



# PACIFIC TRANSPORT UPDATE 2015

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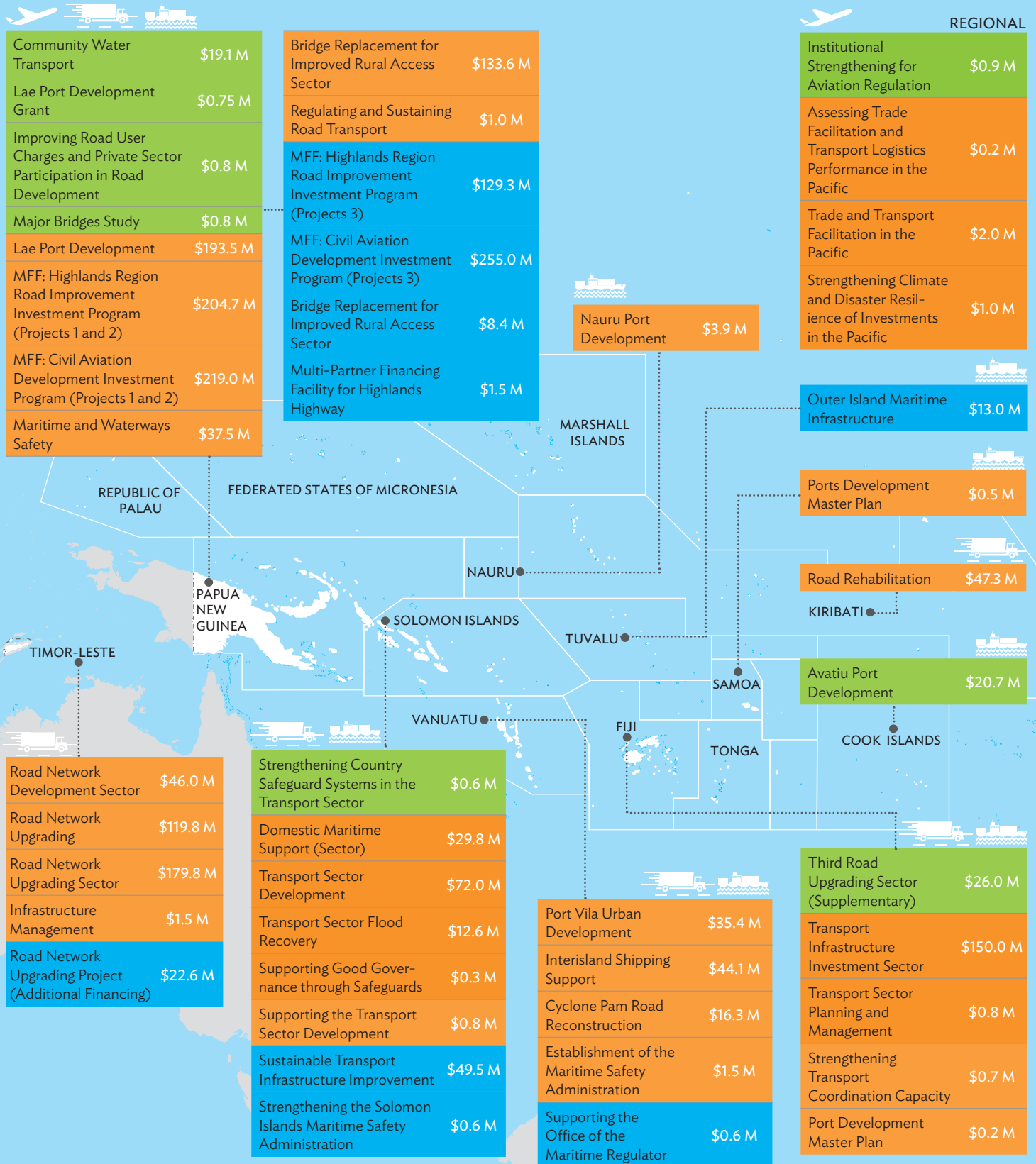
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# ADB TRANSPORT OPERATIONS IN THE PACIFIC



M = million

## Portfolio of Transport Projects in the Pacific (Completed in 2014 and 2015, Ongoing as of 31 December 2015, and Pipeline 2016)

Country	Project	Implementation Period	ADB Funding (\$ million)	Cofinancing <sup>a</sup> (\$ million)	Total <sup>b</sup> (\$ million)
<b>COMPLETED AS OF 2014 AND 2015</b>					<b>66.6</b>
Cook Islands	Avatiu Port Development	Sep 2009–Apr 2014	20.7	0.0	20.7
Fiji	Third Road Upgrading Sector (Supplementary)	Jun 2010–May 2014	26.0	0.0	26.0
Papua New Guinea	Community Water Transport	Nov 2004–Jan 2014	19.1	0.0	19.1
	Lae Port Development Grant	Dec 2007–Feb 2015	0.0	0.75	0.75
<b>ONGOING (AS OF 31 DEC 2015)</b>					<b>1,545.6</b>
Fiji	Transport Infrastructure Investment Sector	Mar 2015–Dec 2020	100.0	50.0	150.0
Kiribati	Road Rehabilitation	Aug 2011–Feb 2017	13.7	33.6	47.3
Nauru	Nauru Port Development	Dec 2015–Mar 2018	3.9	0.0	3.9
Papua New Guinea	Lae Port Development	Oct 2008–Dec 2015	187.5	6.0	193.5
	Multitranches Financing Facility: Highlands Region Road Improvement Investment				
	Project 1	May 2009–Jun 2016	99.4	0.0	99.4
	Project 2	Apr 2014–Jun 2018	105.3	0.0	105.3
	Multitranches Financing Facility: Civil Aviation Development Investment				
	Project 1	Mar 2010–Dec 2015	90.4	0.0	90.4
	Project 2	Apr 2014–Sep 2017	128.6	0.0	128.6
	Bridge Replacement for Improved Rural Access Sector				
	Maritime and Waterways Safety				
	Domestic Maritime Support (Sector)				
Solomon Islands	Domestic Maritime Support (Sector)	Feb 2009–Jun 2019	15.6	14.24	29.84
	Transport Sector Development	Jul 2011–Jul 2016	12.0	60.0	72.0
	Transport Sector Flood Recovery	Oct 2014–Dec 2017	12.6	0.0	12.6
Timor-Leste	Road Network Development Sector	Apr 2010–May 2016	46.0	0.0	46.0
	Road Network Upgrading	Jun 2012–Jun 2018	51.1	68.7	119.8
	Road Network Upgrading Sector	Mar 2014–Jun 2020	125.3	54.5	179.8
Vanuatu	Port Vila Urban Development	Feb 2013–Dec 2017	4.4	31.0	35.4
	Interisland Shipping Support	Sep 2012–Dec 2017	26.8	17.3	44.1
	Cyclone Pam Road Reconstruction	Nov 2015–Dec 2017	13.6	2.7	16.3
<b>PIPELINE 2016</b>					<b>477.8</b>
Papua New Guinea	MFF: Highlands Region Road Improvement Investment (Project 3)		109.3	20.0	129.3
	MFF: Civil Aviation Development Investment Program (Project 3)		255.0	0.0	255.0
	Bridge Replacement for Improved Rural Access Sector		0.0	8.4	8.4
Solomon Islands	Sustainable Transport Infrastructure Improvement		21.6	27.9	49.5 <sup>c</sup>
Timor-Leste	Road Network Upgrading (Additional Financing)		0.0	22.6	22.6
Tuvalu	Outer Island Maritime Infrastructure (Outer Island Port Development)		13.0	0.0	13.0 <sup>d</sup>
<b>Total loans and grants for projects</b>					<b>2,089.7</b>

ADB = Asian Development Bank; MFF = Multitranches Financing Facility.

<sup>a</sup> Includes DVA cofinancing only.

<sup>b</sup> Government counterpart is not included.

<sup>c</sup> Includes ongoing and piggybacked technical assistance.

<sup>d</sup> Includes ongoing technical assistance and project design advance.

Source: ADB.

## Portfolio of Technical Assistance in the Pacific (Completed in 2014 and 2015, Ongoing as of 31 December 2015, and Pipeline 2016)

Country	Project	Implementation Period	ADB Funding (\$ million)	Cofinancing (\$ million)	Total (\$ million)
<b>COMPLETED AS OF 2014 AND 2015</b>					<b>3.1</b>
Regional	Institutional Strengthening for Aviation Regulation	Dec 2010–Jun 2015	0.9	0.0	0.9
Papua New Guinea	Improving Road User Charges and Private Sector Participation in Road Development	Jan 2010–Jan 2014	0.0	0.8	0.8
	Major Bridges Study <sup>a</sup>	Dec 2011–May 2015	0.8	0.0	0.8
Solomon Islands	Strengthening Country Safeguard Systems in the Transport Sector	Dec 2012–Jun 2015	0.0	0.6	0.6
<b>ONGOING (AS OF 31 DECEMBER 2015)</b>					<b>10.5</b>
Regional	Assessing Trade Facilitation and Transport Logistics Performance in the Pacific <sup>b</sup>	Dec 2013–Jan 2015	0.2	0.0	0.2
	Trade and Transport Facilitation in the Pacific	Jun 2014–Jun 2016	0.0	2.0	2.0
	Strengthening Climate and Disaster Resilience of Investments in the Pacific	Sep 2015–Dec 2018	1.0	0.0	1.0
Fiji	Transport Sector Planning and Management	Jan 2014–Jan 2016	0.8	0.0	0.8
	Strengthening Transport Coordination Capacity <sup>c</sup>	May 2015–Jun 2018	0.7	0.0	0.7
	Port Development Master Plan	Dec 2015–Dec 2016	0.2	0.0	0.2
Papua New Guinea	Regulating and Sustaining Road Transport	Oct 2012–Dec 2016	1.0	0.0	1.0
Samoa	Ports Development Master Plan	May 2015–Aug 2016	0.5	0.0	0.5
Solomon Islands	Supporting Good Governance through Safeguards	Nov 2014–Apr 2016	0.3	0.0	0.3
	Supporting the Transport Sector Development Project <sup>d</sup>	Feb 2011–Jun 2016	0.0	0.8	0.8
Timor-Leste	Infrastructure Management	Jan 2013–Jun 2017	1.5	0.0	1.5
Vanuatu	Establishment of the Maritime Safety Administration <sup>e</sup>	Mar 2012–Sep 2016	0.5	1.0	1.5
<b>PIPELINE 2016</b>					<b>2.7</b>
Papua New Guinea	Multi-Partner Financing Facility for Highlands Highway <sup>f</sup>		1.5	0.0	1.5
Solomon Islands	Strengthening the Solomon Islands Maritime Safety Administration		0.6	0.0	0.6
Vanuatu	Supporting the Office of the Maritime Regulator		0.6	0.0	0.6
<b>Total grants and technical assistance</b>					<b>16.4</b>

Total completed loans, grants, and TA		69.8
Total ongoing loans, grants, and TA		1,555.8
Total proposed loans, grants, and TA		480.5
<b>TOTAL INVESTMENT</b>		<b>2,106.1</b>

ADB = Asian Development Bank, TA = technical assistance.

