

PACIFIC TRANSPORT UPDATE 2022





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Notes:

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On the cover: **The passenger and cargo ship Manu Folau at the Funafuti wharf, Tuvalu.** The ship will be replaced under the Strengthening Domestic Shipping Project (photo by R. Singh).

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FOREWORD

Welcome to the 2022 edition of the Pacific Transport Update of the Asian Development Bank (ADB). ADB's Pacific Department partners with governments, communities, and the private sector to increase access to essential goods, services, and opportunities, while building resilience to climate change and external shocks.

ADB's work in the Pacific transport sector supports its developing member countries in providing safe, efficient, and reliable transport services that drive equitable socioeconomic growth and sustainable results. By improving connectivity, ADB seeks to help the Pacific developing member countries to build strong, inclusive economies, while mitigating key challenges that are associated with their geographic isolation and limited resources.

This update highlights some of ADB's core activities in the Pacific transport sector, the impacts these activities produce, and what ADB aims to achieve in the future. It also describes important operational changes in line with ADB's new sector and regional strategies. In particular, we are proud to announce the publication of ADB's *Pacific Transport Sector Assessment Strategy and Road Map* in July 2021, and the ADB Board of Directors' approval of ADB's *Pacific Approach 2021–2025* in 2021. These new strategies will deliver transformational change in the way ADB provides assistance in the region—all toward scaling up the impacts of our work in the Pacific.

Leah Gutierrez

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ADB TRANSPORT OPERATIONS IN THE PACIFIC

COMPLETED PROPOSED SUSTAINABLE AND CLIMATE-RESILIENT CONNECTIVITY OUTER ISLAND TRANSPORT INFRASTRUCTURE INVESTMENT Active—Total financing: \$69.55 million (ADB: \$25.95 million; Green Climate Fund: \$28.62 million; Government of Australia: Active—Total financing: \$42.0 million (ADB: \$12.0 million; World Bank: **OUTER ISLAND MARITIME INFRASTRUCTURE** DIGITAL TWIN CAPABILITIES IN PROJECT MANAGEMENT Active—Total financing (ADB): \$0.23 million Active—Total financing (ADB): \$47.22 million STRENGTHENING DOMESTIC SHIPPING FEDERATED STATES Proposed—Total financing (ADB): \$35.00 million MARSHALL ISLANDS -- OF MICRONESIA PALAU REPARING THE SUSTAINABLE ROAD NFRASTRUCTURE INVESTMENT PROJECT SUPPORTING SAFE RECOVERY OF TRAVEL Active—Total financing (ADB): \$5.00 million NAURU Active—Total financing (Japan Fund for Prosperous and KIRIBATI Resilient Asia and the Pacific): \$2.00 million RAROTONGA AIRPORT INFRASTRUCTURE UPGRADE PROJECT Proposed—Total financing (ADB): \$20.00 million APUA NEW GUINEA TUVALU -----BRIDGE REPLACEMENT FOR IMPROVED RURAL ACCESS PROJECT Completed—Total financing (ADB): \$78.49 million SOLOMON ISLANDS SAMOA TRANSPORT SECTOR PREPARATORY PROJECT AND TECHNICAL ASSISTANCE (TA) **ENHANCING SAFETY, SECURITY, AND SUSTAINABILITY** FOR PREPARING THE LAND AND MARITIME TRANSPORT PROJECTS OF APIA PORT PROJECT COOK Active—Total financing (ADB): \$34.45 million Active—Total financing (ADB): \$65.26 million **ISLANDS** CENTRAL CROSS ISLAND ROAD UPGRADING PROJECT HIGHLANDS REGION ROAD IMPROVEMENT INVESTMENT PROGRAM VÂNUATU (Active—Total financing (ADB, including project preparatory TA): Tranche 1: Completed in June 2016, total financing: \$314.58 million TONGA Tranche 2: Completed in June 2021, total financing (ADB): \$1.02 billion NIUE Tranche 3: Completed in June 2020, total financing: \$130.41 million LAND TRANSPORT SECTOR DEVELOPMENT PROJECT SUSTAINABLE HIGHLANDS HIGHWAY INVESTMENT PROGRAM Proposed—Total financing (ADB): \$5.00 million Tranche 1: Active, total financing: \$313.50 million Tranche 2: Active, total financing: \$375 million Tranche 3: Proposed, total financing: \$207 million TRANSPORT PROJECT DEVELOPMENT FACILITY BUILDING RESILIENCE TO CLIMATE CHANGE IN PAPUA NEW GUINEA Active-Total financing (ADB): \$5.00 million Active-Total financing: \$35.85 million (ADB: \$5 million; Strategic Climate Fund: \$29.25 million; Government of Australia: \$2.98 million) NUKU'ALOFA PORT UPGRADE PROJECT Active—Total financing (ADB): \$45.00 million MARITIME AND WATERWAYS SAFETY PROJECT Active—Total financing (ADB): \$38.00 million FANGA'UTA LAGOON BRIDGE PROJECT Proposed—Total financing (ADB): \$30.00 million CIVIL AVIATION DEVELOPMENT INVESTMENT PROGRAM Tranche 1: Completed in July 2016, total financing (ADB): \$113.30 million Tranche 2: Completed, total financing (ADB): \$128.63 million Tranche 3: Active, total financing (ADB): \$248 million TRANSPORT INFRASTRUCTURE INVESTMENT SECTOR PROJECT CIVIL AVIATION SECTOR INVESTMENT PROGRAM AND ASSOCIATED TA FOR PREPARING THE PROGRAM Proposed—Total financing (ADB): \$176.5 million COORDINATION CAPACITY Active—Total financing: \$150.70 million (ADB: \$100.70 million; World Bank: \$50.0 million) FIJI AIRWAYS COVID-19 LIQUIDITY SUPPORT FACILITY Active—Total financing: \$65 million (ADB: \$40 million; Leading Asia's Private nfrastructure Fund: \$25.0 million) DOMESTIC MARITIME SUPPORT SECTOR PROJECT ENHANCING COVID-19 PREPAREDNESS FOR TOURISM RECOVERY PROJECT **REGIONAL** Completed—Total financing (ADB): \$15.60 million Proposed—Total financing (Japan Fund for Prosperous and Resilient Asia and the Pacific): \$3.00 million SUSTAINABLE TRANSPORT INFRASTRUCTURE MPROVEMENT PROGRAM AND ATTACHED TA FOR STRENGTHENING DOMESTIC TRANSPORT CONNECTIVITY TRENGTHENING THE CAPACITY OF THE MINISTRY OF INFRASTRUCTURE DEVELOPMENT CYCLONE PAM ROAD RECONSTRUCTION PROJECT Active—Total financing: \$5.50 million (ADB: \$5.00 million; Active—Total financing: \$83.20 million Republic of Korea e-Asia and Knowledge Partnership Fund: Completed—Total financing: \$25.53 million (ADB: \$21.04 million; Government of Australia: \$62.20 million) NTERISLAND SHIPPING SUPPORT PROJECT PREPARING PROJECTS TO ENHANCE TRANSPORT Active—Total financing: \$44.14 million (ADB: \$26.89 million; Government of New CONNECTIVITY AND RESILIENCE IN THE PACIFIC TRANSPORT SECTOR PROJECT DEVELOPMENT FACILITY Zealand: \$17.25 million)

Proposed—Additional financing (ADB): \$40.61 million

Active—Total financing (ADB): \$2.25 million

(SUPPLEMENTARY)

INFRASTRUCTURE AND PUBLIC FINANCIAL MANAGEMENT SUPPORT FACILITY

Active—Total financing: \$5.50 million (ADB: \$5.00 million; Republic of

Korea e-Asia and Knowledge Partnership Fund: \$0.50 million)

Active—Total financing (ADB): \$6.00 million

Active—Total financing: \$148.88 million

SOLOMON ISLANDS LAND AND MARITIME CONNECTIVITY PROJECT

ABBREVIATIONS

ADB Asian Development Bank

DMC developing member country

FCAS fragile and conflict-affected situation

FSM Federated States of Micronesia

GDP gross domestic product

HCRN highlands core road network

JICA Japan International Cooperation Agency

MFF multitranche financing facility

PNG Papua New Guinea

PRF project readiness financing

QSIW Queen Salote International Wharf

RBL results-based lending

SHHIP Sustainable Highlands Highway Investment Program

SAR Pacific Transport Sector Assessment, Strategy and Road Map 2021–2025

SIDS small island developing states

TA technical assistance

OVERVIEW

The Pacific developing member countries (DMCs) of the Asian Development Bank (ADB) are scattered across 30 million square kilometers (km²) of ocean—or one-third of the earth's surface—while their combined landmass represents less than 2% of this total. The remote, archipelagic geography of most Pacific DMCs, paired with their small and often dispersed populations, create a unique set of challenges for connecting people, goods, and services. At the same time, Pacific DMCs are among the most vulnerable countries in the world to natural hazards and the effects of climate change. There is a pronounced need to increase connectivity across the region, and to ensure that infrastructure is built and managed to endure.

