this national priority roads as the best value for money use of TSSP resources.
- Provide a stable and predictable source of multi-year funding for road maintenance.
- Fund an independent expenditure tracking study in the roads sector to address the lack of reliable information about spending on roads by different levels of Government in PNG.

Capacity development

- Fund and be held accountable for collecting routine information on road, bridge and traffic conditions for the national network and developing and operating road and bridge asset management systems to support DoWI and DoTI decision-making.

Supporting the private sector

- Require Project Management Consultants to prepare a plan for strengthening small-scale local contractor capabilities, including in conjunction with long-term maintenance contracts.

Value for money

- Increase the focus on demonstrating the benefits of optimal life-cycle maintenance for a more limited number of national road corridors through long-term, performance-based maintenance projects.
- Mandate cost-benefit analysis (CBA) of high cost projects which reduce the availability of funds for maintenance of roads that might otherwise become impassable, and require the CBA to take this opportunity cost into account.
- Develop and use simplified criteria generated by RAMS as the basis for decisions on what treatment to implement and what form of contract to adopt.
- Ensure that the program's gender equality targets are transparent and reported against.
- Address the risks identified by road safety surveys, but with better monitoring of impacts.

Mutual accountability

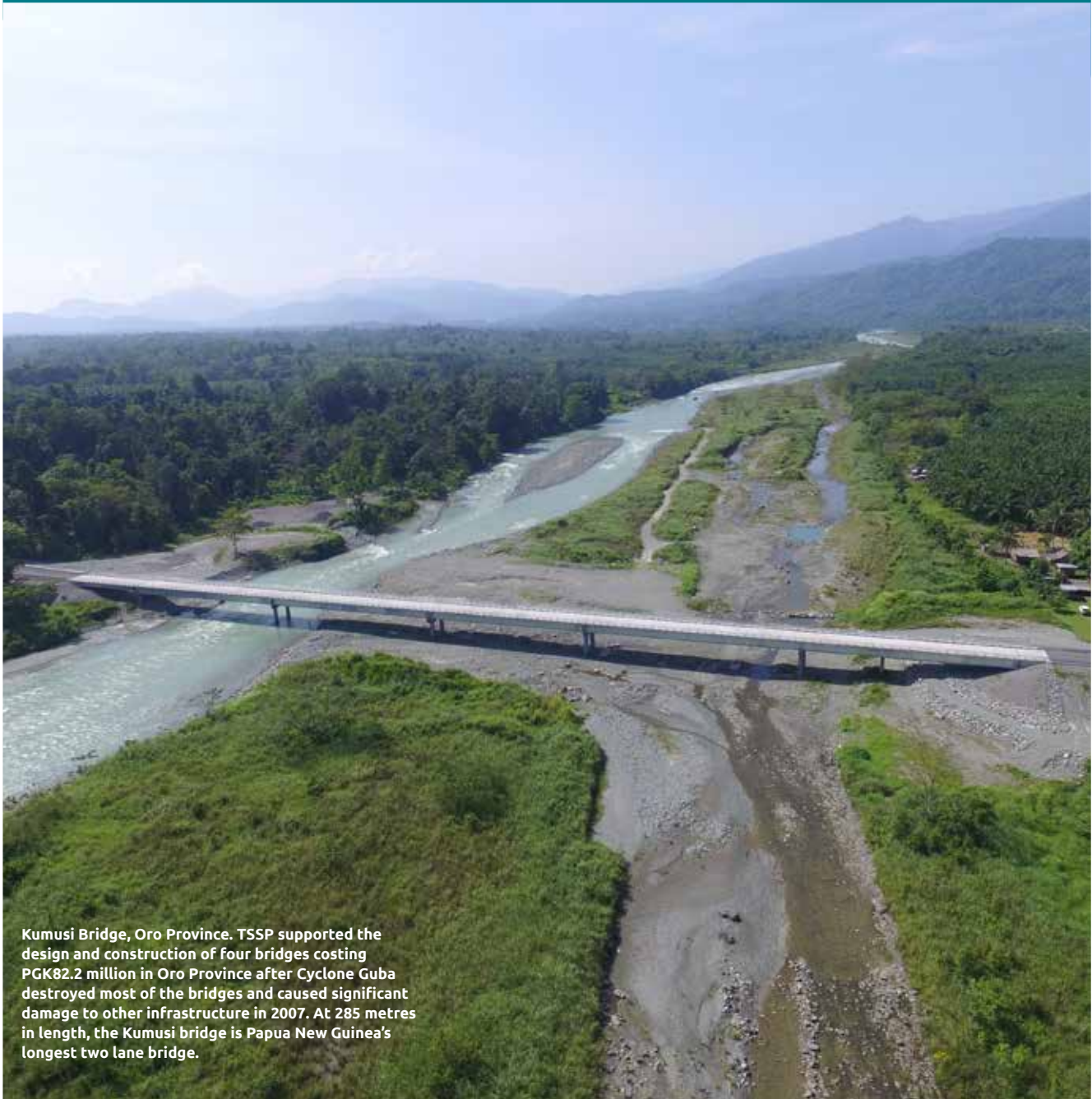
- Establish a formal structured process for communicating expectations about the PNG budget and providing feedback on budget outcomes at a political level.
- Report progress by the PNG Government in fulfilling its partnership agreement commitments to provide adequate funding of road maintenance in Aid Program Performance Reports.
- Report available information on the condition of national priority roads and how it is changing in Aid Program Performance Reports.

Evaluation and research

- Establish a costed and prioritised plan for evaluation and research.

LOGIC OF ROAD MAINTENANCE

TSSP's focus on routine maintenance is based on the fact that routine maintenance, on average, offers economic returns that are considerably higher than investment in new infrastructure. The World Bank estimates that the cost of deferring routine maintenance of a sealed road is equivalent to 6 times the total cost of that maintenance after three years of neglect, and 18 times that cost after five years of neglect. Socio-economic cost also needs to be considered. While these costs increase slowly initially, typically in the form of vehicle wear and tear, they rise exponentially when the road is in such poor condition that travel times are significantly extended, or when the road is no longer accessible to certain vehicles or in wet weather.



Kumusi Bridge, Oro Province. TSSP supported the design and construction of four bridges costing PGK82.2 million in Oro Province after Cyclone Guba destroyed most of the bridges and caused significant damage to other infrastructure in 2007. At 285 metres in length, the Kumusi bridge is Papua New Guinea's longest two lane bridge.

Office of Development Effectiveness

The Office of Development Effectiveness (ODE) is a unit within the Department of Foreign Affairs and Trade which monitors the quality and assesses the impact of the Australian aid program.