<sup>a</sup> Connected to the Bridge Replacement for Improved Rural Access Sector Project.

<sup>b</sup> Small-scale technical assistance.

<sup>c</sup> Associated with the Transport Infrastructure Investment Sector Project.

<sup>d</sup> Associated with the Transport Sector Development Project.

<sup>e</sup> Connected to the Interisland Shipping Support Project.

<sup>f</sup> Formerly the Land Transport Improvement Investment Program.

Source: ADB.

## Overview

Pacific developing member countries (DMCs) typically experience sluggish economic growth and high poverty rates due to constraints specific to the region. For example, in 2010, the poverty rate or the share of population living on \$1.25 per day is around 35%. With the exception of Papua New Guinea (PNG) and Timor-Leste, Pacific DMCs are made up of small, highly dispersed islands spread over vast ocean territories. Most of the population lives along the coastlines or within an average of 1.5 kilometers (km) of the shoreline. Pacific DMC economies are dependent on tourism, agriculture, and fisheries; and transport is an essential component of economic development.

Transport provides critical connections to essential services, and access to domestic and international markets. However, the delivery of efficient transport infrastructure and services is hampered by characteristics shared throughout the region. Generally, these countries have low population densities and small land areas. The islands are geographically dispersed and far from other countries in Asia and the Pacific. This results in a high cost for both domestic and international trade, and increases the cost of access to essential government services such as health care and education. In addition, Pacific DMCs are extremely vulnerable to climate change and natural disasters, which lead to increased infrastructure maintenance costs. Moreover, with their narrow economic base and small markets, Pacific DMCs face fiscal constraints that limit capital investment in infrastructure.

Investing in infrastructure development in the Pacific region is a key priority for the Asian Development Bank (ADB). The transport sector comprises the largest proportion of ADB's Pacific portfolio. ADB's transport portfolio is aligned with the ADB's overarching framework of inclusive and sustainable growth, as set out in ADB's Strategy 2020, where priority is given to projects that facilitate access to markets and social services, encourage economic activities, and improve human capital, while taking into account environmental concerns.<sup>1</sup> ADB's Pacific Approach, 2010–2014 emphasizes the need to continue support in the transport sector to improve connectivity via multimodal networks, while recognizing the need to ensure that investments in the sector are made more resilient against natural disasters and the effects of climate change.<sup>2</sup> Emphasis is placed on improving access to international and domestic markets, as well as on routine infrastructure maintenance and sustainable financing. To reduce cost and labor constraints, communities are involved in maintenance activities. This approach also fosters community ownership and participation.

ADB has strengthened its partnership with other development institutions working in the region. Its project portfolio has grown through joint cofinancing operations with bilateral and multilateral partners. Improved coordination leads to better harmonization of policies and operations among

partner institutions and governments, and enhanced mutual accountability. Governments lead in investment programming and ADB, with its development partners, supports country-driven initiatives.

This publication identifies the projects in the transport sector supported by ADB and its development partners in the Pacific region since 2013.

## Regional Initiatives

Pacific DMCs face considerable constraints to regional connectivity and trade. Limited data on trade and transport logistics hamper strategic planning and analysis, while insufficient technical capacity and manpower of government agencies hinder the timely and efficient management and implementation of projects. Pacific DMCs also have outdated institutional frameworks and regulations, which complicate processes and cause performance delays. Further, safety measures and practices, particularly in maritime and aviation, are not compliant with international standards. The quality of infrastructure also varies across Pacific DMCs, with most having inadequate transport infrastructure and inefficient services.

Pacific DMCs are also vulnerable to climate change. The economies of the Pacific DMCs are dependent on tourism, agriculture, and fisheries, which require substantial coastal and marine resources. However, the DMCs are mostly composed of small islands spread over a wide area. Some islands, especially the atolls, have no surface water, and the people rely on rain or groundwater for their needs, which is difficult because of problems brought about by erratic rainfall and saltwater intrusion. In addition, major infrastructure such as roads and airports are located near the shores and face the following challenges: (i) changes in precipitation levels which can weaken road foundations; (ii) stronger typhoons which impact drainage systems and river flows; and (iii) sea level rise and storm surges which encroach on coastal infrastructure, especially ports and sea ports.

Government allocations for infrastructure maintenance are also limited, exacerbating the problem. Investments in infrastructure require substantial financing, which Pacific DMCs cannot afford on their own.

In this regard, ADB and other development partners are providing financial and technical assistance (TA) to the DMCs. For example, ADB is supporting capacity-building activities on infrastructure investment planning and sustainable financing, on top of capital investments on physical infrastructure. Community-based repairs and maintenance are also being utilized to manage costs and labor constraints. At the same time, climate change adaptation measures and disaster risk management are being integrated into project designs, adopting a “build back better” approach, to minimize infrastructure repair and maintenance costs.

TECHNICAL ASSISTANCE	
<b>Institutional Strengthening for Aviation Regulation</b>	
Harmonization of aviation legislation and regulations among Pacific DMCs, and ensuring the financial sustainability of the Pacific Aviation Safety Office	
Financing	\$0.90 million
ADB: Technical Assistance Special Fund	\$0.90 million
Executing Agency	Asian Development Bank
Status	Completed December 2010–June 2015

The Pacific Aviation Safety Office (PASO) was set up in 2005 to assist its member countries in meeting the aviation safety and security requirements of the International Civil Aviation Office. PASO members are also signatories to the Pacific Islands Aviation Safety and Security Treaty, under which they are obliged to adopt common inspection regime and compliance protocols.

ADB extended TA to assist DMCs in harmonizing their aviation legislation and regulations. This would ease the cost of compliance with inconsistent regulations, simplify travel, and result in improved airline operations. This would also facilitate the work of PASO and enable it to operate more efficiently and cost-effectively. However, legislation drafted under the TA to enable aviation regulatory oversight has yet to be enacted by some member countries.

PASO faces challenges to its financial sustainability, with several members unable to meet their financial obligations through subscriptions. The TA assessed PASO's financial performance and management systems, and recommended measures for improvement.

TECHNICAL ASSISTANCE	
<b>Assessing Trade Facilitation and Transport Logistics Performance in the Pacific<sup>a</sup></b>	
Establishment of a baseline for future trade and transport facilitation projects in the Pacific region	
Financing	\$0.225 million
ADB: Technical Assistance Special Fund	\$0.225 million
Executing Agency	Asian Development Bank
Status	Ongoing December 2013–January 2015

<sup>a</sup> Small-scale technical assistance.

Developing countries in the Pacific are mostly low-populated fragmented islands scattered over the vast Pacific Ocean. This

leads to low economies arising from low volume of passengers and goods, and travel time is lengthy since the islands are far apart. In an environment of restrictive country trade policies and limited resources for infrastructure development, trade and transport logistics are constrained.

Historically, the majority of international trade in the Pacific DMCs were mostly confined with Australia and New Zealand. However, recent years have brought structural shifts in trade patterns. Trade relations between Pacific DMCs and Southeast Asia, the People's Republic of China, and India have recently improved, and total trade with these new regions and countries have increased.

At the Pacific Islands Forum meeting in September 2013 held in Fiji, trade leaders agreed to prioritize and revive the pursuit for regional integration. The ministers also raised the importance of reducing the high cost of trade and transport in the region. Thus, knowledge of trade flows and logistics within and outside the region is essential to ascertain the factors that inhibit efficient trade and transport.

ADB extended TA to support a comprehensive assessment of the state of trade and logistics in the Pacific to serve as baseline for future projects. As a result of the TA, assessment tools for trade and logistics were developed, and an analysis of trade and transport flows for priority corridors was carried out.

TECHNICAL ASSISTANCE	
<b>Trade and Transport Facilitation in the Pacific</b>	
Improvement of Pacific DMC government capacity for strategic trade and transport facilitation investments planning through the use of assessment tools and capacity-building activities	
Financing	\$2.00 million
Japan Fund for Poverty Reduction	\$2.00 million
Executing Agency	Asian Development Bank
Status	Ongoing June 2014–June 2016

Countries in the Pacific are enhancing intraregional trade by identifying and addressing constraints in value chains. However, in-depth studies on the underlying bottlenecks in infrastructure or processes, such as transport logistics or customs procedures, have not been conducted.

ADB extended TA to seven Pacific DMCs—Fiji, the Federated States of Micronesia, PNG, Samoa, Timor-Leste, Tonga, and Vanuatu—to build their capacity in conducting regional analysis of trade and transport linkages. The TA is expected to encourage small and medium-sized enterprises in these DMCs to participate in international trade and improve economic competitiveness.

<sup>1</sup> ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.

<sup>2</sup> ADB. 2009. *Pacific Approach, 2010–2014*. Manila.

Project outputs include tools for trade facilitation and logistics analysis, capacity building for trade and transport demand assessment, and strengthening of customs processes, for use by relevant institutions. These assessment tools, such as the time/cost distance methodology and time-release studies, use data on the transport of commodities along specific routes (including all costs and steps taken such as charges for the processing of documents or delays at ports and terminals), and aid in locating bottlenecks and problem areas. Likewise, demand assessment involves the development of a trade and transport flow model for policy scenario analysis. Results of the assessments will be used in formulating efficiency plans for trade and transport facilitation and in improving customs procedures.

TECHNICAL ASSISTANCE	
<b>Strengthening Climate and Disaster Resilience of Investments in the Pacific</b>	
Integration of climate and disaster-resilient features and processes in investment projects and government planning	
Financing	\$1.00 million
ADB: Technical Assistance Special Fund	\$1.00 million
Executing Agency	Asian Development Bank
Status	Ongoing September 2015–December 2018

Location and geography make Pacific countries highly vulnerable to climate change and disaster risks. Transport infrastructure is regularly damaged by heavy rains and flooding brought about by typhoons, resulting in high rehabilitation, reconstruction, and maintenance costs. In addition to the underlying infrastructure investments, adaptation measures to increase the resilience of infrastructure to disaster events and climate change also involve incremental costs.

ADB extended TA to incorporate climate change and disaster risk management into project designs. The TA includes capacity building for integrating climate and disaster risk considerations in Pacific DMC governments' planning processes, and facilitating Pacific DMCs access to climate financing such as the Green Climate Fund, for which ADB is an accredited implementing agency. In addition, collaboration on knowledge products and knowledge sharing among DMCs and partner organizations will be encouraged.

The success of the TA will be measured through the number of climate adaptation and disaster risk management features of investments for all infrastructure sectors, and increased climate financing for Pacific DMCs.