ADB's work in the Pacific transport sector is empowering people and economies by increasing access to markets, opportunities, and essential goods and services. Pacific transport operations are building resilient and sustainable links that enable communities to thrive, both now and in the future. To this end, ADB is working with its Pacific DMCs to build new connectivity infrastructure and ensure that domestic stakeholders have the capacity and resources to manage it. ADB is also helping to increase resilience to natural hazards by integrating disaster risk management and climate-resilient design considerations into the majority of its projects and technical assistance (TA) in the region.

The Pacific Transport Update 2022 provides an overview of ADB's TA and lending activities in the Pacific region. It showcases the results of ADB's operations in the areas of land, maritime, and air transport as well as in policy planning and capacity building. The Pacific Transport Update 2022 highlights the impacts and outcomes of initiatives completed in 2020 and 2021, and active as of December 2021. It also describes selected activities slated for implementation in the years to come.

Table: Country Data, 2021

Pacific DMC	Population ('000)	Land Area (km²)	Number of Islands/Atolls	GDP per capita (\$, current market prices)
Papua New Guinea	9,018	452,860	approximately 600	2,689
Fiji	886	18,274	332	4,668
Solomon Islands	667	27,990	approximately 998	2,051
Vanuatu	297	12,274	84	3,163
Samoa	198	2,934	9 plus adjacent small islets	3,688
Kiribati	113	810	33	1,766
Tonga	100	750	171	4,468
Micronesia, Federated States of	103	702	607	3,239
Marshall Islands	55	181	34: 5 islands, 29 atolls made up of an indeterminate number of islets	4,326
Cook Islands	19	240	15	17,173
Palau	18	189	more than 300	12,448
Tuvalu	12	27	9	4,298
Nauru	11	21	1	11,292

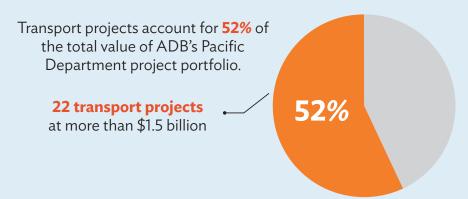
DMC = developing member country, GDP = gross domestic product, km² = square kilometer.

Note: No available data for Niue.

Asian Development Outlook database (2021) (accessed in 7 February 2022).

ADB's 14 Pacific DMCs comprise the Cook Islands, Fiji, Kiribati, the Marshall Islands, the Federated States of Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.





2022-2024 PACIFIC DEPARTMENT TRANSPORT PIPELINE



18 sovereign loan and grant projects at \$1.6 billion, including \$115 million in cofinancing

Reimagining Pacific Transport Sectors:

The Asian Development Bank (ADB) is changing the way it does business in the Pacific. In 2021, ADB published two new strategy documents that will have profound impacts on transport sector operations in the region. The Pacific Transport Sector Assessment, Strategy and Road Map 2021-2025 (SAR) was published in July 2021, and will guide transport sector assistance. ADB's Board of Directors endorsed the Pacific Approach 2021-2025 in June 2021. The strategy will have broader implications on how ADB implements assistance in the region. Key takeaways from both strategy documents are outlined below.

Pacific Transport Sector Assessment, Strategy, and Road Map 2021-2025

The SAR maps out core transport challenges, and ADB's strategic focus on different subsectors, thematic areas, and implementation approaches, including:

Maritime transport. The Pacific developing member countries (DMCs) are dependent on imports for basic goods—including food, fuel, and medicine. At the same time, outer island populations rely on maritime transport to connect with essential services. However, outdated port infrastructure and management practices lead to high import costs at the national level, while degraded island landings create safety risks for passengers. ADB is supporting economic development and regional cooperation through investments in commercial ports and increasing access to opportunities by upgrading outer island landings.

Aviation. National airports in the Pacific are essential to support tourism growth, while domestic airstrips are among the only means of reaching remote populations in mountainous areas. A number of airports across the region do not meet modern safety and security standards. ADB is helping upgrade key aviation infrastructure to ensure passenger safety and to secure compliance with international standards as tourism markets rebound.

Land transport. Road networks are an essential for linking communities with jobs and essential services, and for moving exports products from extraction sites to commercial ports. However, large segments of roadways in the Pacific are unpaved or are rapidly degrading due to lack of maintenance. ADB is helping to upgrade major roadways across the Pacific, and supporting domestic stakeholders to secure the technical and financial resources needed to ensure proper operation and maintenance into the future.

Thematic areas. The SAR seeks to leverage transport sector lending to address crosscutting issues, including (i) climate change and disaster resilience, (ii) regional cooperation and integration, (iii) gender equality, (iv) institutional capacity, (v) land acquisition, and (vi) procurement barriers tied to small economies of scale. The SAR highlights the need to use transport sector lending to address intersectional issues like climate risks and gender equality, and identifies how ADB will address operational issues such as land acquisition and limited institutional capacity.

Climate proofing and resilient design. ADB's transport initiatives in the region recognize that the Pacific DMCs are among the most exposed nations, globally, to climate risks and natural hazards. Accordingly, project designs all feature disaster resilience, and more broadly, ADB is scaling up climate support to assist governments in capturing risk data and integrating it into special planning that underpin investment planning. The Pacific Approach centers around resilience planning and overlaps with the transport projects discussed in detail below.

ADB's Approach to Improving Transport in the Pacific

Building on decades of partnership and experience, the SAR identifies the following methods for driving increased efficiency, effectiveness, and sustainability in transport works in the region:

- Project readiness support. ADB is increasingly using project readiness financing to mobilize consultants at early stages of transport projects in the Pacific. Doing so helps streamline implementation and ensures success once projects are approved.
- (ii) Focus on quality and value. Quality factors on bids will be increasingly used to ensure that selected bidders are capable of delivering high-quality works within the given timeline and budget. The SAR highlights the importance of conservative timelines to ensure assets are built to high-quality standards, and ADB will increasingly seek to mitigate risks of cost overruns by providing sufficient contingencies in all cost estimates.
- (iii) Innovative financing. Sequenced and programmatic lending can encourage deeper government engagement in planning, building, managing, and maintaining infrastructure. ADB is deepening engagements with national stakeholders through programmatic lending, such as the multitranche financing facility, to support more sustainable results.
- (iv) Capacity building. Capacity constraints are among the most critical issues affecting transport project implementation and sustainability. Increasingly, ADB will seek to deliver long-term capacity support and introduce capacity supplementation where appropriate. Addressing capacity constraints features prominently in both the SAR and the Pacific Approach as means of enhancing project impacts and long-term sustainability.

Pacific Approach 2021-2025

ADB recognizes that small island developing states (SIDS) and fragile and conflict-affected situations (FCAS) require differentiated approaches to planning and implementing assistance. The Pacific Approach, 2021-2025 serves as the country partnership strategy for ADB's 12 smallest Pacific DMCs and will oversee a paradigm shift in how ADB delivers assistance to the region, all under a unified goal of supporting a resilient Pacific.

The Pacific Approach advances three new objectives: (i) prepare for and respond to shocks, (ii) deliver sustainable services, and (iii) support inclusive growth. In addition to these objectives, the strategy calls for operational changes in how ADB delivers assistance, such as bringing climate change considerations to the foreground, building local capacity to support the long-term sustainability of essential services, and streamlining procurement to support implementation efficiency in each particular SIDS and FCAS operating environment. The Pacific Approach complements country partnership strategies for Papua New Guinea and Fiji, both of which emphasize building resilience in the face of crisis, as well as ADB's FCAS and SIDS Approach paper, which highlights the need for differentiated approaches to implementing assistance.

The remaining boxes in this paper discuss how ADB is leveraging transport sector operations to deliver transformative results for communities across the region, in line with the strategic pillars of the Pacific Approach and other guiding frameworks.

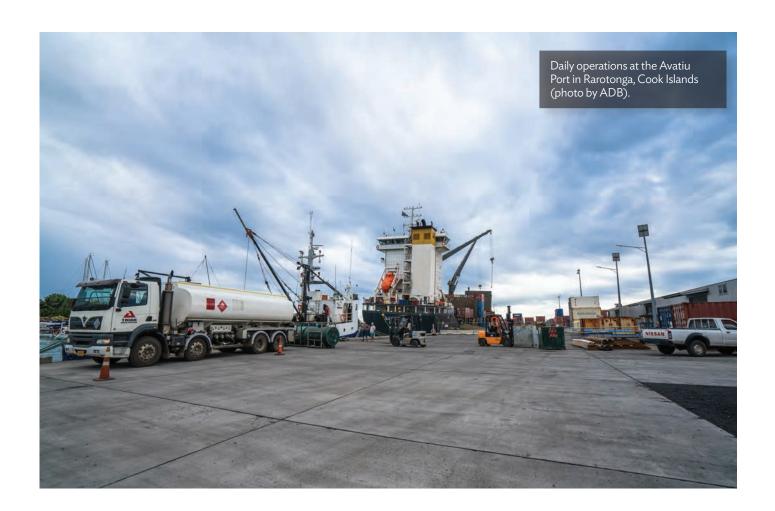
REGIONAL INITIATIVES

The key to unlocking the Pacific community's vast human capital is ensuring that its people and businesses have access to the resources they need to thrive. Connecting people with essential goods, services, and opportunities—such as food, education, health care, and jobs—empowers them to develop themselves and the communities they live in. A safer, more efficient, and reliable transport sector can help achieve these goals and drive socioeconomic growth.

