



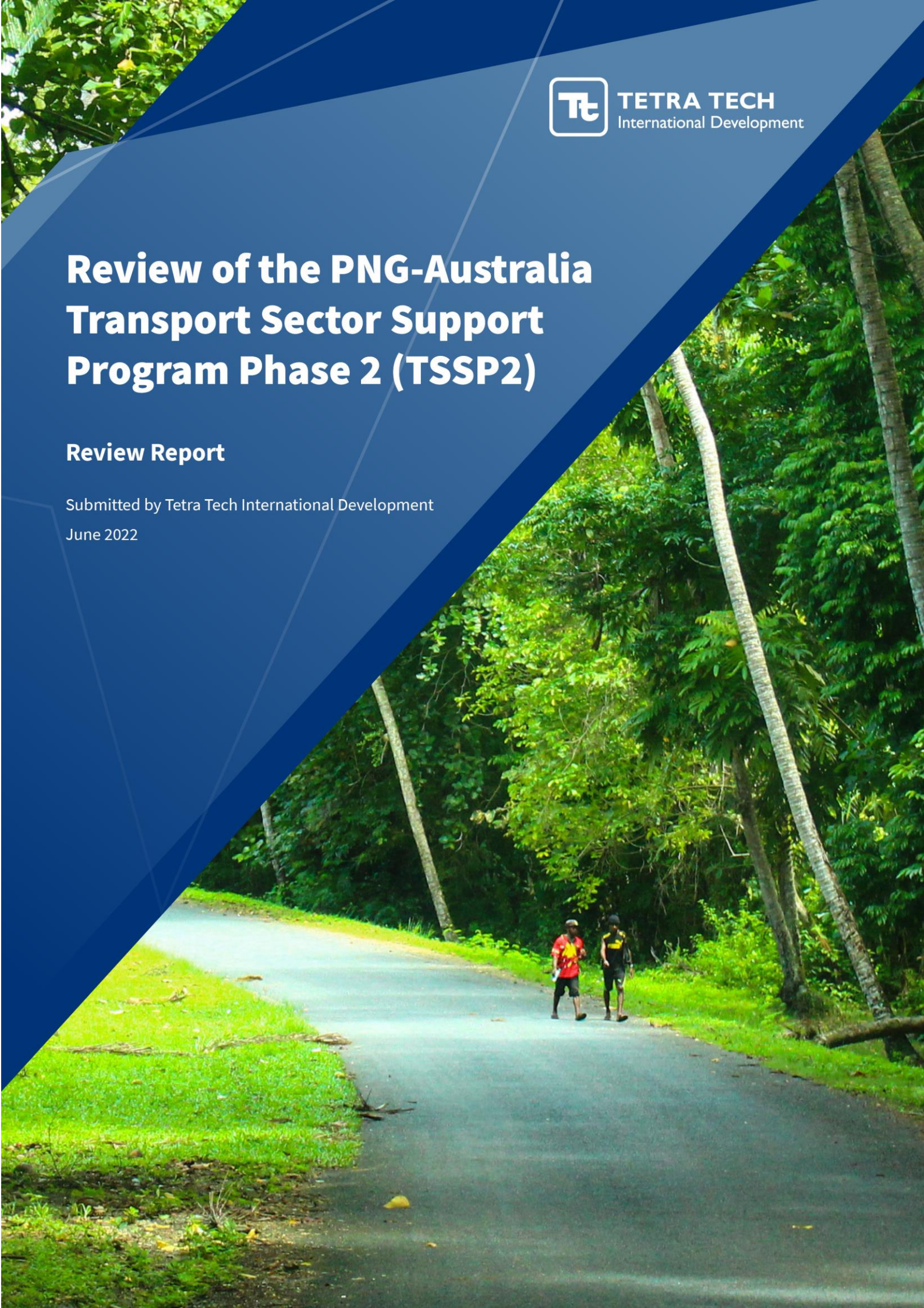
TETRA TECH
International Development

Review of the PNG-Australia Transport Sector Support Program Phase 2 (TSSP2)

Review Report

Submitted by Tetra Tech International Development

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Executive Summary

Introduction

The Department of Foreign Affairs and Trade (DFAT) engaged Tetra Tech International Development (Tetra Tech) to undertake an independent review of the PNG-Australia Transport Sector Support Program Phase 2 (TSSP2).

The Review was conducted from October 2021 to February 2022. This Report presents the Review findings and recommendations for future directions of the Transport Sector Support Program (the Program).

Background and context

The Program is providing more than AUD600 million over nine years to support the Government of PNG (GoPNG) to achieve a well-maintained transport infrastructure network. TSSP2 commenced in 2014 and is scheduled for completion in April 2022. Australia's investment in PNG's transport sector reflects the importance of transport infrastructure, such as roads, ports and airports, in facilitating the efficient, safe and secure movement of goods to market, the provision of essential goods and services, and community connectivity. This investment in PNG's transport infrastructure is a key enabler of economic growth and is the largest component of Australia's aid investment in PNG.

TSSP2's overarching objective is "a safer, more reliable transport system in place enabling economic and social development for Papua New Guinea". To support this, TSSP2 activities are organised around the following End of Program Outcomes (EOPOs):

EOPO 1: GoPNG transport agencies have a clear mandate, and are effective and functional

EOPO 2: GoPNG delivers a planned and prioritised road maintenance program

EOPO 3: GoPNG aviation and maritime agencies deliver improved safety and security, and improved regulatory compliance

TSSP2 is delivered through three mechanisms: i) a managing contractor; ii) the Institutional Partnerships Program (IPP); and iii) an overarching Transport Memorandum of Understanding between PNG's Department of Transport and Australia's Department of Infrastructure, Transport, Regional Development and Communications (DITRDC). Through these three mechanisms, TSSP2 offers flexible and adaptable responses to support the implementation of GoPNG's transport policies, strategies and plans.

Review purpose and scope

The purpose of the Review was to assess and appraise the TSSP2 performance and impact, as well as document lessons learned. The findings and recommendations from the Review will provide evidence and information to guide the design of the next phase of the Program, TSSP3.

The Review:

- Covered the TSSP2 activities implemented from 2014 to 2021
- Assessed both the process and quality of implementation and how that led to the achievement of results
- Focused on assessing the Program as a whole and not on individual partners or agencies within the Program.

Key evaluation questions and objectives

The Review sought to answer eight key evaluation questions (five questions were adopted from the Terms of Reference and three questions were added following the desktop review). These eight questions are organised under two main objectives:

Objective 1: Program design. To examine the design's validity and efficacy and explicitly review the appropriateness of the current TSSP2 implementation modality.

KEQ 1: How has the design contributed to operational performance, and where has it led to issues or concerns?

KEQ 2: Is the current program design fit for purpose?

KEQ 3: What can be changed in the current design to make TSSP2 more effective?

Objective 2: Program implementation. To examine the extent to which the Program was implemented and whether it has led to the achievement of the expected outcomes.

KEQ 4: How have the program's management arrangements contributed to program performance?

KEQ 5: What was the working relationship between the Australian High Commission (AHC) and the TSSP2 team?

KEQ 6: Was TSSP2 effective in the achievement of intended outcomes?

KEQ 7: How can the work between TSSP and AIFFP be improved to ensure complementarity between the two programs?

KEQ 8: Have cross-cutting issues been appropriately integrated into program design and delivery?

The Review drew on evidence from a literature scan, existing reporting, program documents, and primary qualitative data through stakeholder interviews and focus group discussions. The data collection provided a comprehensive picture of the Program and enabled the Review team to triangulate findings in a robust way.

Summary of findings



Relevance of the Program design

The TSSP2 design remains relevant both at the programmatic and political levels. DFAT's investment in TSSP2 continues to be important and provides the PNG-Australia Partnership for Development with a broad range of investment opportunities to support the economic development of PNG. The investment in transport infrastructure enables international and domestic linkages between businesses and customers as well as access for communities to essential services. Overall, GoPNG finds TSSP2 important and acknowledges the key role the Program plays in the transport sector in PNG. However, opportunities for improvement were highlighted in relation to engagement and closer working relationships with senior government officials, including the Transport Sector Coordination, Monitoring, and Implementation Committee (TSCMIC). The public reputation of the Program is strong, and it is one of the most well-known DFAT-funded programs in PNG.

The program design was fit for purpose and has remained flexible and responsive to DFAT's changing priorities for infrastructure investments in PNG. However, a design refresh is needed to accommodate emerging transport sector priorities and needs. Most stakeholders consulted from DFAT, other Australian transport agencies and TSSP2 noted that the design focus on the maintenance of PNG's national priority roads was sound, as these roads provide the greatest economic and social benefit to the greatest number of people in PNG.

Cross-cutting issues were not clearly factored in the current design, with scope for DFAT and GoPNG to include them in future designs and articulate how they will be resourced, implemented and measured. Some TSSP2 and DFAT staff reported that other than the Monitoring and Evaluation (M&E) and risk management, cross-cutting areas such as Gender Equality and Social Inclusion (GEDSI) and environmental and social safeguards were silent in the design.

The TSSP2 Program Logic structured around three End of Program Outcomes (EOPOs) was appropriate for the time it was developed, noting it is timely for a program logic refresh in the new design to reflect changes in the expanding transport sector in PNG and DFAT and GoPNG's priorities and investments.



Program implementation

The utilisation of GoPNG's national systems and processes is commendable and valued, however, mitigation strategies and workarounds are required to minimise delays and resulting underspends. TSSP2 endeavours to utilise local systems, in keeping with DFAT's preference to develop local capacity. However, all stakeholder reports indicate that the use of national systems has led to immense delays due to systemic delays by PNG's National Procurement Commission (NPC).

The working relationship between TSSP2, DFAT and GoPNG's transport agencies is generally seen as positive, with minor areas for improvement for the future. Most stakeholders described the relationship as open, collaborative and having two-way feedback mechanisms. Though, there are calls for more flexibility during implementation, for instance, the ability to adjust annual implementation work plans to accommodate emerging GoPNG and Australian Government needs and priorities.

COVID-19 travel restrictions have hindered the deployment of technical assistance to PNG with some stakeholders noting that the failure to deploy advisers and other technical experts to PNG has diminished relationships and undermined the achievement of outcomes in the last 18 months.

Donor coordination, collaboration, and harmonisation within the transport sector in PNG is seen as a gap for TSSP2 and DFAT more broadly. The Program could benefit from having stronger and closer relationships with

other donor partners. Donor coordination is important for identifying and aligning interventions to national priorities and avoiding duplication of interventions and efforts.



Program effectiveness

TSSP2 is assisting GoPNG in making great strides toward policy and legislative reforms. Enabling legislation such as the Road (Management and Fund) Act 2020 supported by TSSP2 will empower national, provincial, and district land transport authorities in the planning and management of national road assets.

TSSP2 continues to support road maintenance works in PNG with the latest results showing 1,613 km of roads maintained in eight provinces in 2020. Program reporting indicates that TSSP2 support for the planning, delivery, monitoring and reporting of the annual road maintenance program, including the setting of maintenance targets that align with the Road Asset Management System (RAMS) is vital to supporting a well-planned and prioritised road maintenance program.

The Program has worked well in Bougainville and achieved good developmental and socio-economic outcomes. TSSP2 focus on social safeguards in Bougainville is a good example of leveraging investment in infrastructure to maximise benefits to the community. Through the Community Work Arrangements (CWAs) in Bougainville, 9,750 women have seen an increase in their income, which has enabled them to open bank accounts and increase their daily income.

A deteriorating fiscal environment, challenging political context, complex and fragmented governance and implementation framework has made it very challenging for TSSP2 to progress their EOPOs. But despite these challenges, and more recently in the face of a considerable interruption to business continuity as a result of COVID-19, TSSP2 continues to deliver essential and highly valued support for land transport, maritime, and aviation sectors and sustained support for organisation reform, engagement, and performance.

Technical Assistance (TA) remains a critical component underpinning TSSP2's investment in transport infrastructure, though reports tend to be mixed as to the effectiveness of the support. However, there is consensus that an efficient deployment of TA that works to strengthen government systems and strategies such as Connect PNG and prepare PNG Ports for earmarked investment is seen by GoPNG as essential to the program achieving its long-term objectives.



Complementarity between TSSP2 and the Australian Infrastructure Financing Facility for the Pacific (AIFFP)

The collaboration between TSSP2 and AIFFP since 2019 has leveraged TSSP2's local knowledge in pursuit of both road and maritime infrastructure opportunities that have broadened DFAT's investment portfolio in transport infrastructure in PNG. TSSP2 and DFAT staff reported that the prospect of AIFFP financing will further support TSSP2 engagement in the maritime sector and significantly increase Australia's investments in the further development of PNG's maritime infrastructure.