## Cook Islands

Cook Islands is one of the world's smallest states. It has a population of about 21,000 and a vast territory of 1.8 million square kilometers (km<sup>2</sup>), of which only 240 km<sup>2</sup> island. Cook Islands' National Sustainable Development Plan, 2011–2015, envisions quality of life while taking culture and the environment into consideration. It declares eight long-term goals, including infrastructure development.

ADB's Pacific Approach 2010–2014, which serves as the country partnership strategy (CPS) for Cook Islands, specifies three development agendas: inclusive and environmentally sustainable growth, good governance, and regional cooperation and integration. Moreover, it presents four priority areas: transport and information and communication technology, energy, water and sanitation, and education.

<b>Avatiu Port Development Project</b>	
Improvement and reconstruction of infrastructure to expand Avatiu port capacity	
Financing	\$24.62 million
ADB: Ordinary capital resources	\$12.87 million
ADB: Asian Development Fund	\$7.04 million
ADB: Climate Change Fund	\$0.80 million
Government	\$3.91 million
Executing Agency	Cook Islands Ports Authority
Status	Completed September 2009–April 2014

Avatiu Port is the main port in Cook Islands, where nearly all international and domestic trade pass through. The other international port is Aitutaki, and the rest are small domestic ports and jetties. The two international ports are operated by the Cook Islands Ports Authority.

Maintaining efficient operations of the Avatiu port is crucial because it sustains tourism and trade, the predominant means of support to the economy. The port has been operational since 1989. Restoration works are periodically done to maintain the structural integrity of the port, but these have proved costly and ineffective. Advanced corrosion had set in on the reinforcing steel of the structure. In addition, cargo ships are now larger and require bigger harbors and wharfage, while trade volumes have expanded and larger storage areas are essential. ADB extended assistance to enable the Avatiu port to undergo necessary upgrades so that it could conform to international maritime safety standards and bring its capacity up to the required levels.

Through the project, the harbor entrance was widened to 10 meters (m) and dredged to 8 m. A 270 m continuous quay replaced two existing berths. Petroleum pipelines were replaced and buried, and the connection points positioned beside the berth. The wharf was climate-proofed, and storage sheds were relocated and expanded. Navigation aids were also installed. The project improved the Avatiu port so that it complies with international conventions and guarantees its structural integrity.

## Fiji

Fiji has a population of 860,000, of which 49% live in rural areas. Although agriculture has a significant share in the economy, tourism is the dominant driver. Adequate transport infrastructure and services are necessary to connect the rural economies with the domestic and international markets and essential services, and to facilitate tourism activities. Tourism, for example, requires port facilities to service cruise ships and tourists, safe and well-charted shipping lanes, reliable routes and transport services to island destinations, and efficient logistics for travel and provisions.

Maritime transport infrastructure in Fiji is functional and services are reliable, although ports and associated facilities are in poor condition, with limited and often old navigation aids. Recent upgrades of the Suva and Lautoka ports have enhanced their capacity to service cargo ships, with bigger

wharves and cargo storage, and sophisticated harbor cranes that improved ship-to-shore transfer rates. For the smaller ports, infrastructure and facilities remain rudimentary.

Frequent natural disasters and a general lack of adequate maintenance have left Fiji's main road network in a state of disrepair. The short-term priority is the upgrading of roads in the main islands, but long-term plans include road projects in the outer islands. A balanced investment approach between the main routes and the lower level networks is being followed. Capital investments for road expansions are being implemented during periods of fiscal expansion, while maintenance works on core infrastructure take precedence during fiscal austerity. The government has made substantial investments in transport infrastructure since 2012. The Fiji Roads Authority (FRA) is now implementing a 5-year renewal and upgrading program to address the backlog of road maintenance to bring the road network to a maintainable standard.

### Third Road Upgrading Sector Project (supplementary)

Upgrade and rehabilitation of Kings and Lodon Roads

Financing	\$71.80 million
ADB: Ordinary capital resources	\$26.00 million
Government	\$45.80 million
Executing Agency	Department of National Roads, Ministry of Works and Transport
Status	Completed June 2010–May 2014



Around 90% of Fiji's total road network is situated in its two largest islands, Viti Levu and Vanua Levu, where 94% of the population live. The Kings and Lodon roads provide the impoverished rural communities in Viti Levu access to markets and services in Suva.

ADB supported the project to improve road transport services and road asset management, and to expand private sector participation. The project upgraded and rehabilitated roads, added road safety features, procured specialized equipment, and provided consulting services. As a result of the initial upgrade of the Kings Road, traffic increased by an average of 8% per year along the upgraded sections. Significant cost savings are expected from the reduced travel length and time, as well as the elimination of road closures during the rainy season. Increased traffic arising from the road improvement also resulted in economic gains. In addition, upgrades to the Lodon Road improved key linkages between the main international port in Suva and the domestic port in Natovi, enabling domestic imports and exports.

Overall, the project effectively provided better access to markets and services. A total of 125.45 km of gravel roads were sealed, more than the target 100 km. Likewise, 120 km of roads were rehabilitated versus the planned 80 km. Reductions in vehicle operating costs were estimated at 37% for cars and 45% for trucks. Travel times dropped by around 50%. Rural farmers are now able to sell their produce to markets in Suva, and small fruit and vegetable stands have sprung up along the roads.

TECHNICAL ASSISTANCE	
Transport Sector Planning and Management	
Update of national land and marine transport sector plans	
Financing	\$0.90 million
ADB: Technical Assistance Special Fund	\$0.80 million
Government	\$0.10 million
Executing Agency	Ministry of Finance
Status	Ongoing January 2014–January 2016

The 20-year Fiji National Transport Sector Plan (FNTSP) lays out the long-term policies and strategies of the government, complemented by a 10-year road transport investment plan. The FNTSP commenced in 1993 and covers all transport and intermodal matters. It encompasses domestic and international aviation, interisland and international ports and shipping, and municipal and national roads and transport services.

Fiji undertook a midterm review of its FNTSP in 2004, with an emphasis on policy development and implementation. In 2014, ADB provided TA to review and undertake a comprehensive update of the FNTSP strategies and policies in land and maritime transport, with consideration of intermodal

links. An updated 20-year National Transport Infrastructure Investment Plan will also be prepared.

#### Transport Infrastructure Investment Sector<sup>a</sup>

Rehabilitation and upgrade of road networks and maritime transport infrastructure, and capacity building for transport agencies

Financing	\$166.70 million
ADB: Ordinary capital resources	\$100.00 million
World Bank	\$50.00 million
Government	\$16.70 million
Executing Agency	Ministry of Finance
Status	Ongoing March 2015–December 2020

<sup>a</sup> Formerly the Bridge Replacement Project.

Transport connectivity in Fiji is constrained by the limited road networks which offer few alternative routes. The deteriorated road conditions are exacerbated by tropical cyclones which bring heavy rains and flooding. Similarly, maritime transport infrastructure in rural areas are impaired due to neglect. The project is expected to improve access to markets, services, and livelihood opportunities.

ADB has provided support to rehabilitate and upgrade Fiji's road networks and maritime transport infrastructure. This project has two outputs. The first output is the rehabilitation and upgrade of 100 km of roads, 30 bridges, and 6 jetties selected from the priority list in the updated National Transport Infrastructure Investment Plan. Climate change adaptation, road safety features, and gender-sensitive elements, such as streetlights for roads and pedestrian access for bridges, will be incorporated in the design.

The second output is the institutional strengthening and project management support for government agencies in the key areas of infrastructure investment planning and maintenance. Project staff from the FRA will be assigned to conduct procurement and financial management, monitoring and evaluation, and reporting. Consultants will be engaged for subproject design screening, feasibility studies, detailed design, procurement, construction supervision, and safeguards monitoring.

The project is jointly financed by ADB and the World Bank, and is the first project of such size and complexity to be implemented jointly by both organizations globally. ADB and the World Bank have agreed on a common implementation framework to ensure that both organizations' policies and guidelines in regard to technical due diligence, procurement, environmental safeguards, resettlement safeguards, and financial management are met. Streamlining both ADB and World Bank requirements reduces transaction costs, facilitates implementation, and eliminates duplication of efforts for the government.

TECHNICAL ASSISTANCE	
<b>Strengthening Transport Coordination Capacity<sup>a</sup></b>	
Preparation of a capacity development plan for the Ministry of Finance and the Ministry of Infrastructure and Transport, and conduct of staff trainings	
Financing	\$0.70 million
ADB: Technical Assistance Special Fund	\$0.70 million
Executing Agency	Ministry of Finance
Status	Ongoing May 2015–June 2018

<sup>a</sup> Associated with the Transport Infrastructure Investment Sector Project.

ADB is extending TA to support capacity building for the Ministry of Finance, FRA, and the Ministry of Infrastructure and Transport staff engaged in infrastructure planning and project management. It is linked to ADB's ongoing Transport Infrastructure Investment Sector Project.

Key activities include a training needs assessment for staff handling capital and operational budgets, formulation of a staff capacity development plan, and trainings on infrastructure planning and management. Trainings will cover economic and financial analyses of projects, asset management, and public-private partnerships.

TECHNICAL ASSISTANCE	
<b>Port Development Master Plan</b>	
Preparation of a master plan for ports investments, including 15-year supply and demand forecasts, to support ports development	
Financing	\$0.20 million
ADB: Technical Assistance Special Fund	\$0.20 million
Executing Agency	Ministry of Public Enterprises
Status	Ongoing December 2015–December 2016

Fiji is strategically located at the center of the South Pacific region and is recognized as a regional transport hub. The country has six ports of entry declared under the Sea Ports Management Act, and managed by the Fiji Ports Corporation Limited, including: (i) Suva Port, which is the main international gateway for Fiji and a hub port for the region; and (ii) Lautoka Port, which is Fiji's second largest port. There is an imbalance between imports and exports, shown by an excess of empty container exports over imports of about three to one. Ship calls by foreign cargo vessels have remained static at an average of 800 vessels annually, indicating that cargo growth has occurred alongside an increase in vessel size and carrying capacity. Both ports are congested, and require further study to optimize port zoning functions according to cargo types, and land use within port limits.

The TA is the first phase of ports master planning, which will consider development planning to reduce congestion and

improve efficiency at the six declared ports of entry. The TA will establish baseline data on current port efficiency, and forecast port efficiency after the Fiji Ports Corporation Limited carries out port optimization and investment. The TA output, which will include 15-year demand and supply constraints forecasts under an optimized scenario, will support the government in making strategic decisions for new port investments.

## Kiribati

Kiribati is made up of 33 dispersed low-lying islands. Its country territory measures 3.6 million km<sup>2</sup>, of which only 726 km<sup>2</sup> island. Most of the population lives in the capital, Tarawa.

ADB's CPS for Kiribati focuses on poverty reduction and employment generation through better public financial management and efficient infrastructure services. It is aligned with the government priorities expressed in the Kiribati Development Plan, 2012–2015. ADB recognizes that state-owned enterprises are critical in infrastructure services, and aims to strengthen the commercial viability of state-owned enterprise operations.