The Pacific DMCs have made considerable progress toward increasing connectivity. However, a number of challenges remain to be addressed. Limited financial resources and institutional capacity contribute to transport sector development that has not kept pace with demand and, in many cases, lack of routine maintenance contributes to the rapid degradation of existing assets. At the same time, the climate crisis is becoming more pronounced, with increased flooding storms and other climatic events threatening communities, economies, and infrastructure.

As the largest development partner in the region by lending volume, ADB is uniquely positioned to support the Pacific DMCs in pooling resources to address these challenges. ADB is supporting the Pacific DMCs to improve the financial and operational efficiency of infrastructure projects, share lessons, and identify opportunities to strengthen regional collaboration in critical areas such as climate preparedness and trade facilitation.

Regional transport sector initiatives seek to deepen collaboration while increasing access to the knowledge and resources needed to deliver sustainable impacts. This chapter examines ADB's regional transport sector initiatives, and describes how they are contributing to increased resilience, trade, and collaboration among the Pacific DMCs.



Strengthening Domestic Transport Connectivity in the Pacific

Status: Active

ADB financing: \$5.00 million

Cofinancing (Republic of Korea e-Asia and Knowledge Partnership Fund): \$0.50 million

Total financing: \$5.50 million

As countries across the Pacific work to increase transport infrastructure and improve service delivery, efficient project preparation and investment planning are essential for ensuring the success of development activities.

The TA for Strengthening Domestic Transport Connectivity in the Pacific supports project preparation activities for transport investments in a number of Pacific DMCs. The TA has been scaled up to cover further project preparatory activities and address similar needs. In addition to supporting the preparation of investments, the TA is providing advisory support for national transport sector policies.

Some of the key projects prepared under the TA are: the Fanga'uta Lagoon Bridge and Nuku'alofa Port Upgrading Projects in Tonga, the Guadalcanal Road Rehabilitation Project in Solomon Islands, the Interisland Shipping and Support Project in Vanuatu, the Outer Island Transport Infrastructure Investment Project in Kiribati, and the Vanuatu National Transport Sector Investment Policy and Plan.

Preparing Projects to Enhance Transport Connectivity and Resilience in the Pacific

Status: Active

ADB financing: \$5.00 million

Cofinancing (Republic of Korea e-Asia and Knowledge Partnership Fund): \$0.50 million

Total financing: \$5.50 million

The Pacific DMCs face severe development constraints owing to their remote and fragmented geography, limited infrastructure, climate change impacts, and increasingly frequent occurrences of disasters triggered by natural hazards. Their small size, isolation, and high exposure to climate risks and disasters make the Pacific DMCs extremely vulnerable.

Despite considerable progress to upgrade transport infrastructure in recent years, the Pacific DMCs require specialized support in strengthening connectivity and enhancing the resilience of transport infrastructure to climate and disaster risks. Intersectional support to increase connectivity and resilience can help address the vulnerability of the Pacific DMCs while driving more sustainable and resilient development in the long term.

The TA Preparing Projects to Enhance Transport Connectivity and Resilience is designed to address these interlinked objectives. The TA is delivering target support to prepare a number of ensuing projects and is also taking a "big picture" approach to streamlining climate resilience into ADB initiatives by helping prepare transport sector projects and roadmaps that focus on climate-resilient connectivity. The TA was approved in April 2020 and has since received additional support from the Regional Cooperation and Integration Fund and the Republic of Korea e-Asia and Knowledge Partnership Fund.

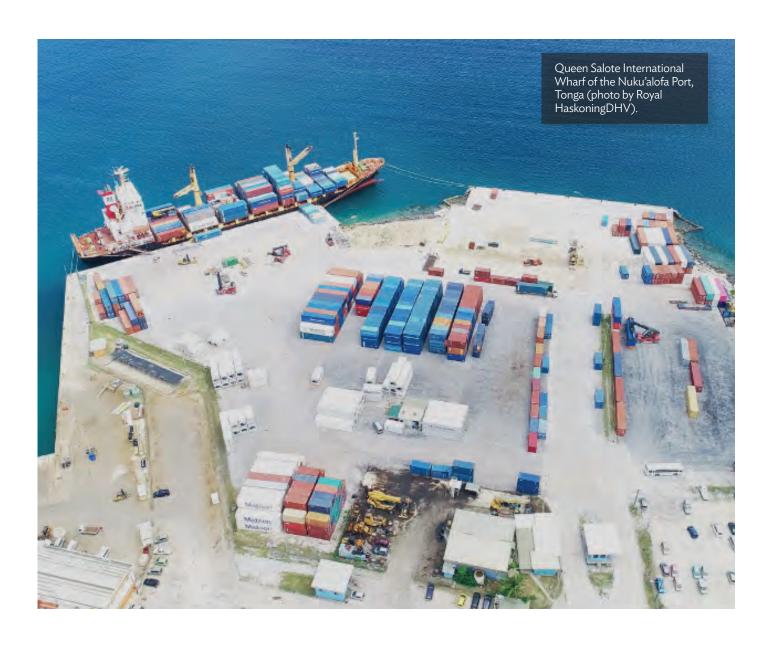
The approval of additional ADB financing in September 2021 has increased the scope of the TA, which now includes the following outputs: (i) strategic review of development options in Fiji under the Suva Port Project, (ii) project preparatory support for the Rarotonga Airport Infrastructure Project in Cook Islands, (iii) preparation of a Pacific regional trade and transport study and feasibility studies for two associated projects, (iv) development of a roadmap for the development of maritime transport in Kiribati, and (v) additional support for the preparation and implementation of land and maritime transport projects across the region. Overall, the TA will increase the start-up and implementation efficiency of various transport initiatives, while directly supporting the integration of climate-resilient design into forthcoming infrastructure works and national connectivity planning.

COUNTRY CONTEXT AND ASSISTANCE

The Pacific DMCs are among the most geographically isolated and internally dispersed nations in the world. At the same time, they lack key financial and technical resources to develop connectivity infrastructure. ADB's transport sector assistance to each of the Pacific DMCs recognizes unique geographic features, domestic resources, and opportunities to provide catalytic support for achieving comprehensive development impacts.

While ADB's Pacific DMCs face a similar set of connectivity challenges, each country has a unique operating context, and requires varying levels of support. Some countries, like Papua New Guinea or Solomon Islands, have highly dispersed populations and extensive transport infrastructure—critical challenges include strengthening degraded infrastructure and ensuring long-term maintenance. Other countries, such as Nauru and Samoa, have more concentrated populations, but require support for improving national connectivity with external markets.

ADB's transport sector work at the country level combines experience working alongside national and subnational governments with regional solutions to overcome perennial sector challenges. In addition to supporting infrastructure development, ADB is committed to working with domestic entities to build and preserve local capacity to manage and maintain assets well into the future.





The Cook Islands comprises 240 square kilometers (km²) of land spread across 15 islands and massive 1.8 million km² of ocean territory. Its pristine terrestrial and aquatic environments have driven the growth of a thriving tourism industry that serves as the backbone of its economy. While border closures associated with the coronavirus disease (COVID-19) had devastating impacts on tourism flows and the broader economy in 2020 and 2021, tourism is set to rebound as global restrictions ease into 2022.

Modern connectivity infrastructure is essential to enabling tourism volumes to grow in the wake of the pandemic. According to its National Infrastructure Investment Plan, the Cook Islands needs to upgrade infrastructure to meet tourism needs and ensure environmental sustainability. ADB is supporting the country to assess infrastructure needs in the aviation sector, and will explore opportunities to deliver resources through its sovereign and nonsovereign operations.

Supporting Safe Recovery of Travel and Tourism

Status: Active

Total financing (Japan Fund for Prosperous and Resilient Asia and the Pacific): \$2.00 million

Economic recovery in Cook Islands will depend largely on the restart of its tourism industry. Accordingly, the safe reopening of borders to international travelers, and the Rarotonga Airport in particular, is a national priority. ADB is assisting the Cook Islands to establish all the key safety features of its main international airport, to facilitate the safe and prosperous restart of the Cook Islands' tourism industry.

The Supporting Safe Recovery of Travel and Tourism Project will strengthen the capacity and readiness of the Cook Islands to safely receive tourists and support the country's economic recovery from the pandemic. The project will improve the readiness of the airport to receive international tourists by extending facilities to allow for social distancing in the airport terminal. It will also improve health system readiness by refurbishing primary health facilities and installing a medical waste treatment system to ensure proper disposal of medical waste in environment-friendly ways.

The project will directly complement the efforts of the Government of the Cook Islands, the business community, and the public to revive tourism and rebuild the economy. Over 10,000 women and men in the Cook Islands will benefit from the project particularly workers in the hospitality sector, 60.5% of whom are women. The project will support the safe reopening of travel and deliver wider health sector strengthening to protect against future health hazards.

Box 1: How Pacific Transport Projects Are Driving Post-Pandemic Recovery

The coronavirus disease (COVID-19) has had unprecedented effects on Pacific economies. Tourism-dependent markets experienced abrupt shocks as international passenger traffic came to a halt, and the larger export economies faced reduced shipping services and increased costs of trade. While the economic impacts of the pandemic (and prospects for recovery) are uneven across the Pacific developing member countries, transport projects will play a consistently important role in rebuilding economies in both the short and long term.