AIFFP stakeholders reported that AIFFP is in a position to leverage and augment TSSP2's technical assistance whilst levelling up the norms and standards of Australia's transport project preparation in PNG to align with international lender standards.

Most stakeholders consulted noted that where possible, AIFFP and TSSP2 should work together to leverage the goodwill that TSSP2 has fostered with local agencies over the past decade. This goodwill between TSSP2 and the GoPNG transport agencies is valuable as it will expedite a more seamless implementation of AIFFP-financed projects to meet stakeholder expectations.



TSSP2 and cross-cutting issues

There is a concerted effort by TSSP2 to strengthen and mainstream GEDSI across TSSP2 and the GoPNG transport agencies' programming and operations. TSSP2 has played a key role in mainstreaming GEDSI values and principles to support transport sector agencies including the Department of Works (DoW) and the Department of Transport (DoT) in aligning their social inclusion policies, resources and systems.

The TSSP2 Monitoring, Evaluation and Learning (MEL) function is well resourced and capable to advance the Program's reporting, learning, and accountability mandate. TSSP2 MEL is guided by the TSSP2 MEL Plan (MELP) that was revised and updated in 2019. The MELP articulates the Program Logic, the EOPOs, the Performance Assessment Framework as well as the program's learning agenda, research, and implementation arrangements.

Program reporting and TSSP2 staff confirmed that TSSP2 has adequate systems in place for risk management. The Program maintains a risk matrix that guides program implementation. The Program also updates its Risk Management Plan as part of its annual work planning.

TSSP2 has developed an Environmental Safeguards and Climate Change and Disaster Resilience Strategy 2020-2022, in consultation with relevant GoPNG agencies and in partnership with the Australia Pacific Climate Partnership which is yet to be fully implemented.

Summary of recommendations

The findings from this Review informed the following recommendations for DFAT, TSSP2 and the GoPNG transport sector agencies:

Program design

Recommendation 1: For the TSSP3 design, DFAT and the Program should work together to refresh the Program's outcomes and logic. This is an opportunity to reposition the Program in an evolving local and regional context and to consider priorities and collaborations with other transport sectors. A refreshed program logic should pay attention to reviewing the EOPOs to help ensure pathways of change are clear, realistic and measurable. As much as possible, new EOPOs should be aligned to the departments and agencies' expected outcomes and should mainstream gender and social safeguards across all the outcome areas.

Recommendation 2: Future designs should include cross-cutting issues of GEDSI, MEL, risk management and environmental and social safeguards and articulate how they will be resourced, implemented and measured across the life of the Program.

Recommendation 3: With the new PNG Road Fund, the TSSP3 design should explore how funding for road maintenance will be supported by GoPNG under this new institutional arrangement.

Recommendation 4: The TSSP3 design should consider increasing funding and support to the maritime sector and explore options for intermodal connectivity with GoPNG's Connect PNG and evolving transport priorities. From a socio-economic perspective, supporting the maritime sector in PNG and investments beyond road maintenance is not only good value for money for DFAT but also unlocks opportunities for economic for a large segment of the population. This is because PNG has a high rural maritime population that needs transport connections to reap the economic benefits enjoyed by the more developed and connected urban areas. However, the economic considerations of investing in new infrastructure will require careful consideration to help ensure that costs of maintaining infrastructure do not exceed the benefits and that GoPNG funding allocations are appropriate and sustainable.

Recommendation 5: Future designs should incorporate and align the TSSP3 better with the Bougainville component (currently sub-contracted to Cardno) with opportunities to bring them closer to the overall Program. TSSP2 (managed by GHD) works with GoPNG's Department of Works (DoW), which is in the process of transferring the Program's responsibilities to the Department of Technical Services (DTS) in Bougainville. Therefore, the current implementation arrangement of having two separate managing contractors should be assessed as the involvement of a single contractor may enhance and underwrite the transition process and overall implementation in Bougainville in the future.

Program Implementation

Recommendation 6: That the Program enhances support for TSCMIC to regularly meet and set agendas that help orient investment toward the achievement of transport strategies such as Connect PNG and to develop the capacity to identify appropriate funding mechanisms to finance national transport plans. Note the Australia-PNG Transport Partnerships Review (conducted alongside this Review) recommends the former Institutional Partnerships Program's Infrastructure Adviser position be transferred to TSSP to provide coordination support between Australian and PNG agencies. To this end, the Adviser would also enhance technical advisory support to TSCMIC.

Recommendation 7: That the Program deploys advisers and other technical experts to PNG in an accelerated manner once COVID-19 travel restrictions are lifted to avoid adverse effects on implementation and relationships built over time. Noting rapid deployment is critical for continued Program success, TSSP2 will need to be mindful that the rapid deployment of adviser resources will need to work within existing adviser funding caps outlined in the Program contract.

Recommendation 8: If appropriate, that the Program review NPC systems and processes as a basis for understanding the benefits and the opportunity costs of using the national procurement system. The review may provide options to either strengthen the NPC through advisory roles and legislative reform or selectively bypass NPC procurement processes where delays are excessive to avoid the higher long-term cost of asset maintenance and higher costs for local communities and business owners.

Future directions: strategy and ways of working

Recommendation 9: Connect PNG will greatly improve the interconnectivity of national road infrastructure and economic outcomes for many Papua New Guineans. However, the construction of new infrastructure will only add to the existing infrastructure maintenance burden, and it is not known whether the economic benefits of new infrastructure will offset increased maintenance obligations. Until such time that GoPNG earmarks resources to fund and manage the maintenance of the entire road network, there is little reason for DFAT to depart from TSSP2's core strategic objectives and delivery mechanisms as they represent sound value for money for everyday Papua New Guineans.

Recommendation 10: An increasing level of investment in a multi-modal transport network by a wide range of stakeholders and development partners outlined in Connect PNG will increase the complexity in which transport infrastructure is funded, managed, and implemented in PNG. Under such circumstances, DFAT and GoPNG would do well to help ensure transport agencies are adequately resourced to navigate this new territory. As a partner of choice with a unique interest in developing PNG's capacity to both develop and maintain its infrastructure, DFAT's provision of technical assistance and advisory support to DoT should be sustained. The technical assistance and advisory support will help ensure that TSSP3 works to strengthen PNG's ability to develop sustainable transportation strategies that address PNG's maintenance obligations whilst supporting inclusive, safe and environmental transport outcomes for all transport users. The technical and advisory support will also allow TSSP3 to monitor and play a central role in the harmonisation of infrastructure activities by GoPNG and its investment partners.

Recommendation 11: Given the burgeoning scope of infrastructure under management, TSSP3 will also need to broaden GoPNG's asset management capability beyond ensuring that funding and resources are adequate to meet the needs of the network under normal operating conditions. Under TSSP3, GoPNG asset management will need to be adequately resourced to quantify the effects of potentially adverse climatic conditions caused by climate change. Though notoriously difficult to

forecast, such capabilities will be essential to mitigating operational risk for new and existing marine structures such as ports as well as informing the design and upgrade of roads and bridge structures in low-lying or coastal environments.

Recommendation 12: Should AIFFP choose to work with TSSP2, it is imperative that TSSP2 retains the discretion to continue its important work in stakeholder engagement, capacity building, maintenance, policy and legal support and reform. These essential activities are critical to the efficacy of the national transport network but also to help ensure institutional preparedness to implement and administer new infrastructure investments. TSSP2's understanding of DFAT processes and familiarity with PNG institutional and private sector capacity provides ground to facilitate the preparatory work that AIFFP requires to finance transport infrastructure investments. Also, TSSP2 should be adequately resourced to support AIFFP in the rollout of these investment projects, especially where the activities are considered to be synergetic and highly complementary.

Recommendation 13: TSSP2 and AIFFP should collaborate and develop systems that enable complementarity in these shared objectives. Where AIFFP is focused on transport infrastructure, it should collaborate and work closely with TSSP2 due to the technical knowledge and relationships/networks it has in PNG.

Recommendation 14: As long as AIFFP has investments in PNG, AIFFP should have appropriate staffing levels based in the Australian High Commission (AHC) to engage with partners and implement programs. The AIFFP focal point at the AHC will coordinate and be a focal point between TSSP2, AIFFP and other government agencies and SOEs. Though current in-country support to AIFFP has been absorbed by the infrastructure team in AHC, future AIFFP investments in PNG should be matched by increased designated resources at the AHC.

Contents

Executive Summary	1
Introduction	1
Background and context.....	1
Review purpose and scope.....	1
Key evaluation questions and objectives.....	1
Summary of findings.....	2
Summary of recommendations.....	4
Chapter 1: Introduction.....	8
1.1 About the Review and why it matters.....	8
1.2 Review scope, approach and methodology	8
1.3 Overview of the Transport Sector Support Program Phase 2 (TSSP2).....	9
1.4 Structure of the Review Report.....	11
Chapter 2: Relevance of the program design	12
2.1 Key findings	12
2.2 Conclusions	15
2.3 Recommendations.....	15
Chapter 3: Program Implementation	17
3.1 Key findings	17
3.2 Conclusions	18
3.3 Recommendations.....	18
Chapter 4: Program effectiveness.....	19
4.1 Key findings	19
4.2 Conclusions	21
4.3 Recommendations.....	22
Chapter 5: Complementarity between TSSP2 and AIFFP	22
5.1 Key findings	22
5.2 Conclusions	23
5.3 Recommendations.....	23
Chapter 6: Cross-cutting issues	24
6.1 Key Findings	24
6.2 Conclusions	26
6.3 Recommendations.....	26
Chapter 7: Overall conclusions and future directions.....	27
7.1 Conclusions	27
7.2 Future directions.....	27
Annex 1: Detailed methodology, limitations and list of stakeholders consulted.....	29

List of Acronyms

AHC	Australian High Commission
AIFFP	Australian Infrastructure Financing Facility for the Pacific
ASAs	Agency Support Arrangements
CASA PNG	Civil Aviation Safety Authority
CWA	Community Works Arrangement
DITRDC	Department of Infrastructure, Transport, Regional Development and Communications
DFAT	Department of Foreign Affairs and Trade
DoT	Department of Transport
DoW	Department of Works
DTS	Department of Technical Services
EOPO	End of Program Outcomes
FSV	Family and Sexual Violence
GBV	Gender-Based Violence
GEDSI	Gender Equality and Social Inclusion
GoPNG	Government of Papua New Guinea
IFC	International Finance Corporation
IPP	Institutional Partnerships Program
LTMC	Long-Term Maintenance Contracts
M&E	Monitoring and Evaluation
MEF	M&E Framework
MLB	Multilateral Banks
MoG	Machinery of Government
MoU	Memorandum of Understanding
NMSA	National Maritime Safety Authority
NPC	National Procurement Commission
NRNS	National Road Network Strategy
PGK	Papua New Guinean Kina
PIP	Project Implementation Plan
PMSC	Project Management and Supervision Consultancy
PNG	Papua New Guinea
RAMS	Road Asset Management System
RSG	Road Sector Group
SOE	State-Owned Enterprises
TA	Technical Assistance
Tetra Tech	Tetra Tech International Development Pty Ltd
TSCMIC	Transport Sector Coordination, Monitoring and Implementation Committee
TSSP2	PNG-Australia Transport Sector Support Program Phase 2

Chapter 1: Introduction

This chapter describes the reasons for and approach to this Review of the PNG-Australia Transport Sector Support Program Phase 2 (TSSP2). It provides an overview of TSSP2, its activities and operating context. It identifies the objectives and outcomes of the TSSP2 and how it aligns with the PNG's broader transport sector objectives and challenges within the PNG transport sector.

1.1 About the Review and why it matters

The Department of Foreign Affairs and Trade (DFAT) engaged Tetra Tech International Development (Tetra Tech) to undertake an independent review of TSSP2. The Program is providing more than AUD600 million over nine years to support the Government of Papua New Guinea (GoPNG) achieve its transport sector objectives. The purpose of the Review was to assess and appraise the TSSP2 performance and impact, as well as document lessons learned. The findings and recommendations from the Review will provide evidence and information to guide the design of the next phase, TSSP3, of Australia's transport sector support to PNG. Also, this Review has been conducted simultaneously with the Australia-PNG Government Transport Partnership whose findings, insights and evidence have also contributed to this report.

The Australian Government is strongly committed to developing PNG's transport sector. The Australian Government's support to the transport sector in PNG commenced in 2007 as a long-term commitment to support the GoPNG achieve a well-maintained transport infrastructure network through the Transport Sector Support Program and other mechanisms. Australia's investment in PNG's transport sector reflects the importance of transport infrastructure, including roads, ports and airports, in facilitating the efficient, safe, and secure movement of goods to market, the provision of essential goods and services, and community connectivity. This investment is a key enabler of economic growth and is the largest component of Australia's aid investment in PNG. In line with DFAT's and the GoPNG strategic priorities and intentions, funding to the transport sector is likely to continue in some form given its enabling functions for economic growth and broader development benefits. In 2020 GoPNG adopted the 'Connect PNG' policy that aims to rebuild the country's road infrastructure on a 20-year Program. Therefore, as TSSP2 comes to an end, it is critical that future investments in PNG's transport sector are informed by a solid evidence base about what has worked well and what can be improved.