In general, infrastructure (power, transport, water, and sanitation) in Kiribati is inadequate and in poor condition while services are inefficient and costly. User charges are below cost and revenues from services cannot cover rehabilitation and maintenance expenditures. Operations are not financially sustainable. There is no explicit subsidy from the government, and limited government finances are unable to meet additional spending. Therefore, upkeep of infrastructure and continuity of services depend on periodic large capital investments coming from donor financing.

Kiribati is also one of the countries which are most vulnerable to climate change, and climate change adaptation is incorporated in ADB's investment projects.

Road Rehabilitation Project	
Rehabilitation of main roads and feeder roads in South Tarawa, and road maintenance capacity building for community-based enterprises	
Financing	\$53.24 million
ADB: Asian Development Fund	\$13.70 million
Government of Australia through the Pacific Regional Infrastructure Facility	\$11.61 million
World Bank	\$22.00 million
Government	\$5.93 million
Executing Agency	Ministry of Finance and Economic Development
Status	Ongoing August 2011–February 2017

Kiribati's total road network is small, more than 20 years old, and located mainly in South Tarawa and Kirimati. Main roads total only 546 km, of which 119.4 km are sealed, while minor roads total 262 km. Road traffic in Kirimati is light and the roads are in good condition. On the other hand, those in South Tarawa handle heavy traffic. Around 6,000 vehicles travel along the South Tarawa route daily, of which 40% are privately owned public minibuses. Recent years have seen a 4% annual increase in road use. As a result, these roads have deteriorated to a gravel surface, and some sections have eroded due to heavy traffic and high rainfall. Large potholes can cause damage to vehicles and pose increased risks of crashes. The stagnant water that fill the potholes during the rainy season and the dust that penetrates people's upper respiratory tract during the summer also pose health hazards. Travel speeds have gone down to an average of 20 km per hour.

ADB and the Government of Australia have extended assistance for the rehabilitation of the main roads and feeder roads in South Tawara, and road maintenance capacity building for community enterprises. Prior to the project, little rehabilitation or maintenance had been done on the roads. Securing budget for road maintenance remains a priority, as annual road maintenance costs exceed toll revenues from the Betio Causeway, while fuel tax and registration fees are also low.

The project covers 32.5 km of main roads and 8 km of feeder roads in South Tarawa. The route connects the Betio seaport with the airport, and around two-fifths of the whole country population live along this route. The expected outputs are (i) rehabilitated and upgraded South Tarawa roads, and (ii) established competent community-based road maintenance groups. A 2-year defects liability period will take into effect after capacity-building activities, during which the road maintenance groups will be engaged to do routine maintenance.

## Nauru

Nauru is a small island with a land area of 21 km<sup>2</sup> and a population of 9,322. With limited agriculture and water resources, its economy relies on fisheries and phosphate mining. The Nauru Economic Infrastructure Strategy and Investment Plan, 2011 sets out the country policies and priorities for economic infrastructure investments. It identifies six priority areas for investments: maritime transport, aviation, roads, water and sanitation, power, and government buildings.

### Nauru Port Development Project

Preparation of engineering design and a due diligence on a Nauru port project

Financing	\$3.90 million
ADB: Asian Development Fund	\$3.00 million
ADB: Technical Assistance Special Fund	\$0.90 million
Executing Agency	Nauru Ministry of Finance
Status	Ongoing December 2015–March 2018

Nauru does not have a natural harbor, and its mooring system is the only facility capable of berthing visiting ships. It can be affected by weather conditions, and ships are forced to unload their cargo from offshore, when it is damaged or require repair. Transferring cargo containers to the port buildings using barges can be time-consuming and costly, and poses serious safety risks.

Several studies have been conducted by ADB, the Japan International Cooperation Agency (JICA), and the Pacific Region Infrastructure Facility since 2009 to provide a suitable port facility for Nauru. Based on a Pacific Region Infrastructure Facility prefeasibility study conducted in 2015, ADB approved a project design advance to undertake geotechnical investigations and detailed engineering designs to construct a quay wall, connecting the causeway, port buildings, and container yard. In parallel, ADB also approved a project preparatory TA to conduct due diligence on the project. The preliminary cost of the project is estimated at \$23 million and civil works are expected to start in November 2017.

## Papua New Guinea

The development framework for Papua New Guinea, Vision 2050, aims for inclusive economic growth over the long term. One of the strategic goals is bringing development to the rural areas through transport, utilities, social services, and livelihood opportunities. In PNG, ADB invests mainly in transport, particularly roads and aviation.

Around 60% of the population lives along the coastlines and rivers. Maritime transport provides the greater share of transport services since most of the coastal communities are remote and accessible only by sea. Ports link the communities with the mainland and the international market. Lae is the primary port and is operated by the state-owned PNG Ports

Corporation. Maritime operations are regulated and managed by the National Maritime Safety Agency, established in 2005.

Most of the country's national airports are old, not suited for newer aircrafts, and do not meet safety standards. They also use derelict navigation equipment and some have no rescue and firefighting services. Most of these airports are operating at a loss and lack government funding. They rely on assistance from development partners.

In land transport, road rehabilitation and maintenance projects take priority over network expansion. Road maintenance is costly but necessary due to frequent damage from natural disasters. At the subnational level, there is around 20,000 km of roads serving 85% of the rural population. However, lack of financial resources of local governments has led to the neglect of provincial and district roads. Moreover, there is no comprehensive data on these roads, which inhibits government agencies from properly evaluating and planning road network improvements.

As road networks improve, the focus will be on road expansion. As of 2010, only 32% of the national roads were in good condition. The Development Strategic Plan, 2010–2030, intends to increase this to 100% by 2030 and triple the total length. The goal is a national road network for the whole of PNG.

TECHNICAL ASSISTANCE	
<b>Improving Road User Charges and Private Sector Participation in Road Development</b>	
Expansion of road user charges for sustainable financing of road maintenance	
Financing	\$1.00 million
Japan Special Fund	\$0.80 million
Government	\$0.20 million
Executing Agency	National Road Authority
Status	Completed January 2010–January 2014

Well-maintained roads ensure sustainable access to markets and livelihoods. However, road maintenance is costly due to heavy rains and frequent tropical cyclones which require recurrent road repairs. In addition, there is a lack of skilled domestic and international contractors to undertake periodic maintenance.

A sustainable financing mechanism for the maintenance of roads is vital to ensure proper periodic maintenance, manage rehabilitation costs, and prolong the life of roads. ADB provided support for the establishment of a mechanism for using road user charges (RUC) to finance maintenance works and procure road maintenance contracts, and to attract more contractors bidding for road improvement and maintenance.

The TA conducted a thorough review of RUCs in PNG and selected good country practices. It also prepared a road map for the National Road Authority (NRA) for the institutionalization of the road user charging system, and an action plan for a Road Traffic Authority (RTA) that will regulate road safety and road transport. The establishment of RTA has been approved through legislation.

As a result of the project, the number of national and international contractors increased and exceeded targets. The number of available international contractors increased from 5 in 2009 to 12 in 2014; while the number of national contractors increased from 15 in 2009 to 22 in 2014.

TECHNICAL ASSISTANCE	
<b>Regulating and Sustaining Road Transport</b>	
Improvement of regulatory capacity in road transport by establishing a Road Traffic Authority, setting up a rural roads database, strengthening the capacity of the National Roads Authority, and building up the pool of skilled labor	
Financing	\$1.00 million
ADB: Technical Assistance Special Fund	\$1.00 million
Executing Agency	Department of Transport and Department of Works and Implementation
Status	Ongoing October 2012–December 2016

NRA was established in 2003 to maintain national roads, with a funding mechanism to finance operations using RUCs. NRA currently maintains only about 2,000 km of roads, out of the total 8,500 km once maintained by the Department of Works, because its capacity to award and manage contracts and keep to annual maintenance schedules is constrained by unsystematic operational procedures, weak financial management, and inadequate revenues earned from user charges. Despite the range of charges allowed by legislation, only a small fuel tax is in place.

The TA will enable better road conditions and reduced travel time. It is expected to improve transport regulations, resulting in a reduced number of unregistered vehicles, unlicensed transport services, decrepit vehicles, and road accidents. In addition, compilation of rural roads data will improve transport sector planning and operations. The TA has four expected outputs: (i) setting up the RTA to review and regulate transport fees and vehicle standards, (ii) expanding NRA by building its technical capacity, (iii) creating a geographic information system-linked rural roads database, and (iv) deepening the pool of skilled workforce for infrastructure.

**Community Water Transport**

Reform of the maritime transport system through infrastructure rehabilitation, capacity building, and establishment of a subsidy fund

Financing	\$28.24 million
ADB: Asian Development Fund	\$19.10 million
OPEC Fund for International Development	\$4.00 million
Government	\$5.14 million
Executing Agency	Department of Transport
Status	Completed November 2004–January 2014

ADB supported a project to facilitate the access of remote river-based communities to economic opportunities by rehabilitating small maritime infrastructure and improving services. The components of the project are (i) the establishment of a subsidy and a route franchise scheme, (ii) the restoration of small maritime infrastructure, (iii) enhancing small-craft safety, (iv) skills development in rural communities, (v) restructuring of maritime services, and (vi) project management services.

The Community Water Transport Trust Fund was established to subsidize water transport services. The fund provided subsidies for franchise operators, and funding for small infrastructure construction and maintenance projects. The

sustainability of franchise routes was problematic. Operating losses and lack of vessels resulted in the termination of some franchises. Other franchises were completed until expiration, but subsequent bids failed to attract interested operators.

The target to restore 40 small maritime infrastructure was not achieved since government policy shifted from the restoration to the construction of new jetties, which remain idle because their design did not factor in the types of vessels used along the routes.

**Lae Port Development Project**

Construction of additional facilities at Lae port to increase cargo handling capacity

Financing	\$239.24 million
ADB: Ordinary capital resources	\$145.00 million
ADB: Asian Development Fund	\$42.49 million
OPEC Fund for International Development	\$6.00 million
HIV Fund	(\$0.75 million completed)
Government	\$45.75 million
Executing Agency	Independent Public Business Corporation
Status	Ongoing October 2008–December 2015



The Lae port is a regional hub for trade between PNG's mainland and island communities, and the main gateway to international markets. Upgrades have been made over the years, but much bigger improvements are required to accommodate higher cargo volumes, larger vessels, and increasing containerization. PNG's economy is thriving and shipping services are expanding.

ADB and the Organization of the Petroleum Exporting Countries have provided support for the construction of additional facilities at Lae port to increase cargo handling capacity. The project is part of the tidal basin master plan and the industrial development blueprint of the provincial government. With PNG's economic reliance on exports, it is crucial to maintain the functional efficiency of Lae port. The project consists of (i) dredging and construction of port facilities including a tidal basin, a berth, and terminal works, to allow larger cargo vessels to dock and ease congestion; (ii) resettlement and livelihood for the affected communities; (iii) project management services; and (iv) gender-responsive HIV/AIDS-awareness programs.