Most immediately, large infrastructure projects will play a critical role in economic recovery, as they feature prominently in public expenditures across the region and, as a result, play a critical role in economic recovery and sustaining employment. In the medium and long term, the development of transport infrastructure will continue to be essential to reducing the costs of trade, driving growth in national and regional tourism markets, and establishing new economic opportunities. Despite economic downturns linked to COVID-19, safe and efficient transport remains essential to economic growth and poverty reduction, and as such, demand for transport infrastructure was relatively unfazed by the pandemic.

During the height of the COVID-19 lockdowns, many of the Asian Development Bank's transport projects suffered the consequences of international travel restrictions and local lockdowns. Although border restrictions and reduced flight schedules persist across most of the Pacific developing member countries, together with local lockdowns, activity is resuming across the region.

Source: ADB.

Rarotonga Airport Infrastructure Upgrade Project

Status: Proposed

Total financing (ADB): \$20.00 million

Rarotonga is the capital of the Cook Islands and is the nation's gateway to international tourism. The Rarotonga Airport was commissioned in 1974 and, prior to the pandemic, handled more than 100,000 passengers per year. As traffic volumes increase in line with tourism sector development, there is a pressing need to upgrade the airport to ensure it can handle higher passenger volumes while preserving adequate safety and security measures.

The Rarotonga Airport Infrastructure Upgrade project will improve existing facilities and ensure the airport is equipped to support national tourism development. ADB is supporting the Cook Islands to conduct assessments on the broader air transport sector, traffic flows, institutions, and project implementation capacity to for an ensuing project. The assessments will support the government in defining priority improvements and preparing the ensuing project.



The Federated States of Micronesia (FSM) comprises four states—Chuuk, Kosrae, Pohnpei, and Yap—spread across 607 islands and 700 km² of land in the Northwest Pacific. The national population is about 115,000 people, with urban migration leading 56% of the population to reside on the four state-capital islands, and the remainder spread across several hundred islands. The geographic remoteness and dispersion, environmental fragility, and climate change impacts pose major challenges for transport infrastructure delivery, and even threaten the physical viability of some areas of both the main islands and the more remote outer islands.

Historically, transport infrastructure development in the FSM has relied on assistance provided through donor support including from ADB, the FSM's Compact of Free Association with the United States, and other bilateral channels, including from the People's Republic of China. While the national government is responsible for policy, planning, and funding, each state enjoys considerable autonomy and carries out implementation, and operation and maintenance of transport infrastructure assets.

For the first time in 2021, ADB and the FSM agreed to begin focusing assistance on improving connectivity to encourage more inclusive economic growth in the wake of the pandemic. Planned assistance will support the population in accessing essential services and economic opportunities, while increasing resilience to climate change and variability.

Preparing the Sustainable Road Infrastructure Investment Project

Status: Active

Total financing (ADB): \$5.00 million

As in many small island developing states in the Pacific, primary roads in the FSM provide access to public facilities, economic infrastructure, and job opportunities along the coastlines where most of its population reside. These roads are vital means for coastal communities to access public goods and services. The road network in the FSM consists of some 200 kilometers (km) of sealed and 15 km of unsealed primary roads, mostly circling coastlines.

ADB and the FSM have identified the need to improve road network connectivity across the country to support inclusive development. The Preparing the Sustainable Road Infrastructure Investment Project (Transport Connectivity Improvement Project) will support the national government in screening suitable road sections for piloting advanced construction technology, and identifying candidate subprojects for ensuing investments in the road network. The project will also undertake feasibility studies and due diligence on institutional, financial, procurement, and safeguards aspects of the selected subprojects, and finance detailed engineering designs and procurement activities to ensure effective and efficient project implementation in the future.





Fiji is a South Pacific archipelagic nation with 110 inhabited islands and a land area of about 18,300 km². Approximately 90% of its 880,000 residents live on the three main islands of Taveuni, Vanua Levu, and Viti Levu, and about half of the population live in rural areas. Improving Fiji's transport infrastructure can increase access to economic opportunities and services for rural populations, and strengthen trade.

ADB's engagement in Fiji dates back to 1970, when the country gained independence—transport investments and TA have been a long-standing cornerstone of the partnership. Ongoing projects focus on building resilience to climate change and laying the foundation for more inclusive growth. Civil works are increasing access to markets and essential services, particularly for vulnerable groups, including rural communities, women, youth, and the elderly.

ADB is supporting connectivity across Fiji by helping the government plan and implement a pipeline of transport works. ADB's support plays a key role in financing civil works and coordinating investments to meet targets in Fiji's 20-Year National Transport Infrastructure Investment Plan. Lending and TA activities are building institutional capacity alongside new assets to improve transport services and ensure that infrastructure is both physically and financially sustained. The previously completed Port Development Project produced positive impacts on the economy, and the Transport Infrastructure Investment Sector Project will help extend these benefits to communities across the nation.

Transport Infrastructure Investment Sector Project and Associated Technical Assistance for Strengthening Transport Coordination Capacity

Status: Active

ADB financing: \$100.70 million (includes \$0.70 million in TA)

Cofinancing (World Bank): \$50.00 million

Total financing: \$150.70 million

The Transport Infrastructure Investment Sector Project is improving access to socioeconomic opportunities by upgrading and rehabilitating land and maritime transport infrastructure.² The project is financing a series of subprojects prioritized by Fiji's 20-Year National Transport Infrastructure Investment Plan. It incorporates a gender-sensitive design and will improve pedestrian access and safety along roads and bridges by installing safety features and streetlights. It will rehabilitate a minimum of 100 km of main, municipal, and rural roads to revised standards and repair or upgrade 40 km of roads to a minimum 3-star rating for vehicle occupants based on iRAP assessments. It will rehabilitate or reconstruct 30 bridges with gender-sensitive designs that improve all-weather pedestrian access to waterways. This will reduce the risk of bridge failure for 250,000 people. The project will also rehabilitate or reconstruct 6 rural jetties.

The associated TA for Strengthening Transport Coordination Capacity built the capacity of government staff in the areas of economic and financial analysis for projects, asset management, procurement and contract management, climate change adaptation, safeguards, and public-private partnerships. A key feature of the capacity building was its focus on long-term asset management

² Formerly titled Bridge Replacement Project.

to support infrastructure sustainability. ADB provided additional support through the Enhancing Transport Connectivity and Resilience in the Pacific TA to conduct a strategic review of development options of Suva Port and to identify a new site to relocate Suva Port to shift some key operations to a new location.

Fiji Airways COVID-19 Liquidity Support Facility

Status: Active

Total financing: \$65 million (\$40 million ordinary capital resources, \$25 million Leading Asia's Private Infrastructure Fund)

Fiji Airways, Fiji's national flag carrier airline, is the Pacific's largest regional airline, accounting for 65% of international seat capacity to Fiji and 60% of interregional seat capacity, connecting the South Pacific to Australia, New Zealand, the United States, and Asia. It provides the majority of international seat capacity to Kiribati and Tuvalu (fragile and conflict-affected situation countries), a substantial proportion of capacity to Samoa, Tonga, and Vanuatu, as well as most domestic flights connecting the Fijian islands. It also provides access to basic commodities and social services by importing essential goods and allowing the local population to connect to other parts of the world. It is therefore a fundamental transport infrastructure for the Fijian and regional economies, which depend on tourism and exports.

Fiji Airways contributes to regional coordination and integration. Because Fiji is a large and important Pacific regional distribution center, the carrier facilitates regional emergency response and recovery efforts, including recovery from periodic regional cyclones. Fiji Airways also plays a critical role in providing access to Fiji's health care facilities for people from other Pacific countries, notably Kiribati and Tuvalu, and to tertiary care outside the region, particularly in Asia, Australia, and New Zealand.

The unprecedented global crisis caused by COVID-19 has crippled the aviation and tourism industries. Fiji Airways has been affected by COVID-19 since the beginning of 2020. ADB was requested to provide liquidity support to Fiji Airways to meet its operational cash requirements under the Fiji Airways COVID-19 Liquidity Support Facility. The loan will fund Fiji Airways' fixed costs during operational shutdown caused by COVID-19 and working capital requirements for a ramp up and restoration of its flight services. The loan includes up to \$40 million from ADB and up to \$25 million from Leading Asia's Private Infrastructure Fund (LEAP).

Enhancing COVID-19 Preparedness for Tourism Recovery Project

Status: Proposed

Total financing (Japan Fund for Prosperous and Resilient Asia and the Pacific): \$3.00 million

Fiji's border closure contributed to an unprecedented economic contraction as tourism revenues declined by 84.4% from 2019 to 2020 and the tourism industry's contribution to the gross domestic product (GDP) decreased from 32% in 2019 to just 10.9% in 2020. Opening the border, encouraging the safe international movement of people, and restoring traveler confidence is essential to the resumption of tourism and broader economic recovery in Fiji.

The Enhancing COVID-19 Preparedness for Tourism Recovery project will strengthen Fiji's capacity and readiness to safely reopen to tourists and rebuild the economy. The project will support Nadi International Airport to reopen with COVID-19 safety measures, and to establish a testing facility for tourists and those working in the tourism industry to reduce the risk of transmission and facilitate international travel under the "new normal."