1.2 Review scope, approach and methodology

The Review adopted an approach and methodology that was aligned to DFAT's Terms of Reference (ToR) calling for a discrete and iterative process. The Review's scope covered the TSSP2 activities implemented from 2014 to 2021. The Review sought to answer eight key evaluation questions (where five questions were adopted from the TOR and three questions were added after the desktop review). This Review considered these guiding themes and key evaluation questions organised under two objectives:

Objective 1: Program design. To examine the design's validity and efficacy and explicitly review the appropriateness of the current TSSP2 implementation modality.

- KEQ 1: How has the design contributed to operational performance, and where has it led to issues or concerns?
- KEQ 2: KEQ: Is the current program design fit for purpose?
- KEQ 3: What can be changed in the current design to make TSSP2 more effective?

Objective 2: Program implementation. To examine the extent to which the Program was implemented and whether it has led to the achievement of the expected outcomes.

- KEQ 4: How have the program's management arrangements contributed to program performance?
- KEQ 5: What was the working relationship between the Australian High Commission (AHC) and the TSSP2 team?
- KEQ 6: Was TSSP2 effective in the achievement of intended outcomes?
- KEQ 7: How can the work between TSSP and AIFFP be improved to ensure complementarity between the two programs?
- KEQ 8: Have cross-cutting issues been appropriately integrated into program design and delivery?

Review of the PNG-Australia Transport Sector Support Program Phase 2 (TSSP2)
Review Report

The Review was structured in five phases, presented below.



The Review drew on evidence from a literature scan, existing reporting, program documents, and primary qualitative data through stakeholder interviews and focus group discussions. The data collection methods provided a comprehensive picture of the Program and enabled the Review team to triangulate findings in a robust way. The approach was also designed to work with the practical constraints of remote reviews and adopted the following methodologies and inquiries:

Method	How it was used
Mixed methods approach	The Review adopted a mixed-methods approach combining different forms of data collection in a phased approach. The Review, therefore, collected both qualitative and quantitative data and integrated them into analysis and synthesis. Examples include program expenditure and PNG transport sector financing landscape (quantitative), stakeholder interviews (qualitative) (see stakeholder consultation list in Annex 1). The Analytical Framework guided analysis for the Review. The mixed approach was suitable for this Review as it allowed the team to combine different methods and data sources to arrive at a richer and more nuanced understanding than what might have been achieved through the use of a single method alone.
Process and outcomes review	In line with DFAT’s expectations on understanding outcomes achieved but also on how the implementation was conducted, the Review assessed both the process and quality of implementation and how that has led to the achievement of results. The Review process was primarily retrospective, reviewing past processes and results to assess performance. Using process-outcome analysis, the Review sought to ascertain the relationship and effects of operational factors and results, to make recommendations into program feasibility and future programming design.
Realist approach	Through the realist approach, the Review sought to not only answer whether the Program has achieved outcomes as a whole but also explored mechanisms behind the achievement of those outcomes, in what contexts and the reasons why. The mechanisms supporting the achievement of outcomes will enable DFAT to choose future investments based on their likely effectiveness within specific contexts.
Deductive and inductive data analysis	The analysis adopted a deductive approach which is to say, the documents and interview data were assembled and analysed using the pre-determined criteria (program design and implementation and future directions). Once data was gathered under the different criterion themes, a more inductive approach was then employed where findings within that theme were assessed without pre-determined criteria so that other emerging themes were discovered and described under it.

Annex 1 describes in detail the methodology and limitations of the Review and provides a list of stakeholders consulted.

1.3 Overview of the Transport Sector Support Program Phase 2 (TSSP2)

Background to TSSP2 and the challenges in PNG’s transport sector

TSSP2 commenced in 2014 and is scheduled for completion in October 2023 (note, TSSP2 was extended after an open tender process in March 2022). TSSP2’s overarching objective is “a safer, more reliable transport system in place enabling economic and social development for Papua New Guinea”. To support this, TSSP2 activities are organised around the following End of Program Outcomes (EPOs):

- EPO 1: GoPNG transport agencies have a clear mandate, and are effective and functional**
- EPO 2: GoPNG delivers a planned and prioritised road maintenance program**
- EPO 3: GoPNG aviation and maritime agencies deliver improved safety and security, and improved regulatory compliance**

To support better implementation of the Program, the TSSP2 design suggested changes and minor deviations from Phase 1 aimed at responding to the priorities and challenges at that time. The proposed changes emphasised service delivery in addition to capacity building and organisation reform, a focus on progressive and opportunistic engagements with agencies through defined agreements and strengthening and improving support to the transport sector to address service delivery bottlenecks. The provision of support to an enhanced role of the Transport Sector Coordination Monitoring and Implementation Committee (TSCMIC) and the inclusion of the Autonomous Bougainville Governments' Division of Technical Services in the Program were also emphasised.

TSSP2 is delivered through three mechanisms: i) a managing contractor (GHD); ii) the Institutional Partnerships Program (IPP); and iii) a Transport Memorandum of Understanding (MoU) between PNG's Department of Transport (DoT) and the Australian Government's Department of Infrastructure, Transport, Regional Development and Communications (DITRDC).

While PNG's road network consists of approximately 30,000 km of sealed and unsealed road, only 8,738 km are considered part of the national road network and the responsibility of PNG's National Government. These national roads are often referred to as 16 'national priority' roads, which form the economic backbone of the local economy and provide the greatest economic and social benefit to the greatest number of people.

Unfortunately, due to a combination of enduring funding constraints, geological and environmental factors, and limited local capacity, the road system in PNG is poorly maintained. Data from a TSSP2-funded survey of road conditions in 2014 showed that only 15 per cent of national priority roads are in good condition, and almost 67 per cent are in very poor condition, with other national roads in a similar condition.¹ Funding constraints have also reduced the length of roads proposed for maintenance. Of the 8,738 km national network, 4,256 km is considered "priority" network and only 2,309 km is considered "priority core" sub-network under the Department of Work's National Road Network Strategy (NRNS), which was prepared with the assistance of TSSP2 in September 2017.

TSSP2's activities and expenditure landscape

TSSP2's activities are largely focused on road maintenance activities for the national priority roads.² These activities are financed through grant funding provided by DFAT. Although TSSP2 funds a significant proportion of the annual budget that finances road maintenance, TSSP2 funding represents only a small portion of overall funding for the land transport network and an even smaller proportion of financing for aviation and maritime transport sectors. While GoPNG has succeeded in partnering with donors and the other Multilateral Banks (MLBs) to develop new road, port and aviation infrastructure, it has limited financing alternatives for road infrastructure maintenance activities and is largely reliant on a combination of DFAT grant funding and GoPNG expenditure.

Other sources of transport sector funding that have been directed to transport network development and maintenance in PNG since 2014 include: GoPNG National and Provincial Governments; Indian Exim Bank; China Exim Bank; and MLBs such as the World Bank and Asian Development Bank. Others include the PNG Sustainable Development Fund and the Tax Credit Scheme funded by mining sector royalties. Due to lack of access to financial data (see Annex 1 on limitations and challenges) the Review was not able to assess the value of transport sector investments and in what sectors the other development partners are investing in PNG.

Table 1 below provides an account of TSSP2's expenditure from 2016 to 2020 according to the EOPOs. The highest proportion of TSSP2's expenditure over the four years was on Land Transport (road maintenance activities), averaging AUD50 million annually and AUD250 million in total representing a proportion of 70.9% and 82.5% of TSSP2's total program value over this period. This reflects TSSP2's ongoing support for maintenance and rehabilitation of national priority roads, including Manus and Bougainville, which remains underfunded by GoPNG.

¹ Slattery et al (2018) *Road Management in Papua New Guinea: An evaluation of a decade of Australian support 2007–2017*, Australian Government Department of Foreign Affairs and Trade, Canberra.

² Throughout this Review Report, the term "road maintenance" refers predominately to the repair of the road surface and associated infrastructure. There are two main types of road maintenance, routine and periodic. Routine maintenance, which is commonly scheduled and undertaken in an annual cycle, involves gravel regrading and reshaping, pothole repairs, edge patching, vegetation control, drainage clearing, line marking, road furniture repair, bridge repainting and other minor repairs. Periodic maintenance, which includes major works such as re-gravelling, resealing, major drainage, pavement and bridge repairs and carried out on a condition-responsive basis. Periodic maintenance expenditures vary more with levels of traffic than do routine maintenance, which depends on the type of construction and weather conditions. In PNG, periodic maintenance is often undertaken as "emergency works", in response to damage as a result of either inclement weather events or a failure to undertake adequate routine or periodic maintenance.

Table 1: TSSP2 Expenditure from 2016 to 2020

EOPO	Activity	2016		2017		2018		2019		2020	
		AUD ('000s)	Total (%)	AUD ('000s)	Total (%)	AUD ('000s)	Total (%)	AUD ('000s)	Total (%)	AUD ('000s)	Total (%)
EOPO1	Sector Capacity Development	11,900	18.1%	7,614	14.8%	702	1.0%	1,202	1.4%	216	0.5%
EOPO2	Land Transport [^]	52,325	79.5%	40,555	79.0%	54,707	79.7%	71,136	82.5%	31,245	70.9%
EOPO3	Aviation and Maritime Safety and Security [^]	1,570	2.4%	3,143	6.1%	1,955	2.8%	2,546	3.0%	2,532	5.7%
	Operational Costs*					11,281	16.4%	11,336	13.1%	10,086	22.9%
	Total	65,795	100%	51,312	100%	68,645	100%	86,220	100%	44,079	100%

[^] Road maintenance funding including Manus, Bougainville, supervision PMSC, technical consultancies, AIFFP Preparatory Project

[^] Includes expenditure for partnership ASAs, MoU etc.

* Includes local and adviser support, taxes and fees. 2016 & 2017 reporting does not split out these costs from EOPOs.

Source: TSSP Annual Program Performance Report 2016-2020. 2013, 2014 and 2015 reports are unavailable.

By comparison, expenditure on sector capacity development (EOPO1) typically ranges between 0.5% - 1.5% of total program expenditure (2016 and 2017 figures include adviser costs) as the activities mostly involve planning and institutional support. Expenditure on Aviation and Maritime Safety and Security (EOPO3) is also relatively low at between 2.4% - 6.1% of program expenditure, depending on the level of services required e.g., feasibility studies, and investment in equipment and infrastructure such as satellite navigation systems. The under expenditure in capacity development and the maritime and aviation sectors is noted as a concern both within DFAT and the GoPNG – observations that are explored in the findings sections in the next chapters of this Report.

1.4 Structure of the Review Report

The following chapters of the Report present the Review findings. The chapters are grouped along the Review objectives of Program design and Program implementation. The report is structured by the key evaluation questions, which were grouped together and guided both the analysis and structure of the Report.

In each chapter, the relevant key findings, conclusions, and recommendations are provided. The last chapter provides the overall conclusion of the Review and provides broad strategic and programmatic considerations for the future.

Chapter 2: Relevance of the program design

This chapter presents the key findings on the TSSP2 design's validity and efficacy and whether the design was fit for purpose. The chapter explores the TSSP2 program logic, implementation arrangements, partnerships, contracting and organisational structure. In concluding the chapter, the Review provides options for future designs including alternative forms of program designs to fit the current operating context in PNG and within DFAT.

The TSSP2 design was completed in January 2013. The design reflected lessons learned from TSSP Phase 1 (TSSP1) and the changing transport sector priorities in PNG. The design retained three major elements of TSSP1: (1) public sector reform in line agencies; (2) central agency engagement; and (3) prioritised transport asset maintenance. The TSSP2 design showed minimal deviation to the implementation approach from TSSP1 to TSSP2, with a focus on retaining a whole-of-sector footprint covering maritime, aviation and land transport and retaining the major focus on land transport with the DoW being the principal implementing agency. The proposed minor deviations included increased capacity building and organisation reform as well as strengthened engagement with PNG agencies and support to address sector challenges.

The design envisaged an implementation approach that included an implementing service provider responsible for governance and capacity development, as well as technical assistance from Australian transport agencies that would focus on transport safety and security with a Project Management and Supervision Consultancy (PMSC). The design committed to using the GoPNG systems where feasible and sensible to do so as long as those systems were working, transparent and fit for purpose.