#### Multitranche Financing Facility: Highlands Region Road Improvement Investment Program (Projects 1 and 2)

Road rehabilitation and maintenance arrangements for the Highlands region core road network

Financing	\$308.30 million
ADB: Asian Development Fund	\$135.70 million (\$38.90 million in pipeline)
ADB: Ordinary capital resources	\$69.00 million (\$70.41 million in pipeline)
European Union	(\$20.00 million in pipeline)
Government	\$103.60 million
Executing Agency	Department of Works
Status	Ongoing May 2009–June 2018

The Highlands region consists of seven mountainous landlocked provinces with high agricultural production of fresh produce and cash crops, and mineral and petroleum resources, accounting for nearly 80% of national exports. The 1,200 km long Highlands Highway is the lifeline for the Highlands region, servicing about 3 million people, of whom 85% are rural. The Highlands core road network (HCRN), comprised of a network of 2,500 km provincial and national roads, provides access to the mining and agriculture enclaves, and links the region with Lae port. Daily traffic volume along the highway ranges from 500 to 2000 vehicles.

The mountainous terrain and poor condition of the Highlands Highway make it costly to build and maintain the network,

and restrict transport. Washouts and landslides are common during the rainy season, making the Highway impassable at times. Two-thirds of the HCRN are classed as being in poor condition. Public and private transport are also limited, costly, unreliable, and unsafe. There is a lack of services infrastructure such as bus stations and rest stops, and facilities to collect, sort, store, and sell agricultural products. As a result, high-potential agricultural products from the Highlands bear high trade costs, manufacturers have limited availability to access domestic and international markets, and the development of value chains is restricted. These are major constraints on PNG's social and economic development.

ADB has extended support for HCRN road rehabilitation and maintenance. This project is being implemented in four tranches, and is expected to improve an extensive 1,400 km of roads, prepare long-term road maintenance contracts for the whole 2,500 km network, and monitor the socioeconomic impact of the improved and maintained roads.

Recurrent maintenance requires an institutional mechanism that will handle asset management. Enabling the newly formed NRA to manage the HCRN is essential in upholding regular maintenance works and in instituting policy reforms for ensuring sustainable sources of funds.

#### TECHNICAL ASSISTANCE

##### Multi-Partner Financing Facility for Highlands Highway<sup>a</sup>

Preparation of the program framework for the \$1 billion Highland Highways financing facility

Financing	\$1.50 million
ADB: Technical Assistance Special Fund	\$1.50 million
Executing Agency	Department of Works
Status	Pipeline

<sup>a</sup> Formerly the Land Transport Improvement Investment Program.

The proposed financing facility is a \$1 billion investment and maintenance program for the Highlands Highway. The program aims for effectively maintained or upgraded roads, including climate-proofing; increased and sustainable road safety for pedestrians and vehicle passengers; improved transport logistics and services to strengthen the value chain for domestic and international trade; and strengthened program management and institutional capacity to deliver the program and sustain its benefits. ADB is expected to finance \$500 million from its ordinary capital resources and the Asian Development Fund. The government has committed \$300 million, and the financing gap will be bridged by cofinanciers. Project 1 is expected to total \$240 million. This TA will finance the preparation of the program.

### Multitranche Financing Facility: Civil Aviation Development Investment Program (Projects 1 and 2)

Improvement of the civil aviation network institutional capacity, and upgrade and rehabilitation of airports

Financing	\$276.02 million
ADB: Ordinary capital resources	\$140.00 million (\$220.00 million in pipeline)
ADB: Asian Development Fund	\$79.02 million (\$35.00 million in pipeline)
Government	\$57.00 million
Executing Agency	Civil Aviation Authority of Papua New Guinea (Project 1) and National Airports Corporation (Tranche 2)
Status	Ongoing March 2010–September 2017

Aviation provides transport services mainly for tourism and business, and in areas where there are no roads due to the difficult terrain. In total, there are more than 450 aviation facilities in the country. The Civil Aviation Authority (CAA) is the oversight agency for airport operations, air traffic management, and civil aviation regulations. It also owns and manages 21 national airports on behalf of the government.

There are three major airlines and more than 20 smaller operators in PNG. Compliance with international safety and security standards is low, creating high accident and security risks. The infrastructure, facilities, and equipment have also deteriorated due to poor maintenance. Frequent flight cancellations result in higher costs to the airlines and the public and private businesses. Losses due to noncommercial viable operations further burden the strained CAA finances.

ADB is supporting a program that covers (i) the improvement of the security and safety processes of 21 national airports up to International Civil Aviation Office standards to secure certification, (ii) installation of modern communication and navigation equipment, (iii) capacity building for CAA to improve aviation operation and maintenance, and (iv) integration of cost recovery and sustainability policies in the civil aviation sector.

### Bridge Replacement for Improved Rural Access Sector

Replacement of temporary and deteriorated steel bridges with permanent structures

Financing	\$143.63 million
ADB: Ordinary capital resources	\$40.00 million
ADB: Asian Development Fund	\$43.63 million
European Investment Bank	\$50.00 million (\$8.4 million in pipeline)
Government	\$10.00 million
Executing Agency	Department of Works
Status	Ongoing: March 2012–June 2017

Due to the rugged terrain, numerous bridges connect the road networks of PNG. Around 700 bridges are found along the national road network, mostly single-lane temporary modular steel (Bailey) bridges. These types of bridges are low cost and easy to install, which are suited for initial phases of roads, although they have a low load carrying capacity. As traffic volume increased, these bridges pose a hazard. They also encumber travel along the two-lane road system.

ADB and the European Investment Bank is supporting the initial phase of what is hoped to be an extensive bridge replacement program involving 16 priority national roads. Replacing 20–30 Bailey bridges located along five priority national roads with permanent structures will improve the country's road network. The Bailey bridges will be reused in rural roads and river crossings.

Other components of the project are (i) capacity building for the Department of Works on bridge asset management, and (ii) a road safety awareness campaign in the rural areas.

### TECHNICAL ASSISTANCE

#### Major Bridges Study<sup>a</sup>

Detailed study on the location and design of critical road bridges

Financing	\$0.90 million
ADB: Technical Assistance Special Fund	\$0.80 million
Government	\$0.10 million
Executing Agency	Department of Works
Status	Completed December 2011–May 2015

<sup>a</sup> Connected to the Bridge Replacement for Improved Rural Access Sector Project.

During the preparatory phase for the bridge replacement project, issues were raised regarding the eligibility of major bridges for financing under the project. The reason was that their location was problematic due to the changing river hydrology. Landslides and other geological concerns also alter the river flow, requiring innovative bridge designs. The government decided that a hydrological and geotechnical field study to aid in the design of major bridges across the country had to be made.

ADB provided TA for the conduct of an in-depth study of the design and location of sample major road bridges along the five national roads covered by the project. The study included the identification of potential sites and recommendations for cost-effective and resilient bridge designs. The findings and recommendations of the study will be applied to critical road bridges in the bridge replacement project.

### Maritime and Waterways Safety

Improvement of maritime safety through the installation of navigation aids and safety infrastructure, and capacity building for communities

Financing	\$44.36 million
ADB: Asian Development Fund	\$37.50 million
Government	\$6.86 million
Executing Agency	National Maritime Safety Authority
Status	Ongoing May 2013–September 2018

Safe and reliable water transport services require adequate navigation aids and equipment, and capable manpower to direct operations. Safety mechanisms and monitoring systems minimize losses from vessel accidents and improve service delivery for passengers and goods transport.

ADB provided support for the improvement of maritime safety through the installation of navigation aids and safety infrastructure, and capacity building for communities. The project serves not only the domestic maritime sector, but also supports international trade. Shipping vessels from the eastern coast of Australia going to Asia call on the ports of Papua New Guinea. These vessels pass through lanes with high traffic volume and groups of atolls. Local knowledge and augmented aids are necessary to navigate the area and reduce the risk of groundings and accidents.

The project supports the installation of traffic control and surveillance systems, tide gauges, and expansive hydrographic charts. This comes with corresponding technical and management trainings for staff, which are necessary to upgrade their skills to operate the equipment. A large-scale hydrographic survey is planned to gather nautical data for navigation charts. Moreover, maritime safety information campaign will be rolled out in remote communities to improve people's awareness of maritime and small craft safety practices.

## Samoa

The development framework of Samoa, as laid out in its Strategy for the Development of Samoa, 2012–2016, targets economic resilience and inclusive growth. Similarly, ADB's Pacific Approach endeavours to improve the region's standard of living, with public sector management and private sector development as the key drivers of change.

Samoa is a small and geographically compact country. It has a population of 200,000 and a land area of 2,820 km<sup>2</sup>, accounted mostly by the two main islands, Savai'i and Upolu. Like other Pacific countries, it is vulnerable to climate change, particularly sea level rise and stronger tropical cyclones. Damage to infrastructure caused by climate change and geophysical hazards have been significant. For example, in 2009, an earthquake and tsunami damaged the then newly built Aleipata wharf. In 2012, Cyclone Evan caused widespread devastation, and ensuing damage and losses reached an estimated \$210 million, with recovery works taking 2–3 years.



TECHNICAL ASSISTANCE	
Ports Development Master Plan	
Formulation of a 20-year ports development master plan	
Financing	\$0.50 million
ADB: Technical Assistance Special Fund	\$ 0.50 million
Executing Agency	Ministry of Finance
Status	Ongoing May 2015–August 2016

ADB has extended TA to assist Samoa in preparing a 20-year development plan to consolidate and prioritize all planned port developments in Samoa. This involves a review and 20-year forecast of port operations using berth utilization and vessel throughput. The forecast requires calculation of the baselines for berth utilization and berth facility productivity. It also includes an analysis of trends in port utilization, such as port capacity and infrastructure constraints, and the occurrence of seasonal storms.

It includes a study on swell intrusion into Matautu Port with proposed attenuation measures. The Matautu port is crucial to Samoa's economy, as it is the country's primary gateway for international trade. Some bottlenecks are emerging, such as the occasional queues of vessels, larger vessels which hamper berthing, and swell intrusion into the harbour. In addition, a tuna processing plant is planned for the container yard at the port. This will limit yard space and congest the berth, thereby reducing port productivity.

The plan will also provide recommendations for optimizing investments and increasing revenues to sustain the operations of the Samoa Ports Authority, which relies on revenues from the operation of the Mantautu port. Currently, below par infrastructure investments and asset management pose a burden on its finances, and revenues from operation and income from assets are insufficient to cover expenses and debt repayments. Inadequate allocations for operation and maintenance have also resulted in the rapid deterioration of infrastructure and equipment.

Additional outputs are (i) a technical and economic assessment for the proposed greenfield port development at Vaiusu Bay, and (ii) a ports asset management plan linked to the Samoa Ports Authority budget.