The project will support measures to reduce the risk of COVID-19 transmission in Nadi International Airport by (i) retrofitting an existing overflow lounge to construct a new boarding gate and lounge that can be cordoned off; (ii) retrofitting unused office space to construct an airside isolation room; and (iii) procuring equipment to support infection prevention and disease control, reducing bottlenecks and time spent in high-risk, high-contact points in the airport, and reducing contact with potential infection source points. The project will also expand testing capacity for projected international passenger movements at Nadi International Airport and workers in the tourism industry by constructing a testing facility and procuring automated COVID-19 test machines and associated lab equipment and consumables.

The project will benefit the 88,200 people employed directly and indirectly in the tourism industry—this represents 25.3% of Fiji's labor force, many of whom are currently on leave without pay or reduced working hours. Women working in the tourism industry are mostly employed in unskilled or low-skilled work and have been disproportionately affected by the COVID-19 pandemic compared to men.



Kiribati is a small, remote country composed of 33 islands, spread across 3.5 million km² of ocean. Distance from major markets leads to high external transport costs, while the internal dispersion of populations leads to inequality in accessing basic services and economic opportunities.

About 55% of Kiribati's population live on the main island of Tarawa, with the remainder spread across its outer islands. The majority of economic activity takes place in the public sector, which accounts for about 50% of GDP and 80% of formal employment. Kiribati's development priorities focus on creating new employment opportunities, fostering greater environmental and fiscal sustainability, and reducing poverty. About 55% of Kiribati's population live on the main island of Tarawa, with the remainder spread across its outer islands divided in three main island groups: the Gilbert Islands, the Line Islands, and the Phoenix Islands.

A safe and efficient maritime transport system is essential for connecting Kiribati's population to economic opportunities and social services, particularly for those living on the outer islands. ADB's assistance is aligned with Kiribati's national development priorities, and focuses on increasing equitable access to opportunities and essential services. Reliable and safe connectivity is critical for outer island development. Movement between the islands involves air and sea travel. Air and sea transport services struggle to meet reliable schedules and overall internal air and maritime connectivity is very limited.

Outer Islands Transport Infrastructure Investment Project

Status: Active

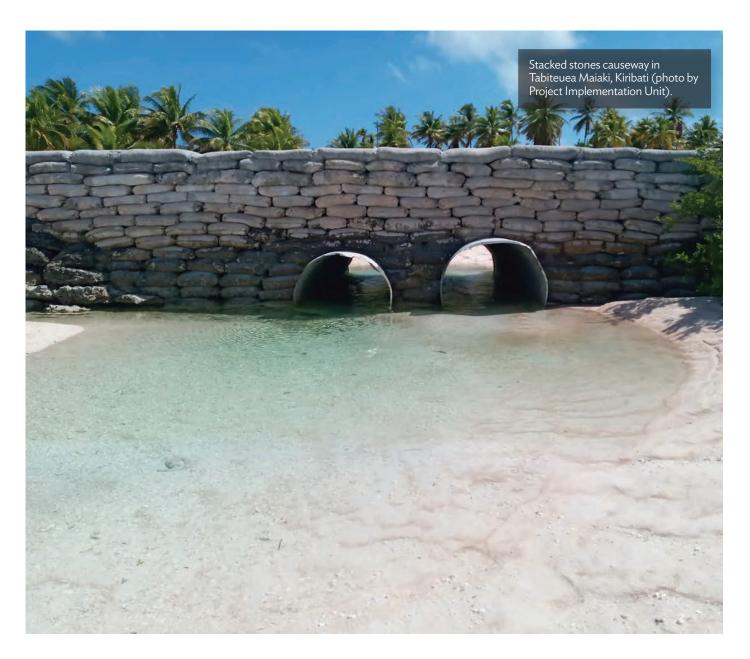
ADB financing: \$12.00 million

Cofinancing (World Bank): \$30.00 million

Total financing: \$42.00 million

Access to goods and services on Kiribati's outer islands is limited, and the degraded condition of maritime infrastructure creates safety risks for passengers. Ship transfers between Tarawa and the outer islands do not follow a regular schedule, and disembarking passengers often have to wade several hundred meters to reach dry land. This passage is particularly dangerous for children and elderly commuters. At the same time, interisland navigational aids are missing, which creates additional safety risks for interisland movement of people and goods.

The Government of Kiribati requested support in providing safer transport to and from the outer islands. ADB and the World Bank together undertook project preparation activities to identify key areas for intervention. The corresponding Outer Island Infrastructure Investment Project is building and refurbishing ship-to-shore maritime landings on outer islands along the Gilbert Islands Chain: Abaiang, Beru, Nonouti, and Tabiteuea South. Investment will improve the safety of interisland navigation, increase resilience to severe weather events and the effects of climate change, and strengthen implementation and management capacity among domestic entities.





Nauru is a very small island country with a land area of 21 km² and a population of about 11,300 people. With limited water and agricultural resources, it is entirely dependent on imports—about 95% of goods, including food and medical supplies, arrive by sea.

Aiwo Port is Nauru's main gateway for trade and is therefore an essential lifeline for the country. However, the port is in very poor condition and creates considerable safety risks—for workers loading and unloading cargo, but more broadly, for the population of Nauru, which depends entirely on the port's sustained operations.

Sustainable and Climate-Resilient Connectivity in Nauru

Status: Active

ADB financing: \$25.95 million

Cofinancing (Green Climate Fund): \$28.62 million Cofinancing (Government of Australia): \$14.98 million

Total financing: \$69.55 million³

The Sustainable and Climate-Resilient Connectivity Project intends to improve port operations by building a climate-resistant wharf that will decrease wait times for shipping vessels, reduce carbon dioxide emissions, lower import costs, and greatly increase the safety of people and goods in Nauru.

The original Nauru Port could not accommodate large shipping vessels, and containers had to be transferred one at a time by barges. Unloading approximately 200 containers took anywhere from a few days to several weeks, depending on weather and other variable conditions.

Excludes TA support comprising \$1.65 million from ADB and \$2.61 from the Government of Australia. Additional financing for TA 9009 is being processed to support institutional reforms that will further improve port operations upon project completion.

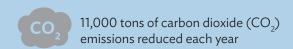
"The old port is about 100 years old and was falling apart. It is very rundown. The loading and unloading of cargo from container vessels and fuel from tankers has become very dangerous and sometimes life-threatening. Our work here is challenging, and we work hard."

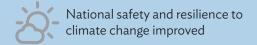
> Nimitz Adam Mechanic at Nauru's Aiwo Boat Harbor

2017 BASELINE Average number of ship days 21 days for shipping vessels 4 days for fuel tankers



CLIMATE IMPACTS





Physical works include (i) forming a berth channel and breakwater at Nauru Port, (ii) reconstructing port buildings and the container storage area, and (iii) strengthening the institutional capacity of the Nauru Maritime and Port Authority to support sustained and efficient operations. In parallel to physical works, ADB is supporting operational reforms, financed separately by TA 9009. Under the TA, the government will carry out port reforms, including institutional strengthening, capacity development, tariff restructuring, and the engagement of the private sector in port operations and management.

The government has set up a revolving fund to be used exclusively to finance the maintenance of the assets constructed under the project. Although physical works were paused atop border closures during the pandemic, construction activities resumed in April 2021 when the contractor chartered a plane to place skilled human resources back at the construction site.

Once complete, the project will create a paradigm shift in international transport logistics for the country—supporting climate change mitigation and resilience, and lowering the cost of transporting goods to the people of Nauru. The project is the third in the region under which ADB has supported a Pacific DMC to access international climate financing from the Green Climate Fund.

Digital Twin Capabilities in Project Management

Status: Active

Total financing (ADB): \$0.23 million

Given Nauru's limited resources and remoteness and the robust scale of ADB's country program—which involves the energy, and transport sectors—innovative solutions are needed to support project management. New approaches are also necessary to help overcome the operational and management obstacles brought on by the COVID-19 pandemic.



"We have dreamed of this new port for so many years... The new port will be like a lifeline for the people of Nauru. It will let us get our food and other supplies from overseas quicker, will help create jobs, and the new port will be safer for the port workers, especially when the weather is bad."

> **Nimitz Adam** Mechanic at Nauru's Aiwo Boat Harbor

The TA for Digital Twin Capabilities in Project Management responds to the need for innovation. The TA supports the Nauru Maritime and Ports Authority and other entities involved in the port project to implement and use a digital twin technology platform. The technology creates a digital replica of the port to gather and assess valuable information for use in monitoring progress, identifying risks and problems, and deciding on appropriate responses during construction, and to evaluate the project's medium. The technology also supports the evaluation and monitoring of long-term impacts following project completion.



Papua New Guinea (PNG) is ADB's largest Pacific DMC in terms of landmass, population, and GDP. In 2019, its population was estimated to be 9.3 million people, spread across 20 administrative provinces on the main island of New Guinea—which houses half of the nation's population—and several smaller island groups.

More than 85% of PNG's population live in rural areas, and the country's rugged terrain and limited infrastructure constrain the provision of basic goods and services. Rugged geography creates a heightened reliance on domestic aviation whereas islands and coastal-dwelling communities are heavily dependent on maritime transport. Gaps in the road network mean economically productive areas in the interior are isolated from markets. Improving intermodal transport can increase access to employment opportunities and social services, while bolstering economic growth.