The design included a program logic that consisted of outcomes aligned to the three components of the Program and an indicative M&E Framework (MEF). Under the MEF, each component outcomes comprised of performance indicators, targets, the process for data collection and reporting responsibilities. In the design document, the MEF flagged access to data and information capture as well as the absence of M&E capacities and capabilities within GoPNG transport agencies as areas of concern.

2.1 Key findings

The TSSP2 design remains relevant both at the programmatic and political levels. DFAT's investment in TSSP2 continues to be important and provides the PNG-Australia Partnership for Development with a broad range of investment opportunities to support the economic development of PNG. The investment in transport infrastructure enables international and domestic linkages between businesses and customers as well as access for communities to essential services.

TSSP2 also facilitates key interactions between Australian and PNG transport agencies, in particular marine and aviation sectors, where long-established working relationships are critical to the safety and efficiency of international trade. As such, TSSP2 is a critical component of Australia's engagement with the Government and people of PNG – it espouses the close bilateral relations between Australia and PNG while advancing achievements of PNG social and economic development priorities.

KEQ 1: How has the design contributed to operational performance, and where has it led to issues or concerns?

Overall, GoPNG finds TSSP2 important and acknowledges the key role the Program plays in the transport sector in PNG, though opportunities for improvement were highlighted in relation to engagement and closer working relationships with senior government officials. The public reputation of the program is strong and is one of the most well-known DFAT-funded programs in PNG. However, some GoPNG officials consulted found targeted engagement with senior government officials and closer working relationships as an area that could be further strengthened. For TSSP3, consideration should be given to establishing effective and appropriate targeted bilateral consultative or advisory mechanisms in-country to engage senior government officials with DFAT and program managers at a strategic level beyond TSCMIC. The bilateral engagement between DFAT, TSSP3 program managers and senior government officials happening outside TSCMIC will be aimed at maintaining close bilateral relationships with government but also as a mechanism to discuss bilateral strategic transport sector developments and aspirations (see Recommendation 10 in the Executive Summary).

The Program approach of using the GoPNG's national systems and processes is commendable and aligns well with the Paris Declaration principles of donor alignment. The TSSP2 approach is quite different from methods employed by other donors and MLBs. TSSP2 endeavours to utilise local systems, in keeping with DFAT's preference to develop local capacity, however, all stakeholder reports indicate that the use of national procurement systems has led to immense delays of up to 24 months in some cases, which have had a negative impact on the implementation of the program (see Chapter 3 KEQ 4).

The transport sector coordination in PNG has worked well under the TSCMIC, though the mechanism could be improved. Some stakeholders consulted from the GoPNG and DFAT reported that the transport sector is one of the

most well-coordinated sectors in PNG. TSCMIC through TSSP2 supports monitoring and reporting of all transport sector activities and reports to the GoPNG. Even though the mechanism is working well, its effectiveness could be improved to achieve better coordination and alignment between GoPNG and other development partners. Stakeholders reported that there has been inconsistent partner attendance and the facilitation of the meetings has not been well managed. The COVID-19 pandemic has further impacted the regularity of meetings attended by the different partners. For the future phase, considerations should be given to strengthening TSCMIC through support in agenda setting, meeting facilitation processes, and provision of incentives (i.e., key information and lessons are shared, and clear actions are produced) for GoPNG senior government officials, other donors and DFAT to attend more frequently and consistently.

The current design and funding levels for technical assistance and capacity building could be improved for the number of GoPNG transport sector agencies that needs support. TSSP2 staff and GoPNG stakeholders reported that the funding levels for TSSP2 are such that the Program can only have a small number of advisers covering the whole transport sector and, in some cases, reports noted that there have been instances of one adviser often supporting multiple agencies, which is an unsustainable workload over time. There were calls from stakeholders interviewed for an increase in the technical assistance element of the new design that acknowledges the breadth of the expanding transport sector, and a plan for resources to match the needs and gaps. This could be explored through the umbrella Australia-PNG Government Transport Partnership arrangements. If funding for technical assistance is not increased or other funding sources brought on board, some stakeholders noted that TSSP3 then should radically reduce its mandate within the transport sector. This shift will not be the best option for Australia given that the capacity of many transport agencies is still low and that they effectively need support to achieve their outcomes. Also, two transport sector agencies have been established (PNG Road Fund and PNG Highway Corporation) meaning that more technical support is needed for them to be established and be operational.

Cross-cutting issues were not clearly factored in the current design, with scope for DFAT to fully include them in future designs and articulate how they will be resourced, implemented, and measured. Some TSSP2 program staff and DFAT staff reported that other than the M&E and risk management, other cross-cutting areas such as Gender Equality and Social Inclusion (GEDSI) and environmental and social safeguards were silent in the TSSP2 design. Even though TSSP2 later recruited resources for GEDSI and developed the Gender and Social Safeguards Strategy 2020-2022, this eventuated as the Program was coming to an end. TSSP3 design should consider embedding the cross-cutting issues in the design and also earmark resources to implement them. Policies such as the Gender and Social Safeguards Strategy that has just been developed will need to be resourced and implemented. Some TSSP2 staff also noted that the new design should mainstream GEDSI and environmental and social safeguards across the EOPOs, so that they are embedded in the implementation plans and implemented across the Program investments.

KEQ 2: Is the current program design fit for purpose?

The program design was fit for purpose and has remained flexible and responsive to DFAT and GoPNG's changing priorities for infrastructure investments in PNG, however, a design refresh is needed to accommodate emerging transport sector priorities and needs. Most stakeholders consulted from DFAT, other Australian transport agencies and TSSP2 noted that the design focus on the maintenance of PNG's national priority roads was sound and good value for money as these roads provide the greatest economic and social benefit to the greatest number of people in PNG. Also, given the low funding allocation by GoPNG for routine road maintenance, a focus on roads maintenance by TSSP2 rather than investments in new road assets was deemed appropriate and good value for money for DFAT.

Some stakeholders noted that the expansion into the maritime sector by the Program was seen as timely and appropriate from a socio-economic perspective. This is because supporting the maritime sector in PNG beyond road maintenance is not only good value for money for DFAT but also unlocks opportunities for economic and social development for a large segment of the population. This is because PNG has a high rural maritime population that needs transport connections to reap the economic benefits enjoyed by the more developed and connected urban areas

The Program's approach of using the GoPNG systems and processes was reported as a best practice for donor alignment by DFAT and useful in strengthening institutions locally. Though procurement delays have been reported as a consequence of using the national systems and process, GoPNG stakeholders noted that this should continue, and workable mechanisms explored to address procurement inefficiencies (see Chapter 3 KEQ 4 on procurement).

TSSP2's capacity-building approach, consisting of targeted technical assistance combined with a program of works implemented through government systems, has provided possibilities to positively influence GoPNG policies, legislations, and strategies. Through this strategy, TSSP2 has had a powerful influence on transport sector policies and transport-related legislation.

The Program has been flexible and responded to shifts and changes within DFAT such as responding to Pacific Step up and Foreign Policy White Paper between 2017 and 2019. Also, the Program designed during AusAID was flexible and adjusted well to the transition from AusAID to DFAT. Some stakeholders from DFAT also noted that the Program has been flexible in accommodating and providing preparatory support to the Australian Infrastructure Financing Facility for the Pacific (AIFFP), which is a significant infrastructure investment in PNG. Even though AIFFP was not part of TSSP2 design, by supporting AIFFP, which provides infrastructure funding of both loans and grants in PNG and the wider Pacific, TSSP2 has had access to resources which has facilitated Australia's remarkable expansion to the maritime sector through preparatory works for the investments in PNG Ports. Increased investments in the maritime sector are important because better transport access across PNG requires not only improved roads but also improved ports and airports for better socio-economic development. For the TSSP3 design, workable mechanisms and engagements with AIFFP need to be explored to help ensure complementarity of efforts and mandate (see Chapter 5).

Even though the design has been fit for purpose throughout Phase 2, most stakeholders noted that a design refresh is due to accommodate an expanding transport sector mandate in PNG as well as DFAT's strategic intentions for the PNG transport sector. This will help align the Program with GoPNG's 'Connect PNG' policy, the current GoPNG policy that aims to rebuild the country's multi-modal transport infrastructure on a 20-year program, and ensure sufficient flexibility to respond as this policy evolves. The following section presents the findings on how the design for TSSP3 could be refreshed to be fit for purpose and relevant for the PNG's transport sector agencies' future directions and community needs.

KEQ 3: What can be changed in the current design to make TSSP2 more effective?

The TSSP2 program logic structured around three EOPOs was appropriate with opportunities now for a program logic refresh in the new design to capture changes in the operating contexts in PNG and within DFAT. Most stakeholders consulted for this Review reported that the goal and the EOPOs remain ambitious and, in some instances, out of the control of TSSP2. For instance, EOPO1 which states "GoPNG transport agencies have a clear mandate and are effective and functional" though appropriate seems too broad given the number of transport agencies in PNG, which are all at various stages of development, operation, funding, and management. Effectively, at any point of time, EOPO1 is at most likely to be true for only a certain percentage of agencies, rather than all agencies and, as such, it is effectively an unattainable EOPO. This is particularly the case as the first part, "a clear mandate" is relatively easy to achieve while the second part, "effective and functional", will take many years of concentrated operational and advisory support in each separate transport agency. Also, the EOPO's objective around mandate and function rests with the GoPNG, and a Program such as TSSP2 can only contribute or facilitate but cannot attain.

Similar views were reported for the EOPO2 that states "GoPNG delivers a planned and prioritised road maintenance program". Some GoPNG stakeholders noted that in practice, work done by the Road Sector Group (RSG) under this EOPO almost exclusively focuses on the TSSP-funded sections of the road network and not the DoW road maintenance priorities across the country. Because of this, some stakeholders noted that TSSP2 in reality operates as a mini-DoW on the side instead of being wholly integrated with the DoW's overall road maintenance work plan. Though reports were mixed on whether and how TSSP2 is fully integrated within the DoW, this observation calls for better alignment, communication, and coordination between TSSP2 and the DoW and also with the new PNG Road Fund in implementing the road-maintenance work plan going into the future.

Also, the current separation of TSSP2 outcomes from the agencies' and departments' outcomes is noted as a concern with opportunities for better alignment in the new design. Some stakeholders from GoPNG reported that the program logic should align as much as possible to DoT and DoW outcomes and not develop separate outcomes, which is the case with the current design. Because of this, the Program has in some instances been seen to be too separated from the individual agencies' work and the outcomes they aim to achieve. GoPNG agencies stakeholders reported that TSSP2 should be aligned to the agency's outcomes and strategic goals, or at least more closely aligned, as set out in their programs and Strategic Plans. In this regard, TSSP2's role is to facilitate, through advice and capacity building activities, the development and implementation of government policies and programs.

The legislation of the Road (Management and Fund) Act of 2020 shifts road maintenance funding to the PNG Road Fund and future designs should consider and align with this shift. Stakeholders consulted in GoPNG agencies noted that with the new Act, road maintenance funding by law is now required to be deposited with the PNG Road Fund. While the Road Fund is still in a transitional stage, future designs should explore how funding for road maintenance will be supported under this new arrangement. Currently, the TSSP2 road maintenance funding continues to be placed in a separate TSSP/DoW Trust Account that is effectively under the control of the RSG. At the time of this Review, some stakeholders in PNG reported that no arrangements have been put in place to transfer fund management to the Road Fund, although the Act commenced on March 1, 2021 (see Chapter 4, KEQ 6 for more on the PNG Road Fund).

The TSSP3 design should consider expanding funding and support to the maritime sector in line with Connect PNG, GoPNG transport policies and Australia's strategic interests for better and sustainable socio-economic outcomes. There are 15 maritime provinces in PNG comprising more than three-quarters of PNG, though support for the transport sector even under TSSP2 has leaned towards roads and aviation (see Chapter 1 on TSSP2 expenditure). Further investments in maritime will unlock the potential of the high rural maritime population to reap the economic benefits enjoyed by the more developed and connected urban areas. At the time of this Review, AIFFP has ramped up investments in PNG Ports, which is positive (in January 2022, Australia and PNG signed agreements for \$580 million in upgrades and refurbishments to several priority ports in PNG) and provides the impetus for further investments towards an integrated transport system that connects roads, air and maritime – an area that the TSSP3 should consider in the new design.

TSSP3 design should better incorporate and align with Bougainville. TSSP2 awarded a sub-contract for PMSC Bougainville to Cardno in April 2018 commencing 1 May 2018 and currently ongoing. Under the TSSP2, the PMSC supported the effective and efficient planning and delivery of road maintenance and rehabilitation contracts in the Autonomous Region of Bougainville. However, some stakeholders note that the TSSP3 design needs to better align with the Autonomous Bougainville Government. The current implementation arrangement of having a separate sub-contractor (Cardno) from the TSSP2 managing contractor (GHD) needs to be revisited and consider whether having two separate managing contractors is appropriate (if better alignment is not feasible or expected to be effective).