## Solomon Islands

Due to improper maintenance, many sections of Solomon Islands' road network have deteriorated, hampering interconnectivity and diminishing mobility and access. Similarly, maritime structures are in poor condition and shipping services are limited by high operational costs, low

user charges, and low demand. Inadequate institutional capacity and budget constraints in government agencies inhibit proper transport sector planning and policy implementation. Institutional capacity constraints in the Ministry of Infrastructure Development (MID) obstruct the efficient implementation of infrastructure projects. Consultants have been traditionally hired to perform project management activities such as scoping, costing, design, and implementation. This arrangement is not cost effective and hinders efficient decision-making.

ADB support to Solomon Islands addresses economic isolation by building up maritime infrastructure and institutional capacity for transport planning and implementation. The National Transport Plan (NTP), 2011–2030, formulated with support from ADB, laid down the government's objectives to develop transport infrastructure and services, build up institutional capacity, and foster private sector development. With ADB support, a National Transport Fund (NTF) was established to provide sustainable financing for the rehabilitation and maintenance of transport infrastructure. The NTF is utilized under the oversight of the NTF Board, comprised of senior government officials and development partners.

One of NTP's strategic priorities is the improvement of road access to enhance social cohesion and provide livelihood opportunities to isolated provinces. Transportation is costly due to the highly dispersed population and remote location of communities. More than 80% of the 540,000 total population is rural, and about 42% of them lack access to roads. Of the 1,875 km total road network, only 6% is sealed. The rest have a gravel, coral, or earth surface. The NTP also focuses on improving and increasing accessibility to maritime transport. Currently, operating costs exceed the revenues earned from passenger and freight charges. As a result, services are intermittent and unreliable, and safety concerns are rife. Most structures are also rundown due to prohibitive rehabilitation and maintenance costs.

TECHNICAL ASSISTANCE	
Strengthening Country Safeguard Systems in the Transport Sector	
Development of country safeguard systems framework and capacity building in the transport sector	
Financing	\$0.60 million
Japan Fund for Poverty Reduction	\$0.60 million
Executing Agency	Ministry of Infrastructure Development
Status	Completed December 2012–June 2015

A country safeguards system (CSS) establishes the country's governing rules and procedures for identifying, assessing, and



managing or mitigating the environmental and social impacts of development. Solomon Islands' National Development Strategy, 2011–2020 cites environmental and social protection as an integral component of projects. Its NTP, 2011–2030 requires adherence to applicable laws and the need to manage the environmental and social impacts of transport projects.

Implementation of infrastructure projects usually requires acquisition of lands and development consent as part of the country safeguards system. While land ownership and acquisition is governed by the Lands and Titles Act administered by the Ministry of Lands, Housing and Survey (MLHS), the development consent, including the environmental assessment, is regulated by the Ministry of Environment, Climate Change and Disaster Management and Meteorology following the Environment Act of 1998. Inconsistencies in the Lands and Titles Act and the Environment Act often result in delays in project implementation, which are exacerbated by the lack of systematic procedures caused by inadequate institutional management.

ADB provided TA to develop a CSS framework to address these inconsistencies and build capacity in the transport sector. The TA facilitated the integration of environmental and social safeguards in all transport projects, and helped to strengthen the CSS framework and train ministry staff. This entailed a review and diagnostic of the CSS legal framework, assessment of institutional capacity, and preparation of an action plan for ongoing CSS strengthening, capacity development, and training.

#### TECHNICAL ASSISTANCE

##### Supporting Good Governance through Safeguards

Strengthening of safeguards framework and establishment of institutional arrangements for land acquisition processes

Financing	\$0.30 million
ADB: Technical Assistance Special Fund	\$0.30 million
Executing Agency	Ministry of Infrastructure Development
Status	Ongoing November 2014–April 2016

ADB provided TA to further strengthen the safeguards framework and establish institutional arrangements for land acquisition processes. The TA follows from the Strengthening Country Safeguard Systems in the Transport Sector by implementing a number of recommendations from the action plan. It includes instituting reforms to systematize the land acquisition and development consent process to ensure the expeditious implementation of projects. It is reviewing legislation, and drafting proposed amendments and enabling regulations. To build capacity, the TA conducts training for ministry staff. An operation manual is also being prepared to serve as guide to staff responsible for completing the safeguards screening process for projects.

**Domestic Maritime Support (Sector)**

Construction and rehabilitation of rural wharves, and set-up of operational shipping schemes

<b>Financing</b>	\$32.29 million
<b>ADB: Asian Development Fund</b>	\$15.60 million
<b>Australian Grant</b>	\$4.30 million
<b>New Zealand Grant</b>	\$5.29 million
<b>European Union</b>	\$4.65 million
<b>Government</b>	\$2.45 million
<b>Executing Agency</b>	Ministry of Infrastructure Development
<b>Status</b>	Ongoing February 2009–June 2019

Two international ports and numerous wharves and jetties comprise Solomon Islands' maritime transport infrastructure. Most of these have deteriorated due to lack of maintenance. Shipping services are provided by about 20 private operators and a few provincial governments. Routes closer to the capital have more demand than routes going to more distant islands, and are profitable. For distant destinations with unprofitable routes, the government provides subsidies, or chartered vessels on occasion.

Inadequate, deteriorating infrastructure and unprofitable shipping services hamper mobility and access to opportunities, particularly for the rural communities. A better maritime transport system will help develop the rural economies, temper rural–urban migration, and reduce social conflicts. Improving maritime transport will benefit the rural population more than building roads and will have a greater impact on reducing poverty.

ADB and donor partners supported a project to support the domestic maritime industry. The project consists of two components: (i) civil works and (ii) franchise shipping scheme. The civil works component will rehabilitate or reconstruct 13 wharves and 3 jetties selected from the list of priority projects in the NTP. Infrastructure located in the poorest and remote provincial areas take precedence since they pose greater benefits. To ensure sustainability of infrastructure assets and support for the local economy, maintenance works using community contracts and capacity building are integrated in the project.

The franchise shipping scheme component supports an output-based approach by subsidizing routes to eight identified remote areas which do not receive regular shipping services, as they are commercially unviable to service due to a combination of long distances and low volumes. Using a minimum subsidy tender process, operators who meet minimum vessel requirements are awarded franchises to operate individual routes on an agreed schedule. The franchise

shipping scheme will ensure more frequent, reliable, and safer services to these rural communities, thereby providing them access to essential services and economic opportunities.

**Transport Sector Development**

Strengthening the government's institutional capacity by establishing a central project implementation unit, and improvement of the transportation network through the rehabilitation and maintenance of land, sea, and air transport infrastructure

<b>Financing</b>	\$98.01 million
<b>ADB: Asian Development Fund</b>	\$12.00 million
<b>Australian Grant</b>	\$30.00 million
<b>New Zealand Grant</b>	\$30.00 million
<b>Government</b>	\$26.01 million
<b>Executing Agency</b>	Ministry of Infrastructure Development
<b>Status</b>	Ongoing July 2011–July 2016

ADB and its development partners, the governments of Australia and New Zealand, supported an institutional strengthening project that will provide a structure for comprehensive transport sector project management and implementation. It has three outputs: (i) a central project implementation unit (CPIU) within MID to manage and implement projects, (ii) rehabilitation and maintenance of priority transport infrastructure, and (iii) capacity building of MID staff. Under the CPIU, transport sector activities will be consolidated, managed, and implemented using government processes and systems. By doing so, the country will move away from the traditional project management unit model to a sector-based model, as well as strengthen thematically, and best practices also in place for the implementation of the NTP and training of outputst infrastrucits procurement, financial management, safeguards, gender and climate change adaptation systems to international standards and best practices. Capacity building activities are also in place for the implementation of the NTP and training of MID staff.

**TECHNICAL ASSISTANCE****Supporting the Transport Sector Development Project<sup>a</sup>**

Preparation and implementation of a capacity development plan for the Ministry of Infrastructure Development

<b>Financing</b>	\$0.80 million
<b>Japan Fund for Poverty Reduction</b>	\$0.80 million
<b>Executing Agency</b>	Ministry of Infrastructure Development
<b>Status</b>	Ongoing February 2011–June 2016

<sup>a</sup> Associated with the Transport Sector Development Project.

In relation to the creation of the CPIU within the MID under the Transport Sector Development Plan, ADB has extended TA to conduct a review of the MID functions and capacity constraints. The outputs includes a capacity development plan for MID and a rationalized MID. A streamlined operational structure will enable MID to manage projects more efficiently.

<b>Transport Sector Flood Recovery</b>	
Rehabilitation and climate-proofing of damaged road transport infrastructure	
<b>Financing</b>	\$14.96 million
<b>ADB: Asian Development Fund</b>	\$12.60 million
<b>Government</b>	\$2.36 million
<b>Executing Agency</b>	Ministry of Infrastructure Development
<b>Status</b>	Ongoing October 2014–December 2017

On April 2014, tropical cyclone Ita caused severe flooding, particularly in Guadalcanal and the capital Honiara. Roads, bridges, households, and sewerage and water supply systems were badly damaged. Housing and transport sustained the worst damage, while mining and agriculture took the heaviest losses. The total impact was equivalent to \$107.7 million or 9.2% of the country's gross domestic product.

In response to the government's call for international assistance, ADB and other development partners conducted a rapid assessment of the reconstruction and recovery needs. The assessment identified the repair of transport infrastructure as an immediate priority, as delay will exacerbate the economic losses resulting from the disaster.

This project entails the repair and climate-proofing of transport infrastructure, covering at least three high-level bridges, five small stream crossings, 1.6 km of bridge approach roads, 80 m of cross culverts, and 300 m of river training.

<b>Sustainable Transport Infrastructure Improvement</b>	
Development of a multimodal transport system as set under the National Transport Plan	
<b>Financing</b>	\$83.93 million
<b>ADB: Asian Development Fund</b>	\$21.00 million
<b>ADB: Technical Assistance Special Fund</b>	\$0.63 million (ongoing)
<b>Australian Grant</b>	\$27.85 million
<b>Government</b>	\$34.45 million
<b>Executing Agency</b>	Ministry of Finance and Treasury and Ministry of Infrastructure Development (TA)
<b>Status</b>	Pipeline

Transport infrastructure promotes inclusive growth by improving mobility and access to economic opportunities of the rural population. On the other hand, efficient urban transport facilitates economic activities, especially trade.

The National Development Strategy, 2011–2020, identified transport development as a priority. The NTP expounds the strategies and policies for strengthening transport infrastructure and services, and for shoring up government capacity and private sector development. The National Transport Fund was set up to provide financing for rehabilitation and maintenance works of priority infrastructure projects. It is intended as a sustainable financing mechanism.