ADB is helping PNG to deliver safer and more efficient transport between rural areas, urban centers, and international destinations. ADB's cumulative lending to transport operations in PNG (including recently closed, active, and planned initiatives) reached \$2.1 billion in 2021. ADB's new country partnership strategy for the nation, *Papua New Guinea*, 2021–2025—Achieving Diversified, Sustained, and Inclusive Growth, has the overall goal of supporting diversified, sustained, and inclusive growth; and places considerable emphasis on leveraging transport infrastructure to connect people with markets and opportunities.

Ongoing lending activities focus on developing sustainable road networks, ensuring that aviation facilities meet international safety standards, and safeguarding coastal villages against changing weather patterns. TA is complementing physical works by increasing domestic capacity to plan, build, and maintain resilient transport infrastructure. Given the large scale and comprehensive range of projects, this section on PNG is subdivided into land, maritime, and aviation initiatives.

Transport on Land—Bridges, Roads, and Highways

PNG's extensive road network brings together urban and rural populations, and links major economic drivers—like mineral extraction hubs—to seaports for export. Although PNG is home to an extensive road and highway network, there are still missing links, and key land transport assets are falling into disrepair. Upgrading PNG's land transport infrastructure is essential to connecting people to opportunities and basic services, while also supporting the national economy to continue growing.

Bridge Replacement for Improved Rural Access Project

Status: Completed

Total financing (ADB): \$78.49 million

Owing to its rugged terrain, PNG has a relatively large number of bridges (about 700 nationwide) compared with the size of its road network. Many of these are single-lane Bailey bridges that were initially used due to low-cost and fast deployment during the early construction of the national road network. However, their limited load-carrying capacity, paired with increasing traffic volumes, is causing many Bailey bridges to deteriorate—generating considerable safety risks for road users.

The Bridge Replacement for Improved Rural Access Project replaced 27 narrow bridges with permanent two-lane bridges. Existing modular bridges that were in good condition (which were replaced due to size) were reassembled on rural roads to boost access to urban centers. The project also developed the capacity of the Department of Works to maintain its bridge management system and to improve road safety in rural areas, where accident rates are high.

Improved accessibility of rural road networks is opening up markets, increasing agricultural profitability, facilitating market chain linkages with downstream processing and export markets, and expanding access to health services.

Transport Sector Preparatory Project and Technical Assistance for Preparing the Land and Maritime **Transport Projects**

Status: Active

Total financing (ADB): \$31.00 million⁴

As ADB scales up financing for road and transport network improvements across PNG, it is working closely with the government to prepare a pipeline of investments that will develop the main corridors of the country, including the northern and southern road corridors and the Highlands region road network.

Lessons learned during ongoing and completed programs signal the need to increase project readiness for future investments. The objective is to reduce implementation delays and improve the efficiency of upcoming programs and projects.

The Transport Sector Preparatory Project is financing feasibility studies, detailed design, and capacity building for ADB's pipeline of land transport investments in PNG. The complementary TA for Preparing the Land and Maritime Transport Projects is providing additional resources to support the assessment of existing transport strategies and policy documents; review feasibility studies, detailed engineering designs, and similar documents prepared under the project; design social and poverty components of forthcoming investments; and help prepare subsequent ADB loans for processing. Together, the project and TA are analyzing options and designing further investments, addressing environmental and social safeguard dimensions, and supporting advance procurement activities for a pipeline of roads works valued at more than \$1.2 billion.

Highlands Region Road Improvement Investment Program

The Highlands region is a major contributor to the PNG economy through its agricultural and mineral exports.⁵ It is also home to 40% of the country's population, who rely almost entirely on the road network for movement of people and goods. The government and its development partners have invested significantly in improving the road network. However, a lack of regular maintenance has led to an overall degradation of the Highlands core road network (HCRN).

For the HCRN to provide an effective link between people, goods, and socioeconomic opportunities, there is a need to improve degraded portions of the network, and to ensure that routine maintenance is carried out along serviceable portions of the road system. Improvements to (and regular maintenance of) the HCRN can increase economic productivity, drive more inclusive growth, and improve roadway safety.

The \$31.00 million is for the Transport Sector Preparatory Project and does not include a separate \$3.45 million for the TA for Preparing the Land and Maritime Transport Projects.

The Highlands region of PNG comprises the provinces of Western Highlands, Jiwaka, Southern Highlands, Hela, Eastern Highlands, Enga, and Simbu.

Highlands Region Road Improvement Investment Program

Status: Active

Tranche 1

Status: Completed in June 2016

Asian Development Bank (ADB) financing: \$303.08 million

Cofinancing: \$11.50 million Total financing: \$314.58 million



Improved 115 kilometer (km) of road



Launched Papua New Guinea (PNG)'s National Transport Development Plan 2011-2020



All project roads fitted with safety features



Delivered capacity building to PNG's Department of Works and the National Road Authority

Tranche 2

Status: Completed in June 2021 Total financing (ADB): \$1.02 billion



Improved 118 km of road



Secured maintenance arrangements for 500 km of the **Highlands Core Road Network**



All project roads fitted with safety features



Delivered capacity building to the National Road Safety Council, Department of Works, and the National Road Authority

Tranche 3

Status: Completed in June 2020 ADB financing: \$109.31 million

Cofinancing (European Union): \$21.10 million

Total: \$130.41 million



Improved 113.5 km of road



Secured maintenance arrangements for 200 km of the **Highlands Core Road Network**



All project roads fitted with safety features



Delivered capacity building to the National Road Safety Council, Department of Works, and the National Road Authority

In 2008, ADB and the Government of PNG launched the Highlands Region Road Improvement Investment Program as a multitranche financing facility.⁶ The investment program includes (i) investment projects covering improvements to about 1,400 km of the HCRN (comprising nine segments of road) to be funded through three tranches; (ii) preparation and administration of long-term road maintenance contracts for the entire 2,500 km of the HCRN; (iii) support for capacity development, resource mobilization for maintenance funds, and improvement of road transport services; and (iv) monitoring of the socioeconomic benefits associated with ongoing improvements to and maintenance of the HCRN. Activities under the first three tranches of the investment program are outlined on the next page.

Box 2: Sustainable Transport: Infrastructure, Capacity, and Governance

Although many of the Pacific island countries have (or once had) adequate transport infrastructure, limited resource allocations have led to the accelerated degradation of key assets. It is significantly more efficient to conduct routine and periodic maintenance than it is to rebuild assets. However, Pacific island countries often lack the technical and financial capacity to conduct maintenance needed to sustain infrastructure. The "build-neglect-rebuild" paradigm is a result of limited maintenance and is a widespread challenge in the region.

In support of more sustainable impacts, the Asian Development Bank (ADB) is programming solutions to the build-neglect-rebuild paradigm into its operations across the region—in support of more sustainable impacts. Capacity building and programmatic lending are key approaches for ensuring that domestic stakeholders have the resources they need to sustain transport assets over their economic life cycle. Integrating maintenance contracts into project implementation and building projects with low-maintenance design features are also critical ways of delivering sustainable results.

Capacity building. ADB is scaling up capacity building in the areas of transport planning, implementation, operation, and maintenance. Support for planning and implementation targets greater efficiency during the project life cycle, while assistance in the areas of operation and maintenance focuses on how infrastructure is managed after construction activities are complete. ADB's assistance in the transport sector seeks to build the capacity of domestic institutions to managing transport infrastructure, and to establish local ownership—from the community to government levels—to deliver more sustainable results. Activities include training and engaging local government and private sector entities in maintaining roads, ports, and airports; and even training local communities and individuals to preserve critical transport links.

Programmatic lending. Lending modalities such as the multitranche financing facility and policy-based loans enable ADB to engage more deeply with domestic stakeholders, and in turn, support robust knowledge and skill transfer. Programmatic lending modalities typically provide larger resource envelopes than individual projects but sequence them over longer periods of time. This supports closer partnerships between ADB and counterpart governments, from the planning to post-completion stages of infrastructure development. Policy-based loans, in particular, enable ADB to link loan disbursal to specific milestones, such as the approval of policies, roadmaps, or capacity-building activities in specific organizations.

Asset management. Where possible, ADB promotes long-term asset management in its actual project designs. This means that ADB supports the establishment of road asset management systems to ensure that the operation and maintenance of the constructed or upgraded infrastructure will be planned at the onset and adequate financing for the maintenance will be reserved. This approach, together with establishing performance-based maintenance contracts, directly address the risk that local stakeholders run out of financial resources needed to maintain the infrastructure over its projected economic lifetime. Engaging or training maintenance contractors in advance simultaneously helps address risks of limited technical capacity.

Low-maintenance design features. In remote areas, like outer islands, maintenance is expensive, due to lack of qualified service providers and other resources and long distances. In these cases, ADB works closely with local representatives to understand what is and is not possible in terms of maintenance, and designs infrastructure to respond to local contexts. ADB also promotes communitybased maintenance wherever feasible. Examples include building wharves and jetties to require minimal hands on support, or assigning community representatives the responsibility of reporting degradation to relevant authorities.

Multitranche financing facility (i) is a flexible financing instrument that enables ADB to provide assistance programmatically; (ii) facilitates long-term partnerships and constructive dialogue on physical investments as well as nonphysical (thematic and sector) interventions; and (iii) provides critical mass, predictability, and continuity.