2.2 Conclusions

The current TSSP design is deemed fairly robust, flexible, and fit for purpose. The design has been responsive in accommodating the changing operating context in the PNG transport sector such as COVID-19 and the downturn in economic conditions brought about by wider disruptions to transport and trade. Also, the program has worked within a dynamic political environment within PNG, resulting in adjustments within the PNG administrative environment, which has forced the program to revise its road maintenance work plans and focus on specific provinces.

Some elements of the design, such as the use of the national systems and processes, have been well received, as well as the transport sector coordination mandate implemented under TSCMIC. TSSP's capacity-building approach, consisting of targeted technical assistance combined with a program of works, has provided opportunities and possibilities to positively influence GoPNG policies and legislations in line with the EOPOs. At the same time, the design was noted to be silent on cross-cutting issues such as GEDSI, environmental and social safeguards, risk management and to some extent M&E.

The EOPOs were relevant at the time but are now deemed outdated and are due for a refresh to better align with GoPNG's priorities and outcomes. Further, engagement with Bougainville should be revisited alongside considerations within the design of how TSSP3 should engage with the AIFFP into the future.

2.3 Recommendations

Recommendation 2.1: For the TSSP3 design, DFAT and the Program should work together to refresh the program's outcomes and logic. This is an opportunity to reposition the program in an evolving local and regional context and to consider priorities and collaborations in other transport sectors. A refreshed program logic should pay attention to reviewing EOPOs to help ensure pathways of change are clear, realistic and that results hierarchies articulate what the program can achieve, what the Program contributes to, what the government can achieve, and what can be achieved together. As much as possible, the new design EOPOs should be aligned to the departments and agencies' expected outcomes and should mainstream gender and social safeguards across all the outcome areas.

Recommendation 2.2: Future designs should include cross-cutting issues of GEDSI, MEL, risk management and environmental and social safeguards and indicate how they will be resourced, implemented and measured across the life of the Program

Recommendation 2.3: With the new PNG Road Fund, the TSSP3 design should explore how funding for road maintenance will be supported by GoPNG under this new institutional arrangement.

Recommendation 2.4: The TSSP3 design should consider increasing funding and support to the maritime sector and explore options for intermodal connectivity with GoPNG's Connect PNG. From a socio-economic perspective, supporting the maritime sector in PNG beyond road maintenance is not only good value for money for DFAT but also unlocks opportunities for economic for a large segment of the population. This is because PNG has a high rural maritime population that needs transport connections to reap the economic benefits enjoyed by the more developed and connected urban areas

Recommendation 2.5: Future designs should incorporate and align the Program better with Bougainville (sub-contracted to Cardno) with opportunities to bring them closer to the national Program. TSSP2 (managed by GHD) works with the DoW which is in the process of transferring responsibilities to DTS in Bougainville. Therefore, the current implementation arrangement having two separate managing contractors should be reconsidered as the involvement of a single contractor may enhance and underwrite the transition process.

Chapter 3: Program Implementation

This section presents the key findings on how TSSP2 was implemented in practice. The section delves into the relationships and interface between the Program and DFAT, how the Program worked with GoPNG agencies, how the Program collaborated with Australian government agencies, other development partners and the private sector.

3.1 Key findings

KEQ 4: How have the program's management arrangements contributed to program performance?

The Program's implementation was first contracted to SMEC (2014 to 2018) and later GHD (2018 to date). The Program has generally been implemented well with more challenges and delays experienced in recent times primarily due to COVID-19. Other than general implementation delays, COVID-19 travel restrictions have hindered the deployment of advisers to PNG with some stakeholders noting that the failure to deploy advisers and other technical experts to PNG has diminished relationships and achievement of outcomes in the last 18 months.

Compared to TSSP1, TSSP2 is a more streamlined program that is aware of the risk of inefficient use of technical assistance resources, yet assertive enough to expand resourcing capacity in areas it considers essential to maintaining the program trajectory and effectiveness, such as a reform of legislative policy to enable better management and funding of transport infrastructure and procurement.

The utilisation of GoPNG national systems and processes is commendable and valued, however, mitigation strategies and workarounds are required to minimise delays and resulting underspends. The TSSP2 implementation model is quite different from methods employed by other donors and MLBs. TSSP2 endeavours to utilise local systems, in keeping with DFAT's preference to develop local capacity. However, the use of PNG systems has led to delays. For instance, some multi-year long-term maintenance contracts (LTMCs) have been held up in the NPC system for up to 2.5 years and are a primary source of program underspend. These delays are particularly problematic for TSSP2, as it seeks to shift from smaller (<Papua New Guinean Kina (PGK) 10M) short-term maintenance contracts to larger (>PGK30M) multi-year long-term maintenance contracts (LTMCs). From a programming perspective, this shift toward LTMCs is far more efficient. However, this new model is highly susceptible to procurement risk as protracted delays to project implementation tend to result in large variations in annual maintenance expenditure and lower levels of service as entire sections of the road lie unattended without major maintenance for extended periods. If the disruption is significant, the outcome is a higher long-term cost of asset maintenance and higher costs for local communities and business owners.

The delays in implementation are also a considerable drag on program performance as substantial corrective effort needs to be invested to rescope, draft and procure a host of smaller short-term road maintenance packages that can be signed off at the Secretary level to address the annual expenditure gap. Thus, protracted procurement delays at NPC severely undermine TSSP2 and the agency's capacity to progress the long-term transport agenda and immediate action is necessary to resolve the impasse. To mitigate some delays, some stakeholders proposed strengthening the NPC through advisory roles and selective bypassing of procurement requirements for capacity building contracts as possible solutions.

Donor coordination, collaboration and harmonisation within the transport sector in PNG is seen as a gap for TSSP2 and DFAT more broadly. The Program could benefit from having a stronger and closer relationship with other donor partners. Donor coordination is important for identifying and aligning interventions to national priorities and avoiding duplication of interventions and efforts. Though transport sector coordination takes place through the TSCMIC, the mechanism is not seen as effective and is preoccupied with operational matters. The onset of COVID-19 has also restricted the ability of the committee to meet between late 2020 and September 2021, with only two meetings held in September and December 2021.

KEQ 5: What was the working relationship between the Australian High Commission (AHC) and the TSSP2 team?

The working relationship between TSSP2, the AHC and GoPNG transport agencies is generally seen as positive, though there are opportunities for improvement. The relationship is characterised by open communication, feedback, and planning. Though positive across the board, there are further suggestions to strengthen this through agile work planning, flexibility in adjusting annual implementation work plans to accommodate emerging GoPNG and Australian Government needs and priorities.

TSSP2 is valued by the GoPNG transport agencies. Feedback from DoW, in particular, was very positive, though the department expressed concerns about the lack of expediency in the recruitment of key advisers. DoW also expressed a desire for TSSP2 to support the shift in the focus of TSCMIC toward GoPNG priorities and the identification of new sources and mechanisms for road funding e.g., the implementation of the Public-Private Partnership (PPP) Act 2014.

GoPNG stakeholders noted a high preference for TSSP2 advisers to be based in the counterpart agencies and co-located with their direct counterparts. In agencies, it was proposed that no advisers or managers should be based in the Secretary or CEO's office unless they are direct advisers to the Secretary or the CEO. Managing Contractors should also provide adequate training and induction regarding local customs and cultural practices, an overview of GoPNG strategy documents and sub-sector specific policies and laws.

3.2 Conclusions

As TSSP2 returns to full strength in its advisory capacity after COVID-19, the Review envisages high-level coordination and support for TSCMIC in its efforts to align the National Road and Connect PNG Strategies and to assist GoPNG agencies with the identification and development of new funding mechanisms to finance these ambitious transport plans.

The Review also found that while challenges for deploying advisers and other technical experts to PNG has diminished relationships and achievement of outcomes in the last 18 months (due to COVID-19), there remains a strong undercurrent of appreciation for the support that TSSP2 has provided to GoPNG agencies over the years. Key GoPNG agencies such as DOW highlighted TSSP2's innovative approach to implementation e.g., CWAs in Bougainville and shift to LTMCs.

As with most matters in PNG, strong relationships are critical for the successful and effective implementation of donor-funded programs. The positive feedback underscores the importance of proactively managing relationships throughout implementation and consistent communication across programs, sectors and agencies. This will position TSSP2 to be best placed to provide constructive and trusted advice to GoPNG agencies and state owned enterprises to maximise development outcomes and minimise investment risk.

3.3 Recommendations

Recommendation 3.1: That the Program enhances support for TSCMIC to regularly meet and set agendas that help orient investment toward the achievement of transport strategies such as Connect PNG and to develop the capacity to identify appropriate funding mechanisms to finance national transport plans. The Australia-PNG Transport Partnerships Review (conducted alongside this Review) recommends the former Institutional Partnerships Program's Infrastructure Adviser position be transferred to TSSP to provide coordination support between Australian and PNG agencies. To this end, the Adviser would also enhance technical advisory support to TSCMIC.

Recommendation 3.2: That the Program deploys advisers and other technical experts to PNG in an accelerated manner once COVID-19 travel restrictions are lifted to avoid adverse effects on implementation and relationships built over time. Noting rapid deployment is critical to continued Program success, TSSP2 will need to be mindful that the rapid deployment of adviser resources will need to work within existing adviser funding caps outlined in the Program contract.

Recommendation 3.3: If appropriate, that the Program review NPC systems and processes as a basis for understanding the benefits and the opportunity costs of using the national procurement system. The review may provide options to either strengthen the NPC through advisory roles and legislative reform or selectively bypass NPC procurement processes where delays are excessive to avoid the higher long-term cost of asset maintenance and higher costs for local communities and business owners.

Chapter 4: Program effectiveness

This chapter assesses whether the Program has achieved its intended outcomes. The section explores areas the Program has done well and areas that need further improvement to effectively achieve outcomes. The chapter also draws out good practices as well as mechanisms that have facilitated or hindered the effectiveness of the Program. Findings in this chapter are grouped in line with TSSP2's EOPOs. Broader development outcomes are also explored and unintended outcomes both positive and negative are reported.

4.1 Key findings

KEQ 6: Was TSSP2 effective in the achievement of intended outcomes?

This section focuses on the results achieved under each of the EOPOs. It does not report all of the key results achieved given the breadth of TSSP2 but focuses on outcomes that were reported as most significant delivered under TSSP2.

EOPO 1: GoPNG transport agencies have a clear mandate, and are effective and functional

TSSP2 is assisting GoPNG in making great strides toward policy and legislative reforms. New enabling legislation supported by TSSP2 such as the *Road (Management and Fund) Act 2020* is a key undertaking as it is designed to empower national, provincial, and district land transport authorities in the financing, coordination, and management of national road assets.

This new legislation is designed, in part, to replace the National Road Authority (NRA), which was gazetted under the National Roads Authority Act 2003, GoPNG's most recent attempt at establishing a self-funded road authority. While the objectives and structure of the two pieces of legislation are broadly similar, the National Roads Authority Act 2003 culminated in a road authority (NRA) that was inadequately financed, poorly integrated (maintenance responsibility was shared with a significant of NRA responsibilities often conferred to DoW), and lacked the essential legislative authority to declare, commission and classify public road infrastructure.

By comparison, the new legislation developed by GoPNG with the support of TSSP2 is relatively broad in scope and offers more detail than its predecessor, particularly in terms of funding arrangements. The new legislation aims to address road maintenance funding challenges through the establishment of a Road Fund that sources revenue from driver licence and registration fees, fuel levies in respect of road users, and (future) road user charges. Whether these existing or forecast revenue streams are adequate to support the functions of the Road Fund while delivering sustainable maintenance outcomes without the need for ongoing annual GoPNG budget allocations is not yet known. However, if history provides any guidance, GoPNG has not secured adequate funding allocation for road maintenance activities and this may take some time.

In contrast, the recently legislated Connect PNG (Implementation and Funding Arrangements) Act 2021 - an infrastructure development initiative of GoPNG - commits a minimum of 5.6% of the annual national budget to road infrastructure development, up to a limit of K20 billion for the life of the program. The PNG National Budget is forecasting K22.175 billion in expenditure in fiscal 2022, equating to K1.24 billion for new infrastructure in 2022. Should this investment in new infrastructure proceed, the value of assets under management and the corresponding increase in demand for maintenance funding will sharply increase.

The legislation also establishes procedures for the declaring, commissioning and classification of public roads, simplifying the process of land acquisition for the road network, the demarcation of road boundaries and the responsibility for road management of national, provincial and district road authorities. The legislation also grants GoPNG the power to establish multiple road authorities or companies who may themselves enter into unilateral arrangements to deliver essential activities for public roads. While such arrangements may build inherent flexibility into the way the national road network is managed, the added complexity may potentially undermine the delivery of an integrated and sustainable land transport system.