ADB and the Government of Australia have extended support for a project with three areas of concern: operational capacity in the CPIU and the NTF Board Secretariat, financing for infrastructure investments, and development of a sustainable transport system. The TA has three outputs: (i) a comprehensive transport policy, developed together with the MID and in consultation with civil society organizations; (ii) a framework for government contributions and a user charge scheme to ensure the sustainability of NTF; and (iii) capacity development for infrastructure project implementation.

<b>TECHNICAL ASSISTANCE</b>	
<b>Strengthening the Solomon Islands Maritime Safety Administration</b>	
Support the restructuring and capacity building of the maritime safety administration	
<b>Financing</b>	\$0.60 million
<b>ADB: Technical Assistance Special Fund</b>	\$0.60 million
<b>Executing Agency</b>	Ministry of Infrastructure Development
<b>Status</b>	Pipeline

The Solomon Islands Marine Division, instituted in 1978, had been responsible for managing shipping services with government-owned fleet. However, a technical and organizational capacity in maritime administration and safety is lacking, and compliance with international maritime obligations remains low. Upon the request of the government, ADB provided a TA in 2008 to establish the Solomon Islands Maritime Safety Administration (SIMSA). The SIMSA was established on July 2010, and was transformed into a monitoring and regulatory body, instead of an operational organization.

The SIMSA is currently facing several challenges in fully implementing reforms and fulfilling the obligations under the international treaties acceded to by Solomon Islands. The proposed TA will assist SIMSA in improving capacity and

restructuring into an organization capable of addressing the changing needs of the international maritime community. The TA will ensure a sustainable and efficient maritime safety administration that promotes safe shipping and clean seas to support the country's economic growth.

## Timor-Leste

Road is the main mode of transport in Timor-Leste. Around 6,000 km of roads comprise Timor-Leste's road network, and about half of this is underdeveloped rural tracks. Paved roads used to comprise 80% of the core network, but deterioration has left almost the entire network in disrepair and in need of rehabilitation or upgrading. The road network serves 90% of passengers and 70% of freight. The 1,426 km national roads and 869 km district roads comprise the core network, and almost 70% of these are in very poor condition. Moreover, some sections are narrow and located in difficult terrain.

Transport services in Timor-Leste are provided by the private sector, while the government takes a regulatory role. Minibuses and light trucks carry passengers and goods, but the use of motorcycles has increased at a rate of 28% per annum between 2012 and 2014. A limited number of heavy trucks are used for cargo (especially in Dili), although poor roads make it difficult to operate large and heavy vehicles outside of Dili. Services are costly and unreliable, and accident rates are high due to poor road conditions.

The Strategic Development Plan (SDP) 2011–2030 emphasizes investments in road infrastructure and prioritizes the rehabilitation and improvement (upgrading) of the

existing road network. The SDP 2011–2030, prioritizes the development of human and physical capital through infrastructure development and capacity building. The government is drawing on earnings from petroleum to support the country's long-term development. An infrastructure fund backed by the Petroleum Fund makes multiyear budgeting for large infrastructure projects. It is used as counterpart funds for donor-financed development projects, including transport infrastructure. In 2015, \$311 million was allocated for transport projects, especially roads. This was equivalent to 20% of Timor-Leste's 2015 annual budget.

The Council for the Administration of the Infrastructure Fund (Conselho de Administracao do Fundo Infraestrutura [CAFI]) was formed to guide infrastructure development. It is headed by the prime minister and its major projects secretariat handles planning, public-private partnerships, and loan financed projects. Considerable investments in infrastructure are being implemented, with more than \$3 billion worth planned for 2012–2017.

Nevertheless, government capacity is limited and the ambitious plan is putting pressure on available resources. Neglect of road maintenance has resulted in rapid deterioration of infrastructure. The magnitude and speed of reforms, coupled with overlapping institutional frameworks, demand a clear action plan.

ADB supports government's priorities for improving linkages to rural and agriculture economies. Consequently, ADB is investing in road upgrading projects to improve the quality of the existing network. Support for a preparation of a transport sector master plan to serve as the transport system framework is also ongoing.



<b>Road Network Development Sector</b>	
Upgrade and maintenance of existing national roads, and development of cross-border facilities access roads and parking areas	
Financing	\$52.90 million
ADB: Asian Development Fund	\$46.00 million
Government	\$6.90 million
Executing Agency	Ministry of Infrastructure
Status	Ongoing: April 2010–May 2016

ADB supports (i) the upgrade or rehabilitation of national roads, (ii) incorporation of climate-proofing elements in the road design, (iii) capacity building on road maintenance for national contractors, and (iv) establishment of an ongoing road maintenance program for national roads in the border region.

The Road Network Upgrading Sector Development Project has accomplished the Upgrading of 52 km of the Liqueica–Batugade–Mota Ain –Maliana national roads along with the rehabilitation of 18 km roads between Batugade to Maliana. While the original project design aimed to focus on restoring roads to a maintainable condition, it was found that this could not be done effectively and at reasonable cost. In line with the Government’s SDP, the project scope was amended to provide for upgrading from a 4.5 m pavement standard to 6 m standard along with incorporation of climate change and climate resilience measures to reduce future maintenance.

The project also included training for small contracting firms in road maintenance technology and project management-related activities, to develop local capacity.

<b>Road Network Upgrading</b>	
Upgrade and climate-proofing of principal national roads, including the preparation of a feasibility study and detailed design	
Financing	\$148.63 million
ADB: Ordinary capital resources	\$42.63 million
ADB: Asian Development Fund	\$8.45 million
Japan International Cooperation Agency	\$68.70 million
European Union	(\$22.60 million in pipeline)
Government	\$28.10 million
Executing Agency	Council for the Administration of the Infrastructure Fund (Conselho de Administracao do Fundo Infraestrutura [CAFI])
Status	Ongoing; June 2012–June 2018

A follow-on ADB-supported project (the Road network Upgrading Project) is contributing further to the government’s goal of upgrading the national road network. It has five outputs: (i) upgrade and climate-proofing of national roads from Tacitolu to Liqueica, including widening of pavements and construction of drainage structures; (ii) a feasibility study and design for the roads from Manatuto to Natarbora, and from Comoro roundabout to the planned new international port at Tibar; (iii) 2-year performance-based road maintenance; (iv) road safety and social issues awareness community campaign; and (v) project management support. Additional financing has been approved by ADB for the construction of the road from Tacitolu to Tibar port entrance, (comprising a dual carriageway 4.4km in length), and this will facilitate the movement of heavy goods vehicles between Dili and the port.

The upgrading of other sections of the national road network with support from JICA and the World Bank is expected to boost the overall impact of the project.

<b>Road Network Upgrading Sector</b>	
Upgrade and climate-proofing of priority national roads, including maintenance works and road safety campaign	
Financing	\$251.66 million
ADB: Ordinary capital resources	\$93.00 million
ADB: Asian Development Fund	\$32.35 million
Global Environment Facility/Least Developed Countries Fund	\$4.50 million
European Investment Bank	\$50.00 million
Government	\$71.81 million
Executing Agency	Ministry of Public Works Transport and Communication and Council for the Administration of the Infrastructure Fund (CAFI)
Status	Ongoing: March 2014–June 2020

A third ADB supported project (the Road network Upgrading Sector Project - RNUSP) covers (i) the upgrade and climate-proofing of 81km of national roads, (ii) due diligence and detailed engineering designs for a further 169kms of national roads, (iii) performance based maintenance contracts, (iv) road safety and HIV/AIDS awareness campaign for the communities, and (v) project management support for government agencies.

Road improvements involve road widening, drainage works, raising road levels in flood-prone areas, and slope stabilization. The road from Manatuto to Natarbora (81km) will be upgraded, as it is a key corridor which connects {presumably somewhere quite important} to the south coast where the government’s petroleum and gas industries are situated.

TECHNICAL ASSISTANCE	
<b>Infrastructure Management</b>	
Formulation of a long-term strategic results plan and an operational capacity development framework to guide and improve infrastructure management	
Financing	\$1.50 million
ADB: Technical Assistance Special Fund	\$1.50 million
Executing Agency	Ministry of Public Works Transport and Communication
Status	Ongoing January 2013–June 2017

Additional finance has been approved that will support the upgrading of a further 97km and it is expected that ADB will have supported the upgrading of a total of 285km (or 20% of the total national network by 2019).

A performance based maintenance component incorporated in all of the construction contracts to stem the rapid deterioration of the roads, to ensure a high standard of maintenance in the initial period after the construction work has been completed. These 2-year road performance based maintenance components will serve as the basis for future performance-based procurement of maintenance services countrywide.

ADB is providing support for the formulation of a long-term strategic plan for the Ministry of Public Works, Transport and Communications along with a capacity development plan. The strategic plan sets targets for institutional reform and systems improvements. It covers roads and bridges, water and sanitation, and power infrastructure. Its accompanying capacity development plan assesses the existing staff capacity to deliver infrastructure and asset management and provides a capacity development framework to enable the Ministry to fulfill its functions.

## Tuvalu

Tuvalu is one of the Pacific countries struggling to achieve economic resilience at the national level. It has fragile institutions and policies, and relies on external assistance to generate and sustain economic growth.

ADB's Pacific Approach, 2010–2014 serves as its CPS for Tuvalu. Key drivers of change are public sector management and private sector development. There are four priority sectors: (i) transport and information and communication technology; (ii) energy; (iii) urban development, water, and sanitation; and (iv) education. ADB support focuses on ports infrastructure for the main and outer islands of Tuvalu, incorporating climate-resilient features in the design and operations.

Tuvalu's National Strategy for Sustainable Development, 2005–2015 outlines the development framework to achieve the vision of a "healthy, educated, peaceful, and prosperous" nation. One of the identified strategic areas is reliable and affordable infrastructure and support services to shore up private sector development and create opportunities for growth. However, Tuvalu is a small country with highly dispersed and sparsely populated islands. Economies of scale are small, and transport services are unprofitable and rely on subsidies. Due to weak institutions, operation and management of infrastructure are also deficient.

<b>Outer Island Maritime Infrastructure (Outer Island Port Development Project)</b>	
Rehabilitation of port infrastructure to improve connectivity between Funafuti and the outer islands, and capacity building for government agencies in port operation and maintenance	
Financing	\$13.01 million
ADB: Asian Development Fund	\$10.41 million \$2.00 million (ongoing PDA)
ADB: Technical Assistance Special Fund	\$0.60 million (ongoing)
Executing Agency	Ministry of Communication and Transport
Status	Pipeline

ADB is providing support for a project to rehabilitate and improve maritime infrastructure in selected outer islands of Tuvalu, some of which were damaged by tropical cyclone Pam in March 2015, and the safety, efficiency, and sustainability of maritime transportation within the capital Funafuti and the outer islands. The project targets economic and social constraints due to connectivity problems arising from Tuvalu's geography: (i) nine small islands comprising a land area of 26 km<sup>2</sup> stretching over 680 km; (ii) small and dispersed population of 10,800, as of 2012, with less than 1,600 people on each of the outer islands; and (iii) decreasing outer island population.