The impact of the investment program will be export-driven economic growth and rural development in the Highlands region. The improved road network will reduce transport costs and accidents, increase connectivity between rural and urban areas, streamline access to major ports and airports, and support more equitable development. A proposed second phase to the recently closed Highlands Region Road Improvement Investment Program will be proposed to ADB's Board of Directors for consideration in 2023. The first tranche of the ensuing investment program is expected to deliver approximately \$355 million to upgrade an additional 205 km of the road network and expand on capacity-building efforts to ensure long-term sustainable maintenance of the road network.

Sustainable Highlands Highway Investment Program

Status: Active

The Highlands region accounts for 80% of all national exports, but its main link to PNG's largest commercial port is degrading rapidly. The 1,200 km-long, two-lane national Highlands Highway is the central lifeline for linking people, goods, and services across the Highlands region. It connects to the HCRN, ties together 1,800 km of regional and feeder roads, provides access to international airports, and crucially connects the Highlands to PNG's main commercial port—Lae Port. In 2017, the most recent assessment, more than 70% of the highway was in either in fair or in poor condition, and 90% of the road length posed safety hazards to users and pedestrians.7

The Sustainable Highlands Highway Investment Program (SHHIP) is a 10-year investment program that is designed to be implemented under three separate tranches with a project ceiling of \$1.0 billion. The SHHIP investment program will dramatically improve physical assets and safety features of the highway and increase its economic life span through improved drainage, bridge replacement, road realignment, and stabilization works in several critical sections along the corridor.

To finance SHHIP, the Government of PNG negotiated a multitranche financing facility (MFF) with ADB. The ADB Board approved Tranche 1 on 10 July 2017 and the loans were declared effective as of 8 September 2017. The second tranche was approved in 2021, and the third tranche is slated for board consideration in 2023.

SHHIP Tranche 1 will repair, rehabilitate, and maintain a total road length of 430 km of the existing double-lane highway to a good trafficable condition from Nadzab Airport Turnoff in Morobe to Kagamuga Turnoff in Western Highlands Province. The overall project cost for Tranche 1 is \$357.50 million comprising (i) ADB financing of \$272.0 million (ordinary capital resources), \$30.0 million; (ii) Government of Australia grant financing of \$11.5 million; and (iv) Government of PNG counterpart financing of \$44.0 million. SHHIP Tranche 2 will upgrade 71 bridges along the Highlands Highway and provide institutional support to the implementing agency, the Department of Works, in asset management.

Tranche 1

Status: Active

ADB financing: \$302.00 million Cofinancing: \$11.50 million Total financing: \$313.50 million



Repair, rehabilitate, and maintain a total road length of 430 km of the existing double-lane highway to a good trafficable condition



Providing capacity building to the Department of Works

Road conditions are rated on a scale of 1-5: (1) very good, (2) good, (3) fair, (4) poor, and (5) very poor. Roads that are rated in conditions 1-3 are considered maintainable, while conditions 4-5 require upgrades prior to being maintainable.

Tranche 2

Status: Active

ADB financing: \$325.00 million Cofinancing: \$50.00 million Total financing: \$375.00 million



Upgrading 71 bridges along the Highlands Highway



Providing capacity building to the Department of Works

Tranche 3

Status: Proposed

ADB financing: \$147.00 million Cofinancing: \$60.00 million Total financing: \$207.00 million



Construction of a new bypass road around Goroka to accommodate heavy traffic; and rehabilitation of roads around Goroka, including the construction of truck climbing lanes along steep gradients.



Construction of two logistics platforms and weighbridge stations in Goroka and Jiwaka provinces for the transport of fresh produce to domestic and regional markets, and to limit truck overloading.

Maritime Transport and Climate Resilience

Building Resilience to Climate Change in Papua New Guinea

Status: Active

ADB financing: \$5.00 million

Cofinancing (Government of Australia): \$2.98 million Cofinancing (Strategic Climate Fund): \$29.25 million

Total Cofinancing: \$35.85 million8

PNG's population and economy are highly exposed to the effects of climate change. At the same time, lack of technical, physical, and financial capacity to plan for and cope with severe weather events exacerbates corresponding risks. Vulnerability to climatic events is uniquely pronounced for PNG's 800,000 coastal villagers, due to their reliance on small ports for the timely delivery of perishable food.

The Building Resilience to Climate Change Project9 is strengthening the capacity of communities, government agencies, and civil society to plan for and respond to the effects of climate change. The project is (i) increasing access to adaptation financing; (ii) fostering a better understanding of climate change vulnerability and adaptation options; (iii) increasing adaptive capacity at the sectorial, national, district, and community levels; and (iv) enabling further investments in climate-resilient maritime infrastructure for coastal villages. The project is:

- developing and investing in adaptation plans based on climate change and vulnerability assessments for 21 islands and
- financing a climate-proof wharf in Alotau—the provincial capital of Milne Bay—which will benefit approximately 170,000 people, or 36,000 households.

Includes \$8.62 million in additional financing from ADB (\$5.00 million), Government of Australia (\$2.98 million), and Government of Papua New Guinea (\$0.64 million).

Formerly Alotau Port Climate Proofing Project.

The safe and efficient management of PNG's maritime transport network directly affects the access of coastal communities to economic opportunities and essential goods and services. The government has made significant progress to strengthen maritime safety by establishing the National Maritime Safety Authority, which, in turn, has improved the maintenance of existing safety equipment, such as navigational aids and lighthouses.

Maritime and Waterways Safety Project

Status: Active

Total financing (ADB): \$38.00 million

The Maritime and Waterways Safety Project is building on the success of the National Maritime Safety Authority and is producing mutual benefits for rural and remote communities, the wider national population, and regional stakeholders engaged in maritime trade. The project is:

- replacing 99 existing navigational aids, installing 33 new units;
- developing navigational charts and extending the automatic identification network to enhance the safety information infrastructure;
- engaging rural communities to maintain navigational aids; and
- providing training on maritime safety for communities of varying sizes.

Coastal shipping, which is critical to 65% of PNG's poor population, will be safer and more efficient, and passenger capacity will increase. Domestic benefits include greater access to goods, services, and economic opportunity, while the region will benefit from safer, more efficient trade.



Air Transport and Aviation Safety and Security

PNG's aviation industry provides essential support for tourism, business, trade, and social cohesion. However, deteriorating infrastructure and constrained institutional capacity threaten the certification of many of PNG's airports. The Civil Aviation Authority's development plan provides a framework for addressing existing gaps, but the agency requires technical and financial support to implement it successfully.

Civil Aviation Development Investment Program

ADB launched the Civil Aviation Development Investment Program in December 2009 to address critical constraints. It comprises four tranches, with a total funding allocation of approximately \$480.00 million. The investment program is overseeing upgrades to 19 priority national airports, supporting institutional reform, and building capacity to ensure the long-term maintenance of all infrastructure. Project activities funded under tranche 1, tranche 2, and tranche 3 are outlined below.

Tranche 1

Status: Completed in July 2016 ADB financing: \$89.70 million

Activities completed under tranche 1 helped ensure compliance with the International Civil Aviation Organization's safety and security standards for five priority airports, identified in the Civil Aviation Authority's strategic plan. Tranche 1 included (i) institutional reforms to improve air traffic services and regulatory oversight; (ii) physical works; and (iii) modernization of communication, navigation, surveillance, and fire safety equipment.



Improved safety and travel for 1.5 million people





Improved runways or terminals at five airports



Procured fire trucks as well as communication, navigation, and surveillance equipment

Tranche 2

Status: Closed

Total financing (ADB): \$128.63 million

Tranche 2 includes (i) institutional strengthening to increase the sustainability of the reformed institutions, including the National Airports Corporation, Air Services Limited, and Civil Aviation Safety Authority; (ii) physical works; and (iii) procurement of equipment for communication, navigation, surveillance, and fire safety.



Improved safety and travel



Installed security fences at six airports



Improved runways and taxiways at five airports



Procured **nine fire trucks**; as well as communication, navigation, and surveillance equipment

Tranche 3

Status: Active

Total financing (ADB): \$248.00 million

Tranche 3 includes (i) institutional strengthening to increase the sustainability of the National Airports Corporation, Air Services Limited, and Civil Aviation Safety Authority; (ii) physical works; and (iii) procurement of equipment for communication, navigation, surveillance, and fire safety.



Improving safety and travel



Upgrading runways at nine airports



Constructing terminal buildings at eight domestic airports



Securing safety certification for nine national airports

Upon completion, the Civil Aviation Development Investment Program will have built or upgraded a total of 13 airport terminals and landside facilities; improved runways, taxiways, and airside facilities at 15 airports; and helped secure certification from the International Civil Aviation Organization for the Jacksons International Airport. In line with national priorities and the successful implementation of the investment program, the government has requested further investments in aviation infrastructure and corresponding support to build institutional capacity.

Civil Aviation Sector Investment Program and Associated Technical Assistance for Preparing the Program

Status: Proposed

ADB financing: \$158.00 million

ADB financing for preparatory TA: \$1.50 million Government counterpart financing: \$17.00 million

Total financing: \$176.5 million

The National Airports Corporation is working to improve connectivity between domestic airfields and PNG's international airports to support economic growth in the tourism and agriculture sectors, and to improve connectivity to PNG's remote communities.