These measures, heavily supported by TSSP2, aim to empower the government in the management of public road infrastructure, limit PNG's reliance on donor funding and work to remove the discretionary approach to road maintenance funding appropriation. All these measures are deemed consistent with GoPNG's "Maintenance First" Policy as defined in the National Road Network Strategy. The measures also support the broader reform objectives set out in the Medium-Term Transport Program 2 (MTTP2).

TSSP2 is supporting the delivery of innovative capacity strengthening approaches for agency counterparts.

Despite the challenging operating context, TSSP2 has also achieved progress in the implementation of improved organisational and financial systems and processes that should leverage efficiency gains proposed under the new Capacity Development Framework 2020-2022 (CDF). These measures are designed to refocus the program on effective development principles in building engagement practices for sustainable and government-owned

capacity outcomes. In terms of transport sector coordination TSSP2 continues to provide support to TSCMIC by assisting DoT to facilitate the six bi-monthly TSCMIC meetings and continue to provide Secretariat support services to TSCMIC. TSCMIC is well placed and essential to enhance donor coordination and avoid donor duplication and donor fragmentation, however, more needs to be done to make it more effective and impactful (see Chapter 2, KEQ 1).

Some other examples of TSSP2 support to GoPNG transport agencies include:

- TSSP2 provided support to DoT and DoW in developing and embedding organisational and corporate plans to ensure ownership of governance systems and processes. Specifically, TSSP2 supported the development of the DoW Corporate Plan 2020-2024 with the Secretary of DoW, which is now being progressively implemented by DoW. It sets out a new strategic direction for the department, in line with the institutional reforms.
- In line with the road sector institutional reforms, TSSP2 assisted the DoW Organisational Review Team to restructure DoW into the Department of Works and Highways, as the lead authority for the National Road Network. The new restructure was approved by DPM on 10 December 2021. This is a strong example of organisational and staff capacity building as the department for the first time is appropriately configured to deliver its policy and legal mandate, while at the same time staff have been trained in organisational analysis, workload analysis, developing job descriptions and conducting workforce planning.
- TSSP2 supported the establishment of the multi-sector Road Advisory Committee to advise the Minister of Works and to ensure a Whole-of-Government approach to road classification and related matters.
- TSSP2 contributed to the development of the National Road Management Performance Agreement, which was cleared by the State Solicitor to transfer some road management functions to sub-national authorities and ensure accountability for sub-national roads funding.
- TSSP2 provided training in how to classify roads under the new road legislation and now supporting the classification of all roads under the new Act as National, Provincial or District roads to roll out the Road Management Performance Agreement.
- TSSP2 assisted with the implementation of the Connect PNG Economic Road Transport Infrastructure Development Program 2020-2040 through the development of governance arrangements, legislation, corporate structures, and key NEC policy submissions.

EOPO 2: GoPNG delivers a planned and prioritised road maintenance program

TSSP2 continues to support road maintenance works in PNG with the latest results showing 1613km of “priority” national roads maintained in eight provinces in 2020. Program reporting indicates that TSSP2 support to the planning, delivery, monitoring and reporting of the annual road maintenance program, including the setting of maintenance targets that align with the Road Asset Management System (RAMS) is vital to supporting a well-planned and prioritised road maintenance program.

Table 2: Length of Papua New Guinea priority roads maintained

Year	Maintenance Expenditure (AUD, 000's)	Target Road Maintained (km)	Road Maintained (km)	Provinces	Efficiency (AUD 000's /km)
2016 [^]	52,325	Not available	760	11	69
2017	40,555	Not available	1630	9	25
2018	54,707	1500	1861	13	29
2019	71,136	1500	1833	12	39
2020*	31,245	Not available	1613	8	19

[^] Oro Bridges Reconstruction Project was finalised in November 2016. Four bridges: Eroro, Girua, Ambogo and Kumusi bridges were rebuilt to withstand floods of greater magnitude than those which followed Cyclone Guba at a total cost of PGK 141.9 million (inclusive of supervision costs) over two years. A total of PGK 38.9 million (exclusive of supervision costs) was spent in 2016.

* No target (km) identified in the 2020 TSSP Annual Program Performance Report

Source: TSSP Annual Program Performance Report 2016-2020. 2013, 2014 and 2015 reports are unavailable.

While the actual number of provinces benefitting from TSSP2 investments in road maintenance tends to vary from year to year, delays associated with COVID-19 notwithstanding, the overall number of kilometres of the priority road network under maintenance has demonstrably increased. The improvement in length of road maintenance is attributable, in part, to a departure by TSSP2 from large development infrastructure projects e.g., Oro Bridges,

which tend to absorb a disproportionate amount of financial resources from perpetually constrained annual road maintenance budgets.

It is also worth noting that in 2020 the Program maintained 1,613 km of roads across 8 provinces. While this was below the original target, a figure that was not identified in the TSSP2 2020 annual report, this was an impressive result considering the constraints on delivery due to the impact of COVID-19 and its associated effects on contractor payments (DoW) and procurement (NPC). This result was also delivered during a period of widespread supply chain disruptions and inflationary price pressures in the contracting industry in PNG.

TSSP2 road maintenance works have enhanced access to markets. TSSP2 defines access as having the means or opportunity to approach or enter a market – a space where vendors convene to sell their goods. According to the TSSP2 Annual Program Performance Reports (2016-2020), 486,584 women and 527,131 men had better access to markets in eight provinces in 2020. The figures bring a total number of people accessing markets to 1,013,715 which surpassed the target set by the Program of 900,000 people in 2020. Gender disaggregated data for people accessing markets was not available from 2016 to 2019 though a total of 1,048,706 people in 2019 and 1,017,174 people in 2018 were reported to have had better access to markets

Whilst access to markets data does not form part of standard asset management calculations, literature shows that an understanding of the population serviced by a section of transport infrastructure can lead to more efficient social and economic outcomes, particularly in a constrained budget investment scenario. Also, the data can be particularly useful where large and severely disadvantaged populations (particularly women) reside within proximity to poorly maintained road infrastructure e.g., Sepik Highway in PNG. The Review notes good efforts by TSSP2 in undertaking important research such as the Coastal and Sepik Highway Impact Study and developing a system of collecting and reporting on investment beneficiary data that may inform future investment decisions. Doing this will provide data for the Program to assess the socio-economic benefits of the road infrastructure.

EOPO 3: GoPNG aviation and maritime agencies deliver improved safety and security, and improved regulatory compliance.

Though underinvested in by TSSP2, in some instances the Program has supported aviation and maritime safety and security investments under the overarching transport sector MOU commitments, including related activities that expand preparation of PNG Ports preparation for earmarked investment in development infrastructure. These activities include TSSP2 support for the establishment of a multiagency TSCMIC maritime governance Sub Committee, port development masterplans and the National Shipping Services Program. Less funding allocation in the maritime sector (see Chapter 1 on TSSP2 expenditure) was flagged by DFAT and GoPNG stakeholders and an economic case has been put forward to increase investments in this sector (see Chapter 2 KEQ 3). Investing in maritime transport will unlock the economic potential of maritime communities to reap the economic benefits through access to better markets and other business opportunities.

The Bougainville component of TSSP2 has worked well and achieved good developmental and socio-economic outcomes. TSSP2 focus on social safeguards in Bougainville through the PMSC (Cardno) is a good example of leveraging investment in infrastructure to maximise benefits to the community. TSSP2 sub-contracted the PMSC Bougainville to Cardno from 2018-2020. Under the TSSP2, the PMSC supported the effective and efficient planning and delivery of road maintenance and rehabilitation contracts in the Autonomous Region of Bougainville. The Community Work Arrangements (CWA) is one of the components of PMSC Bougainville's scope of services. Program reports note that CWAs is an important component of the road maintenance program spending approximately 20 to 24% of the maintenance budget program. CWAs perform grass cutting and drain cleaning, which is an integral part of the road maintenance program by ensuring water can drain off the road appropriately so the road stays in better condition longer. Over the course of TSSP2, reporting indicates that the use of CWAs not only provided valuable income to everyday Bougainvilleans but increased access for both women and men to the benefits of financial services (via access to MiCash accounts). Reports note that in Bougainville 9,750 women participating in community works have seen an increase in their income, which has enabled them to open bank accounts and increase their daily income.

4.2 Conclusions

A deteriorating fiscal environment, challenging political context, complex and fragmented governance and implementation framework has made it very challenging for TSSP2 to progress their EOPOs. But despite these challenges, and more recently in the face of a considerable interruption to business continuity as a result of COVID-19, TSSP2 continues to deliver essential and highly valued support for land transport, maritime, and aviation sectors and sustained support for organisation reform, engagement, and performance.

Technical Assistance (TA) remains a critical component underpinning TSSP2's investment in transport infrastructure, though reports tend to be mixed as to the effectiveness of the support. However, there is

consensus that an efficient deployment of TA that works to strengthen government systems and strategies such as Connect PNG and prepare SOEs such as PNG Port's for earmarked investment is seen by GoPNG as essential to the program achieving its long-term objectives.

The provision of technical expertise that leveraged established trusted relationships provided the best conditions for progress and stakeholder reports indicate that the relationship between the technical advisers and agency representatives remains very positive.

4.3 Recommendations

Recommendation 4.1: That TSSP2 continue to develop a standardised financial reporting framework that rationalises TSSP2 program expenditure into activities that can be linked directly to the EOPOs. It would also be useful for TSSP2 annual reports to include GoPNG performance data e.g., expenditure and km are maintained by DoW itself, in order for TSSP2 to monitor the impact of program activities on the whole network maintenance program, not just those km's funded and maintained by TSSP.

Recommendation 4.2: With new road policies and legislations passed, TSSP2 should support the establishment and operationalisation of these new road transport agencies formed such as the PNG Road Fund. This will help ensure that the gains through these legislations are not eroded but rather supported so that they get implemented.

Recommendation 4.3: That TSSP2 continues to invest in the DoW asset management function commenced in 2019 with the delivery of initial road condition data collection processes and continuous engagement with DoW's Asset Management Branch with TSSP2 Advisers. This should be viewed as a long-term and essential road network management function, which will support the legislative reforms to be implemented in 2020/2021 and help to ensure maximum efficiency in the management of the national road network.

Chapter 5: Complementarity between TSSP2 and AIFFP

This chapter assesses TSSP2's recent engagement with the AIFFP, including the provision of support for project preparation. The chapter also provides areas for consideration and issues to be considered when designing TSSP3.

5.1 Key findings

KEQ 7: How can the work between TSSP and AIFFP be improved to ensure complementarity between the two programs? TSSP2 has been working with the AIFFP in PNG since 2019, leveraging TSSP2 local knowledge in pursuit of infrastructure opportunities that broaden DFAT's investment portfolio in transport infrastructure (beyond the maintenance of road infrastructure) and facilitate involvement in GoPNG's national infrastructure aspirations e.g., Connect PNG.

The collaboration between TSSP2 and AIFFP since 2019 has leveraged TSSP2's local knowledge in pursuit of both road and maritime infrastructure opportunities that have broadened DFAT's investment portfolio in transport infrastructure in PNG. TSSP2 and DFAT staff reported that the prospect of AIFFP financing will enable TSSP2 to significantly increase its investments in the maritime infrastructure (see Chapter 1). For example, AIFFP and GoPNG have as of 21 January 2022 entered into an agreement to provide AUD580 million to improve 6 to 7 ports owned by PNG Ports Corporation. TSSP2 assisted with the preparatory work to support AIFFP reach an investment decision for funding to PNG Ports. TSSP2 has also provided similar functions to support AIFFP's proposed investment in the Trans-Island Highway.

The support for port development is a good example of TSSP2 leveraging internal technical capacity and external sources of funding to support an expansion into transport modes outside of the traditional investment in inland transportation. The expansion into port development will provide critical transport services in remote regions and in locations where the construction and maintenance of a traditional road network were considered both impractical and cost-prohibitive.

Some DFAT and AIFFP stakeholders reported that the AIFFP and TSSP2 have delineated roles. AIFFP can only fund discrete projects e.g., a port, approved at the highest levels of the government.

AIFFP is a separate Australian Government facility that is not dependent on TSSP2's capabilities to plan and deliver infrastructure investments. The requirements to obtain AIFFP Board endorsement and Australian Government approval for an AIFFP-financed investment are not subject to DFAT aid delivery standards, though they do share many of the same principles i.e., environmental and social safeguards, GEDSI, inclusion and transparency.