Tuvalu's transportation infrastructure and services are inadequate. Maritime transport services are available only once every 2–3 weeks, when the two government-owned ships travel from Funafuti to the outer islands and Fiji. There are no ship docking facilities in the outer islands, and docking facilities for workboats, which transfer passengers and cargo from and to ships floating offshore, are only available in Vaitupu, Nanumea, and Nukufetau. In some areas, passengers have to get on and off laboriously, and cargo have to be manually carried. Moreover, workboats have to go through channels to reach the shores of outer islands, which is dangerous depending on the sea conditions. Serious accidents occur and result in the loss of lives and income. When the sea is rough or after dark, the transfer operations stop, resulting in decreased efficiency.

To overcome the connectivity challenge, the government is committed to making maritime transportation safer and more efficient to achieve the following objectives: (i) improved livelihoods and safety conditions in the outer islands; (ii) economic development; and (iii) reduced migration from the outer islands to Funafuti, which currently faces problems of overcrowding, pollution, and the spread of diseases.

The project will be designed in coordination with other development partners in the sector. New Zealand's Ship to Shore Project substantially completed in 2013, dredged the channels and installed navigational aids, while JICA provided a new cargo/passenger ship in late 2015.

## Vanuatu

Vanuatu has 80 islands, 65 of which are deserted, and 78% of its 260,000 population live in rural areas. It is an isolated country and has weak domestic linkages, which severely constrains opportunities for trade and economic development. Port Vila, the capital, and Luganville are the two largest towns.

Its Priorities and Action Agenda, 2006–2015 outlined the medium-term development strategies of the government. It identified three areas of concern: (i) employment and livelihood, (ii) economic and social infrastructure, and (iii) social stability. Among the key support strategies are the development of road and maritime infrastructure and the reduction of transportation costs. An action plan, Planning Long, Acting Short, complemented the Priorities and Action Agenda with short- and medium-term programs. On the other hand, Vanuatu has no transport master plan or an asset inventory and management system.

Facilitating access of people in remote areas and outer islands to services and markets is critical to the social and economic development of Vanuatu. However, due to scarce capital investments, reliable and affordable transport services between the islands are lacking. Many of the islands have small jetties while some only have beach sites for landings. Most of the structures are old and the average age of shipping vessels is 29 years. Insufficient maintenance due to prohibitive costs has also exacerbated their conditions. Government agencies also have insufficient capacity, and the institutional and legal frameworks are outdated.

### Port Vila Urban Development

Integration of Port Vila drainage and sanitation systems design with the road sector development

<b>Financing</b>	\$38.48 million
<b>ADB: Asian Development Fund</b>	\$4.38 million
<b>Australian Grant</b>	\$31.00 million
<b>Government</b>	\$3.10 million
<b>Executing Agency</b>	Ministry of Finance and Economic Management
<b>Status</b>	Ongoing February 2013–December 2017

Port Vila is the capital of Vanuatu and has a population of about 45,000. Tourism drives the economy and Port Vila hosts 2,000–3,000 tourists daily. Hence, the quality of urban services is important from both economic and social perspectives.

Urban infrastructure in Port Vila is inadequate. Roads have deteriorated and lack proper drainage systems. Facilities in community-managed multipurpose units are run-down. The sanitation system relies on household and commercial septic tanks, with septic tank sludge (“septage”) disposed at a designated site. However, lacking an efficient waste disposal and treatment system, the current site poses serious health and environmental hazards.

ADB is extending support for a project for the development of a drainage and sanitation master plan for 2010–2025 and will rehabilitate 14 km of urban roads and 1.6 km of stormwater drainage and will construct 11.6 km of new stormwater drains. The project will also deliver a septage treatment plant, and community hygiene facilities with associated hygiene awareness and education campaigns targeting women and the youth. Moreover, it will build the capacity of government agencies and communities to sustainably manage and operate the infrastructure delivered by the project.

### Interisland Shipping Support

Development of maritime infrastructure to improve connectivity between Port Vila and five outer islands, and establishment of a support scheme to increase shipping services to noncommercial remote destinations

<b>Financing</b>	\$49.2 million
<b>ADB: Asian Development Fund</b>	\$26.8 million
<b>Government of New Zealand</b>	\$17.3 million
<b>Government</b>	\$5.1 million
<b>Executing Agency</b>	Ministry of Finance and Economic Management
<b>Status</b>	Ongoing September 2012–December 2017

Interisland shipping serves the majority of Vanuatu's population, 70% of whom are dispersed in the outer islands, and is the backbone of the economy. Port Vila is the shipping hub and serves as a consolidation point exports and imports. Expanding shipping services is resulting in shortage of berths and congestion at the ports. Moreover, lack of ports at the outer islands limit shipping access to the islands.

Low population density inhibits operation of regular and reliable shipping services to and from these outer island communities. Private operators either serve only the busier passenger and cargo routes or provide infrequent ship calls to not-very-profitable routes. The project is establishing a shipping subsidy scheme to shore up operation to remote outer islands, including the unprofitable routes. The plan is to build up demand in these routes until they become commercially viable. The subsidy will be phased out gradually over 5 years.

ADB is assisting an Interisland Shipping Support Project to expand interisland shipping infrastructure to improve connectivity to outer island communities. A terminal in Port Vila, one outer island wharf, and three jetties are being built. In addition, three outer island wharves are being rehabilitated. All infrastructure will have facilities for passengers, including persons with disabilities, and storage for cargo.

TECHNICAL ASSISTANCE	
<b>Establishment of the Maritime Safety Administration<sup>a</sup></b>	
Establishment of a maritime safety agency to oversee interisland shipping infrastructure and services	
Financing	\$2.0 million
ADB: Technical Assistance Special Fund	\$0.5 million
New Zealand TA Grant through the Asian Tsunami Fund	\$1.0 million
Government	\$0.5 million
Executing Agency	Ministry of Finance and Economic Management
Status	Ongoing March 2012–September 2016

<sup>a</sup> Connected to the Interisland Shipping Support Project.

In Vanuatu, where maritime transport is the main mode of transportation, maritime routes are served by private sector operators with limited management and technical expertise. The administrative capacity of the government is deficient and even the policy framework needs overhaul. Governance reforms are necessary to update outdated regulations, provide strategic direction, and systematize institutional processes. The implementation of institutional reforms is critical to improve the policy-setting and implementing capacity of the government, particularly for monitoring maritime safety.

ADB and the Government of New Zealand are providing TA to support the governance aspect of the Interisland Shipping Support Project and establish a maritime safety agency to oversee interisland shipping infrastructure and services. The TA will facilitate compliance with international standards and protocols. The TA is also preparing staff development plans and reviewing shipping fee structures.

An independent Office of the Maritime Regulator (OMR) will be established after the Maritime Sector Regularity Bill is passed by Parliament in 2016. The OMR will ensure that maritime safety regulations are compliant with national and international safety standards, and are effectively enforced. This will be complemented by an existing maritime policy unit which provides advice on maritime affairs.

TECHNICAL ASSISTANCE	
<b>Supporting the Office of the Maritime Regulator</b>	
Support the maritime regulator in the implementation of reforms in maritime safety	
Financing	\$0.60 million
ADB: Technical Assistance Special Fund	\$0.60 million
Executing Agency	Ministry of Finance and Economic Management
Status	Pipeline

ADB is also providing TA to support the OMR. The TA will provide advisory services to the newly established maritime regulator on the implementation of institutional, legal, and financial reforms in maritime safety.

Cyclone Pam Road Reconstruction	
Rehabilitation and upgrade of rural roads, and development of a community-based model of road rehabilitation and maintenance in selected communities	
Financing	\$18.50 million
ADB: Asian Development Fund	\$8.00 million
ADB: Disaster Response Facility	\$5.61 million
Global Environment Facility/Least Developed Countries Fund	\$2.68 million
Government	\$2.21 million
Executing Agency	Ministry of Finance and Economic Management
Status	Ongoing November 2015–December 2017

Vanuatu is one of the 20 countries in the world most vulnerable to disasters caused by natural hazards, including cyclones,

floods, landslides, storm surges, earthquakes, tsunamis, and droughts. Climate change will affect disaster risk through changes in the intensity and frequency of weather hazards. Projections for Vanuatu indicate increased frequency and intensity of extreme rainfall events and cyclones. Transport infrastructure, in particular, is highly vulnerable to these hazards.

In March 2015, Vanuatu was struck by tropical cyclone Pam, an extremely destructive category 5 cyclone, with wind speed estimated at 250 km per hour and wind gusts peaking at 320 km hour. The center of the cyclone passed east of Efate Island, where the capital Port Vila is located, and continued southward, passing just west of Erromango and Tanna Islands. Heavy rainfall and destructive high storm surges caused severe flooding and widespread damage, particularly in Tafea and Shefa provinces, where 11 fatalities were confirmed, and an estimated 65,000 people were displaced from their homes. Approximately 17,000 buildings were damaged or destroyed including houses, schools, and clinics and other medical facilities. Tropical cyclone Pam caused widespread crop destruction and compromised the livelihoods of at least 80% of Vanuatu's rural population.

The major impact on the transport sector was on the Efate ring road. Large water flows and the accumulation of upstream debris caused extensive damage to bridges, approach roads,

piers, abutments, riverbanks, and service connections. The accumulation of debris at bridges, coupled with pressure from flood waters, burst through several riverbanks and approach roads, disconnecting the bridges and widening the rivers and streams. Several major bridge components were destroyed. Culverts and headwalls collapsed completely or were washed away. About 19 km of sealed roads located mostly on very flat, low-lying coastal terrain, also suffered extensive pavement damage, with roadside drains blocked or filled with accumulated sediment and debris. Waves scoured the sealed road in several locations, reducing traffic to a single lane. The damage assessment highlighted the need to address repairs to Efate ring road as soon as possible to minimize secondary economic impacts, and to restore connectivity to tourism centers and to essential services such as hospitals, schools, markets, and main commercial centers in Port Vila.

ADB provided support for the rehabilitation and upgrade of rural roads affected by tropical cyclone Pam, and the development of a community-based model of road rehabilitation and maintenance in selected communities. The project incorporates key lessons from recent disasters in the Pacific island countries. It supports the government's efforts to build back better, i.e., upgrade infrastructure during reconstruction, and strengthen resilience to future disasters and climate change.



## About the Pacific Transport Update 2015

The Asian Development Bank (ADB) is working to assist in the development of the transport sector in 14 Pacific developing member countries (DMCs) through technical assistance, loan, and grant financing. ADB provides support for transport sector policy, investment planning, capacity building, and new capital infrastructure investment. ADB is currently implementing transport projects and technical assistance in eight Pacific DMCs—Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, and Vanuatu. This document provides an update of ongoing, proposed, and recently completed Pacific Transport projects and assistance for 2015.

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Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.



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