AIFFP stakeholders noted that AIFFP leverages and augments TSSP's arrangements and teams while levelling up the norms and standards of Australia's transport project preparation in PNG to align with international lender standards. Examples include AIFFP working to strengthen TSSP's approach to environmental impact management in line with International Finance Corporation (IFC) standards (e.g., aggregate sourcing on roads maintenance, increasing the specificity and practicality of gender equality and social inclusion action plans, and originating innovative sectoral environment and sustainability assessments to orient TSSP's work on project-level environment and sustainability impact assessments (ESIAs). Overall, TSSP2 is convenient and complementary for AIFFP purposes

Most stakeholders consulted noted that AIFFP and TSSP2 should work together to leverage the goodwill that TSSP2 has fostered with local agencies over the past decade. This goodwill is valuable as it will expedite a more seamless implementation of AIFFP-financed investments to stakeholder expectations. Having AIFFP resourcing on the ground in PNG will help facilitate closer engagement and collaboration between TSSP and AIFFP.

5.2 Conclusions

The complementarity of TSSP2 and AIFFP activities to support a whole-of-Australian Government approach combined with TSSP2's extensive local knowledge of geological and environmental conditions, government and contracting industry capabilities and asset management principles means there is a strong rationale for AIFFP and TSSP2 to collaborate to inform the decision-making processes and to manage investment risk. In this sense, TSSP2's technical support is valuable and contributes to the long-term success of AIFFP activities.

With AIFFP's financial support, TSSP2 has the potential to both improve and expand the quality and scope of PNG transport services to achieve the evolving objectives of the PNG-Australia Partnership for Development. There are differing views and expectations on how AIFFP and TSSP2 can work together. On one hand, there is the opinion that AIFFP and TSSP2 should work together but have clear roles and responsibilities while on the other hand, there is the view that TSSP2 and AIFFP, though working in the same sector, have separate objectives and funding models and should work separately. At the time of this Review, there seems to be merit, energy, and willingness for AIFFP and TSSP2 collaboration especially since AIFFP provides funding that TSSP2 can leverage to advance transport sector investments in PNG.

5.3 Recommendations

While a separate review of the AIFFP is concurrently being undertaken, a couple of options for consideration were proposed:

Recommendation 5.1: Should AIFFP choose to work with TSSP2, it is imperative that TSSP2 retains the discretion to continue its important work in stakeholder engagement, capacity building, maintenance, and institutional reform. These essential activities are critical to the efficacy of the national transport network but also help ensure institutional preparedness to implement and administer new infrastructure investments. TSSP2's understanding of DFAT processes and familiarity with PNG institutional and private sector capacity provides ground to facilitate the preparatory work that AIFFP requires to finance transport infrastructure investments. Also, TSSP2 should be adequately resourced to support AIFFP in the rollout of these investment projects, especially where the activities are considered to be synergistic and highly complementary.

Recommendation 5.2: TSSP2 and AIFFP should collaborate and develop systems that support complementarity in these shared objectives. Where AIFFP is focused on transport infrastructure, it should collaborate and work closely with TSSP2 due to the technical knowledge and relationships/networks it has in PNG.

Recommendation 5.3: As long as AIFFP has investments in PNG, AIFFP should have appropriate staffing levels based in the Australian High Commission (AHC) to engage with partners and implement programs. Though current in-country support to AIFFP has been absorbed by the infrastructure team in AHC, future AIFFP investments in PNG should be matched by increased designated resources at the AHC.

Chapter 6: Cross-cutting issues

This chapter assesses how TSSP2 factored and implemented cross-cutting issues across its programming. Cross-cutting issues in this section refer to gender and social inclusion (GEDSI); monitoring, evaluation and learning (MEL); risk management; and environmental and social safeguards.

6.1 Key Findings

KEQ 8: Have cross-cutting issues been appropriately integrated into program design and delivery?

GEDSI

There is a concerted effort by TSSP2 to strengthen and mainstream GEDSI across TSSP2 and the GoPNG transport agencies' programming and operations. GoPNG's National Strategy to Prevent and Respond to Gender-Based Violence (GBV) 2016-2025 calls for all government agencies to mainstream GEDSI within their workplaces.³ Stakeholders consulted report that TSSP2 has played a key role in mainstreaming GEDSI values and principles to support transport sector agencies including DoW and DoT in aligning their social inclusion policies, resources and systems with this policy. Some organisational restructure exercises have commenced involving the creation of GEDSI-specific positions. These positions will provide the program with a focus for future GEDSI activities with counterpart agencies.

The GEDSI initiatives are also guided by the TSSP2 Gender and Social Safeguards Strategy 2020-2022, which provides parameters and strategies for inclusion. At the time of this Review, the Strategy varies in its implementation stages. Most stakeholders noted the significant improvement of GEDSI awareness observed across the transport and relevant agencies within GoPNG as spearheaded by the TSSP2 GEDSI Adviser. The adviser is well connected with PNG transport sector agencies and the Department for Personnel Management (DPM), although delays in appointing heads of agencies and a lack of dedicated personnel have impacted TSSP2's efforts to support GEDSI socialisation activities across agencies. With agency consultation, the adviser has also created a GEDSI community of practice and assisted agencies in nominating male representatives to join a male advocacy network within the transport sector. In partnership with Business Coalition for Women, the GEDSI Adviser has also developed a Family and Sexual Violence (FSV) Policy to support TSSP2 program staff experiencing FSV in their home environment, and there is potential to replicate the development of the FSV policy within PNG transport sector agencies including CASA PNG.

Stakeholders reported that more women are being trained in technical capabilities and are accessing opportunities to work in decision-making and leadership positions. A Women in Transport Network has existed since 2017 and consists of 11 transport sector agency representatives. It was noted that this could be effective for promoting women in leadership and women's empowerment with advisory support to institutionalise the network in GoPNG agencies and to help ensure agency funding arrangements for their work plans.

The impact of these outcomes and policies is yet to be known though there is evidence on the impacts and benefits of well-maintained roads for women and men, particularly on economic empowerment and enabling access to markets, health, and education services. One key GEDSI outcome has been observed under the Bougainville CWAs (see Chapter 4, KEQ 6) where women participating in community works have seen increased incomes which have enhanced their financial inclusion efforts. Reporting on disability is limited although plans are underway to engage PNG Disability Association to conduct a baseline study on disability in the transport sector.

Current limitations in TSSP2 reporting mechanisms also constrain the program's current ability to measure the social-economic benefits of TSSP2 activities at the community level. A 2018 ODE evaluation found that gender had become largely invisible in project reporting and recommended steps to "define some modest, concrete and achievable outcomes that can be realised with available resources from a defined baseline. More can be done to highlight gender impacts of the program without necessarily applying significant additional resources." While GEDSI inputs are now captured in the revised annual Program Implementation Plan (PIP), current reporting continues to emphasise quantitative indicators such as road completions over sex-disaggregated data or GEDSI indicators. This presents an opportunity for TSSP2 to improve understanding of GEDSI reporting requirements and improve the quality of GEDSI data being captured.

GEDSI reporting could be improved by revising the current format of the PIP in line with DFAT recommendations that reporting on GEDSI performance information be explicit and visible under each program component, and also include a separate section detailing progress against the gender strategy or gender components that includes lessons learned and good practice examples.⁴ Future PIP development could ensure GEDSI components are embedded

³ Government of Papua New Guinea (2016) *National Strategy to Prevent and Respond to Gender Based Violence 2016-2025*, p79

⁴ DFAT (2020) 'Gender Equality In Monitoring And Evaluation And Reporting: Good Practice Note' (Accessed 1 February 2022)

across all EOPOs and that there is an explicit reference to advocacy and awareness of DFAT social safeguards requirements to contractors. This could also be paired with on-the-ground compliance checks to help ensure social safeguards are being implemented by contractors.

Reflecting the importance of GEDSI as a cross-cutting issue, stakeholders consulted also recommended an adjustment to TSSP2 reporting lines so the GEDSI adviser reports directly to the team leader. This would improve the mainstreaming of GEDSI across the different work streams given its overlap with agency support, enhance oversight of contractor compliance with GEDSI and social safeguards requirements, and better position the program for community-level engagements planned for the future.

Monitoring, Evaluation and Learning (MEL)

TSSP2 has a program logic that includes three EOPOs. TSSP2 staff used this program logic to inform the structure of the program's comprehensive MEL framework; guide the program's analysis, reporting and accountability to DFAT; and support the program's annual reflections, learning and adaptive management processes.

Currently, the TSSP2 MEL function is well resourced and capable to advance the Program's reporting, learning, and accountability mandate. TSSP2 MEL is guided by the TSSP2 MEL Plan (MELP) that was revised and updated in 2019. The MELP articulates the Program Logic, the EOPOs, the Performance Assessment Framework as well as the program's learning agenda, research, and implementation arrangements.

With the review of the MELP in 2019, TSSP2 has since been reporting progress made towards the achievement of EOPOs in its annual reporting which has been useful in providing evidence and insights on the progress of the program relating to effectiveness. TSSP2 MEL staff noted that an additional MEL Action Plan 2020-2022 was developed to target key areas that have not been addressed in existing reporting (such as roads and cross-cutting issues). The plan also includes a participatory approach to partnerships to enable the identification of sectoral priorities and agency capacities that need further strengthening.

TSSP2 MEL processes have been nimble which has provided the program flexibility through the annual planning and budgeting process room to adjust priorities and course-correct initiatives throughout the year. Even though the annual work planning has improved over time, DFAT stakeholders consulted noted that there is more room for TSSP2 to remain flexible, and in some instances, move away from the annual implementation plan and be more accommodative of emerging priorities from the GoPNG.

Senior GoPNG officials have also expressed a desire for more national advisers rather than international advisers to fulfil M&E functions within GoPNG agencies. They noted that this will be important in building and retaining MEL capacities in-country. Though the funding of these national MEL positions was not clearly articulated, their importance was noted by most agencies consulted. As discussed in Chapter 2, KEQ 3 the program logic for TSSP2 is due for a refresh to enable better articulation of EOPOs that are relevant to the current context and priorities in PNG. Therefore, TSSP3 design should work with the TSSP2 MEL component to help reshape and reformulate EOPOs reflecting their experience, insights and lessons learned.

Risk management

Program reporting and TSSP2 staff consulted confirmed that TSSP2 has adequate systems in place for risk management. The program maintains a risk matrix that guides program implementation. The Program also updates its Risk Management Plan as part of its annual work planning. In addition, the Program also pro-actively manages health and safety risks through its updated Business Continuity Plan. This proactive risk management approach has mitigated and enabled program continuity, though more could be done. For instance, risk management could be embedded into the program design. Stakeholders consulted also mentioned that remote working models necessitated by COVID-19 carried some risks in terms of reduced oversight of quality control, although this is offset by a strengthening of partnerships and collaboration made possible through more regular telecommunication.

TSSP2 continues to monitor external risks such as the PNG political situation, the domestic budget (particularly for the transport sector) and organisational changes in counterpart agencies. These approaches have resulted in no reported safety and security issues within the last three years, although stakeholders noted that the CWAs in Bougainville contains risks for fraud in its implementation arrangements.

Environmental and social safeguards

TSSP2 has developed an Environmental Safeguards and Climate Change and Disaster Resilience Strategy 2020-2022, in consultation with relevant GoPNG agencies and partnership with the Australia Pacific Climate Partnership. The COVID-19 pandemic has delayed the recruitment of an adviser whose intended function is to be a key resource for transport sector agencies to draw upon in realising their environmental safeguards, climate change and disaster resilience obligations and priorities. Stakeholders report that TSSP2 has been able to draw on social safeguard resources from other sources (such as AIFFP for the Transnational Highway) to mainstream

these priorities, and subcontractors are implementing basic environmental safeguards, but more skilled resources are needed for full implementation of the strategy.

6.2 Conclusions

The future sustainability of GEDSI activities warrants some consideration. While TSSP2 has recruited the right person with the right mix of skills for its GEDSI function, stakeholders consulted have expressed concern that sustained GEDSI engagements may not continue in the event of the current short-term adviser departing from the role. Some measures are in place to support the sustainability of GEDSI activities (i.e. involving the Operations and Office Managers in the implementation of the FSV policy and its referral processes) but more needs to be done to help ensure the longevity of existing policies, systems and processes beyond the departure of the current STA. Stakeholders consulted also expressed a need for more GEDSI awareness training with frontline staff within transport sector agencies given the role that transport plays in GEDSI issues including human trafficking, child protection and gender-based violence.

There is also room for further outcome and impact reporting of the TSSP2 and the MEL Advisers have planned for this. As TSSP2 draws to an end, there are plans to conduct roads impacts studies through case studies that showcase economic benefits because of good and well-maintained roads. Also, there are planned studies on community perceptions of the cross-cutting impacts of GEDSI and social safeguards.

In terms of risk management, the program can respond well given available resources. In terms of MEL, stakeholders consulted report a reluctance within Australian agencies to share activity work plans or performance results with TSSP2, which can impact the program's ability to meet DFAT's timeframes for ASA reporting requirements. This suggests an opportunity for TSSP2 to undertake capacity building with agencies to improve their understanding, appreciation and ownership of evaluation concepts and practices including creating a culture of evidence, learning and sharing.

6.3 Recommendations

Recommendation 6.1: TSSP2 in collaboration with GoPNG should increase delivery of GEDSI awareness training with frontline staff within transport sector agencies to improve understanding of the role that transport plays in GEDSI issues including human trafficking, child protection and gender-based violence (GBV).

Recommendation 6.2: TSSP2 to continue socialising the TSSP2 Gender and Social Safeguards Strategy to enhance understanding of GEDSI issues and promote ownership amongst program staff in continued monitoring and oversight of GEDSI activities.

Recommendation 6.3: That TSSP2 MEL reporting systems, frameworks and tools are improved to best capture GEDSI outcomes through better data capture and gender-disaggregated data across all EOPOs. This will help to ensure that GEDSI components are embedded across all EOPOs and that there is an explicit reference to advocacy and awareness on DFAT social safeguards requirements to contractors. This could also be paired with on-the-ground compliance checks to help ensure social safeguards are being implemented by contractors.

Recommendation 6.4: That TSSP2 to finalise recruitment of an environmental and social safeguards adviser to support the implementation of the TSSP2 Environmental Safeguards and Climate Change and Disaster Resilience Strategy, which is yet to be fully operationalised.

Chapter 7: Overall conclusions and future directions

7.1 Conclusions

In line with DFAT's strategic priorities and intentions for PNG, funding to the transport sector in PNG is likely to continue and/or increase as a significant part of its overall investments in PNG. Given the good performance of the TSSP2 concerning achieving its objectives and its importance to the GoPNG, there is merit and value to recalibrate TSSP3 to enhance programmatic and development effectiveness in line with the Australian Government as well as GoPNG's priorities and needs.

TSSP2 enjoys the broad and positive support of stakeholders from both Australia and PNG. Its activities are highly valued, progressive, and critical to the day-to-day functioning of the PNG transport network, in particular the land and roads network. Hence, the TSSP3 design should build on the lessons learned and best practices of TSSP2 while adapting the program logic and implementation arrangements and giving consideration to the broader environment including new investments by AIFFP, GoPNG and other development partners.

TSSP2's deep understanding of DFAT and GoPNG processes and systems and the strength of its working relationships provide a sound platform for future investment in large-scale infrastructure projects. To respond to the evolving objectives and aspirations of the partnership, TSSP should continue its progressive legislative reform and capacity development to maximise the ability of GoPNG transport agencies to plan, fund, and manage transport infrastructure assets. Further support should also be provided to support GoPNG implement the legislation passed and policies and plans developed.

The introduction of large donor financing for new infrastructure introduces a seismic shift in the existing development paradigm. Despite years of investment in capacity to administer transport infrastructure in the Pacific, national road maintenance funding in countries such as PNG remains highly dependent on foreign aid which is itself cyclical, increasingly fragmented, and unpredictable.

The Review comes at a time when the design for the next phase of TSSP (TSSP3) is under consideration and in the context of a marked increase in donor investment in development infrastructure. While PNG is clearly in need of connective transport infrastructure, the range of economic, financial and social risks are broad and relatively high should GoPNG fail to meet its commitment to self-fund maintenance work. It is the view of this Review panel that future program funding and related investment decisions for new infrastructure incorporate realistic maintenance funding projections to support GoPNG to meet its current and future maintenance funding obligations.

7.2 Future directions

Strategy and policy direction

TSSP2's role in assisting PNG in the planning and financing of road maintenance has always represented sound value for money, improving social and economic outcomes for everyday Papua New Guineans whilst underwriting national stability and economic performance. But it remains that maintenance projects tend to be prioritised less in PNG's political economy. Therefore, until such time that GoPNG earmarks resources to fund and manage the maintenance of the entire road network, there is little reason for DFAT to depart from TSSP2's core strategic objectives and delivery mechanisms as they represent sound value for money for everyday Papua New Guineans.

The Program's investments in road maintenance are encouraged with room to expand to other sectors such as maritime and ports. As mentioned above, DFAT should not depart from its core strategic objectives but be open to broadening the scope to include new transport assets. For instance, DFAT investments in select new investments, founded in sound development economic principles may well provide TSSP2 with the opportunity to leverage its technical abilities and positively influence GoPNG to leverage opportunities to achieve a well-maintained transport infrastructure network.

Approach and ways of working

At the macro level, it is also important to acknowledge that the Australian Government's agencies will not be the only players operating in the infrastructure sector in PNG during the lifecycle of TSSP3 during which time there will be a considerable shift in the way infrastructure is managed and implemented. Under these circumstances, DFAT would do well to encourage adequate GoPNG resourcing to navigate this new territory.

An increasing level of investment in a multi-modal transport network by a wide range of stakeholders and development partners outlined in Connect PNG will increase the complexity in which transport infrastructure is funded, managed, and implemented in PNG. As a partner of choice with a unique interest in developing PNG's capacity to both develop and maintain its infrastructure, DFAT's provision of technical assistance and advisory support to DoT should be sustained. The technical assistance and advisory support will help ensure that TSSP3 works to strengthen PNG's ability to develop sustainable transportation strategies that address PNG's maintenance obligations whilst supporting inclusive, safe and environmental transport outcomes for all transport

users. The technical and advisory support will also allow TSSP3 to monitor and play a central role in the harmonisation of infrastructure activities by GoPNG and its investment partners.

This contribution will allow Australia to have a more direct imprint in this complementary space, similar to the role the Pacific Region Infrastructure Facility (PRIF⁵) provides for infrastructure investment in the Pacific. This model, incorporating a range of donors and facilitators, could be a good best practice example to apply to PNG.

If executed with an inclusive and supportive approach, TSSP3 will foster confidence in GoPNG's ability to finance, implement and manage infrastructure assets, improve the potential for the future financing of national building infrastructure investments, and support Australia to remain a partner of choice.

TSSP3, together with partners such as AIFFP and other development partners (i.e. MLBs), should assist PNG to strike a balance between maintenance and investment, regardless of the type of transport infrastructure investment, or they impose a financial burden on project recipients that culminates in the protracted involvement of large maintenance focussed programs such as TSSP2. If programs such as TSSP2 are to achieve their objective such as an autonomous, well-planned and prioritised road maintenance program, then the economics of large-scale infrastructure investment must factor in the cost of maintaining new infrastructure.

Further, TSSP3 should work with development partners to guard against the potential for designated maintenance funding to be diverted to new infrastructure projects as this invites serious implications for aid-dependent countries and how they manage ageing infrastructure.

Given the burgeoning scope of infrastructure under management, TSSP3 will also need to broaden GoPNG's asset management capability beyond ensuring that funding and resources are adequate to meet the needs of the network under normal operating conditions. Under TSSP3, GoPNG asset management will need to be adequately resourced to quantify the effects of potentially adverse climatic conditions caused by climate change. Though notoriously difficult to forecast, such capabilities will be essential to mitigating operational risk for new and existing marine structures such as ports as well as informing the design and upgrade of roads and bridge structures in low-lying or coastal environments.

The expansion of TSSP3 into marine infrastructure development will also facilitate an enhanced understanding of multi-modal networks in rural areas. For example, planning activities for future port infrastructure should allow TSSP3 and GoPNG to broaden their understanding of transport movements for people and cargo in areas at the fringe of the existing transport network, such as East Sepik Province, Sandaun, and Western Province. Enhanced understanding will not only inform the design and planning of this infrastructure but help ensure that the transport network is inclusive and interconnected in locations where both elements are severely lacking. This will improve resilience to pandemic challenges as well as general access to services and commercial opportunities.

⁵ <https://www.theprif.org/what-we-do>

Annex 1: Methodology, limitations and stakeholders

Data collection methods

The Review team utilised the data collection methods and tools shown below.

Method / tool	How it was done
Documentation review & contextual analysis	<p>The Review team conducted a thorough desktop review of both operational and reporting data for TSSP2 and analysed the secondary data against the analytical framework to generate initial findings and where primary data collection should focus.</p> <p>A contextual analysis was undertaken to help provide a holistic view of the context; the whole environment in which the TSSP2 operates. The environment spanned all the policies, institutions and processes including the private sector and the social, cultural, environmental and economic aspects of areas of intervention by the Program. Noting limitations with data availability, financial analysis explored contributions to the transport sector by other donors, multilateral development banks, GoPNG and the private sector to identify areas or sectors that TSSP can invest in.</p> <p>The contextual analysis helped the assessment of contributions and attributions of the TSSP2 and identify areas or sectors the future iteration of TSSP can invest in.</p>
Rapid literature scan	<p>The Review Team undertook a rapid literature scan to capture literature and reporting from similar DFAT-funded and other donor-funded transport investments in PNG and the Pacific region. The team referred to the literature to help answer specific evaluation questions or triangulate findings from the primary data collection. It explored transport financing trends in PNG looking at the past, present, and future trends.</p>
Key informant interviews	<p>Interviews were used flexibly to gather data to answer the evaluation questions, understand stakeholder perspectives, and were conducted through a combination of remote and face-to-face interviews (more so in PNG) where our local team members lead the consultations. During the interviews, the Review team explained that they were conducting two reviews simultaneously while reiterating the differences between the two reviews and the objective and purpose of each one of them. Our local team members mapped stakeholders and undertook consultations in a culturally appropriate manner to enable participation and ultimately the inclusion of their perspectives and experience in findings.</p>
Focus group discussions	<p>In some cases, it was appropriate to group people together to enable more people to contribute, and for the group to interact with each other. Our local team members undertook consultations in a culturally appropriate manner to enable participation and ultimately the inclusion of their perspectives and experience in findings.</p>

Limitations and challenges

Below are some of the key challenges and limitations faced during the Review.

Challenge / Limitation	Details
Remote interview scheduling challenges	<p>Given that the majority of interviews were conducted remotely, the team anticipated interview scheduling challenges. To mitigate this, the review team in consultation with DFAT developed a list of relevant people to be interviewed and contacted early in the review process. The team provided options for interviews to ensure that they had adequate time to schedule a meeting that will not conflict with their other formal or informal commitments.</p>
Unavailability of stakeholders for interviews	<p>There were very few stakeholders who were unavailable for the interviews due to prior commitments or were unavailable in December- the period when most interviews were conducted. The team undertook several approaches to reduce these challenges including providing advance notice of meeting dates and coordinating with relevant DFAT staff in Port Moresby to ensure more scheduling flexibility.</p>
Data quality	<p>Accessing and verifying the authenticity of data was a challenge. Some data sources did not provide up-to-date data and some data points were missing, limiting the ability to assess trends. In many cases, there was no baseline data which limited the evaluation ability to assess targets achieved.</p>
High staff turnover	<p>Where Programs have been in implementation for a long time such as TSSP2 (since 2014), there is likely a high turnover of staff. This means that some staff who might have been part of the activities have left by the time of this Review. Through a snowball approach, we asked the current staff of former staff members they believed warrant engaging. We then reach out if the staff had extensive knowledge of the activities implemented and/or were deemed important to the review.</p>
Lack of access to financial data	<p>The Review struggled to access the PNG transport sector financial data from GoPNG agencies as well as the other development partners. This limited the ability of the Review to assess trends in transport financing and sectors that partners are investing in. Given that DFAT wanted to understand the transport financing landscape, the Review could not provide this other than noting partners investing in the transport sector (see Chapter 1 on TSSP2 expenditure)</p>

Stakeholder Consultation List

Agency	Number of stakeholders interviewed	Type of interview*
Australian Government		
Department of Infrastructure, Transport, Regional Development and Communications	2	FGD
Australian Maritime Safety Authority	2	FGD
Civil Aviation Safety Authority	2	FGD
Airservices Australia	3	FGD
Australian Transport Safety Bureau	2	FGD
Bureau of Meteorology	4	FGD
DFAT	10	FGD
GHD/TSSP	10	FGD and KII
Australian High Commission Port Moresby	10	FGD and KII
Government of Papua New Guinea		
Department of Transport	2	FGD
Department of Prime Minister & National Executive Council	5	FGD
PNG Accident Investigation Commission	2	FGD
Civil Aviation Safety Authority	6	FGD
NiuSky	4	FGD
National Maritime Safety Authority	4	FGD
Road Traffic Authority	7	FGD
Department of Works	1	KII
Department of National Planning & Monitoring	1	KII
PNG Ports Limited	1	KII
Other stakeholders		
Department of Transport	1	KII
WINGS Education	2	FGD
Cardno	2	FGD
Business Coalition for Women	2	FGD
JBS Consulting	1	KII
Asian Development Bank	1	KII

*Focus Group Discussions (FGDs) or Key Informant Interviews (KII)