The Civil Aviation Sector Investment Program will establish a sustainable civil aviation network to support economic growth and reduce poverty in rural areas by realizing safer, more efficient, and more accessible all-weather air transport services. The program will achieve this by helping (i) improve the condition and sustainability of rural airstrips; (ii) upgrade infrastructure, and finance operational and safety equipment for key airports; and (iii) build institutional capacity and support policy interventions to support cost recovery, equitable service delivery, and improved sector efficiency.

In November 2018, ADB approved the corresponding TA for preparing the next phase of the Civil Aviation Investment Program. This will build on an ongoing investment program to help develop an aviation roadmap for PNG, which will structure further financing in the sector and oversee activities beyond completion of the Civil Aviation Sector Development Investment Program.

"This new airport is a milestone achievement by the national government and the Asian Development Bank. It's a big development that comes with great challenges and responsibility for us. We are proud of our new airport."

> Pup Kuriti Kagamuga Community leader and landowner from Kagamuga





Samoa is a geographically compact country in the South Pacific, with a total landmass of 2,934 km² spread across two main islands (Savaii and Upolu) and several smaller ones. Approximately 70% of its population (188,000 residents) live in rural areas, and the majority of the workforce is engaged in subsistence activities.

Samoa's economy is dependent on its fisheries sector and agricultural products for exports, and on importing most of its fuel and commodities. Large distances from major international markets create high import costs and limit trade. However, its relative proximity to neighboring islands—including American Samoa, the Cook Islands, Niue, Tonga, Tokelau, and Tuvalu—creates the potential to expand Samoa's current role as a regional transshipment hub.

Maritime transport is the economic lifeline for the country. To meet the growing needs of its economy, Samoa will need to increase the capacity of its existing port, and implement measures to enhance safety and build resilience to climate change.

The national road network totals 1,255.7 kilometers (km)—816.5 km on Upolu and 439.2 km on Savaii. Samoa's communities rely heavily on coastal roads and cross island roads for their transportation needs. Most roads are along the coast, where 70% of people live and where most public facilities, economic infrastructure, and jobs are. The same coastal regions and their roads are vulnerable to flooding, wave action, storm surge, and rising sea levels. Elsewhere, landslides are common. Samoa needs to continue rehabilitating and upgrading existing roads and improve the asset management arrangements to ensure an efficient and safe road network.

Enhancing Safety, Security, and Sustainability of Apia Port Project

Status: Active

Total financing (ADB): \$65.26 million¹⁰

The main wharf in Apia was constructed in 1966 and has since benefited from upgrades and expansions. However, as demand grows, Apia Port is increasingly overcrowded and vulnerable to sea swell. This impacts the safety of vessel operations during the wet season and currently results in losses of up to 20 ship berth days a year. Further investments are needed to increase the port's safety and capacity.

¹⁰ Includes \$3 million as a project design advance to help prepare the project.

Apia Port was initially constructed in 1966 under a grant from New Zealand. The Japan International Cooperation Agency (JICA) subsequently rehabilitated the port—following cyclone damages in 1992—and built a new wharf in 1999. In 2015, JICA approved a grant to extend the wharf, rehabilitate the container yard, improve navigational safety, upgrade passenger facilities, and rehabilitate tugboats to meet international operating standards.

APIA PORT

Demand Estimates per Annum

2015

(port demand per annum)

25,000 TEU

54 shipping vessels

15 cruise liners



2035

(anticipated port demand per annum)

35,000 TEU

100 shipping vessels

20 cruise liners

TEU = twenty-foot equivalent unit.
Source: Asian Development Bank Pacific Department.

The Enhancing Safety, Security, and Sustainability of Apia Port Project is (i) extending the existing breakwater to protect against swell during the rainy season, (ii) enlarging the turning basin to accommodate more vessels, and (iii) reconfiguring the port precinct and container terminal to improve efficiency. The project will complement ongoing port development works funded by the Japan International Cooperation Agency (JICA). Overall, improvements to the port will increase resilience to climate variability and enable Samoa to expand its role as a regional transshipment hub—thereby increasing safety and driving economic development.

Central Cross Island Road Upgrading Project

Status: Active

Total financing (ADB, including project preparatory TA): \$40.80 million

In addition to supporting maritime connectivity, ADB is assisting the government to increase land transport mobility and safety conditions for eight villages along the Central Cross Island Road, which connects the north and south of Samoa's capital Island, Upolu. Semi-urban areas along the road host pedestrian traffic, for school and college students, and safety conditions along the road are poor. At the same time, the road is an alternative evacuation route in the event of cyclones, and a critical pathway for post-disaster relief.

The road was significantly damaged during Cyclone Evan in 2021, and although the government has since restored some of the heaviest-hit sections, there remain portions of the road that are in degraded condition, causing safety concerns for vehicles and pedestrians alike.

Project works will upgrade about 20 km of road, ensure long-term maintenance, and integrate gender-sensitive considerations into the road transport subsector in Samoa. The project will rehabilitate and climate-proof the road, and will (i) improve access to public services; (ii) increase tertiary education rates; (iii) provide faster and safer access to medical services; and (iv) support economic growth, particularly in the tourism sector. Road improvements will also contribute to disaster preparedness, as the road provides an alternate route for evacuation and post-disaster relief between the northern and southern coasts.

Box 3: Driving Economic Growth with Regional Connectivity

Many of the Pacific developing member countries (DMCs) of the Asian Development Bank (ADB) have limited domestic resources, and rely on importing basic goods and services to meet the needs of growing populations. Conversely, the larger Pacific economies like Papua New Guinea and Solomon Islands—rely on exporting natural resources, including minerals, timber, and fish, to drive economic growth. In both cases, the efficient operation of commercial ports is critical to reducing the costs of trade. Further, as tourism rebounds in the wake of the coronavirus disease, multimodal transport will become increasingly important for supporting growth in tourism sectors across the region. At the community level, multimodal transport within the Pacific DMCs is essential for connecting individuals with economic opportunities and essential goods and services.

ADB is supporting its Pacific DMCs to drive economic growth at the national and regional levels by upgrading transport and trade infrastructure, updating facility management practices to enhance operational and financial efficiency, and by helping select DMCs to build their roles as transshipment hubs. At the subnational level, ADB is building critical transport links that connect outer island communities and remote populations to the opportunities and resources they need to thrive. Port, road, and aviation projects are driving economic growth for communities and national economies alike by removing barriers to trade and boosting export competitiveness.

For example, ADB's port projects in Nauru, Samoa, Solomon Islands, and Tonga will increase port capacity and strengthen management practices to optimize port efficiency. These interventions will reduce the costs of importing goods and help establish deeper regional trade. Road and highway projects in Papua New Guinea and Solomon Islands will increase connectivity between resource extraction sites and existing commercial ports—increasing export efficiency to drive economic growth. Reducing export barriers through improved domestic road links and outward connections through maritime infrastructure will significantly increase trade competitiveness. ADB is complementing physical works with capacity building for infrastructure operators to optimize port, road, and airport management—all in support of deeper efficiency, reduced transport costs, and increased regional trade.

Box 4: Enhancing Resilience to Disasters and Climate Change Impacts

The Pacific developing member countries (DMCs) of the Asian Development Bank (ADB) are among the most exposed, globally, to disasters and the effects of climate change. Low elevations expose many of the Pacific DMCs to heightened risk of storm surges and sea level rise, while their placement along the Cyclone Belt and the Pacific Ring of Fire increase exposure to volcanic eruptions, earthquakes, and cyclones.

At the same time, the Pacific DMCs have severely constrained technical and financial resources with which to prepare for and respond to disasters. ADB classifies all the Pacific DMCs as small island developing states, and seven of them as fragile and conflict-affected situations. Recognizing the unique challenges of fragility and heightened exposure to hazards, ADB has developed a Fragile and Conflict-affected Situations and Small Island Developing States Approach paper and a new climate strategy for the region. These strategies underpin long-term sector development, from planning to maintenance.

Expanding the Scope of Resilience Assistance

Historically, ADB's transport operations in the Pacific have featured climate-resilient design components, support for accessing adaptation financing (including from the Green Climate Fund and similar international resources), and disaster-contingent financing to rebuild assets after disaster events. However, the growing frequency and magnitude of climate events calls for a paradigm shift in how development assistance addresses these hazards in the region.

ADB's new climate strategy for the Pacific shifts assistance further upstream than the conventional project-based approach. ADB is increasingly working with regional entities and national and subnational governments in the Pacific DMCs to collect and analyze climate data, assess risks associated with changing weather patterns and sea level rise, and plan urban and rural interventions accordingly. ADB will also continue supporting adaptation and risk-reduction measures needed to increase the resilience of infrastructure to both disaster events and long-term climate change.

Physical investments in roads, ports, and airports integrate resilient design features into all new projects. This includes enough large drainage systems to accommodate increasing rainfall, careful selection of location of maritime structures, and higher and stronger road embankments and breakwaters, as examples. Realignment of roads to higher grounds and coastal protection may be necessary to avoid flooding. ADB is also supporting DMCs in selecting appropriate construction materials that take the climate requirements into consideration. As ADB continues to deepen its partnerships with Pacific DMC governments in transport sector planning, it will increasingly deliver capacity building related to adaptation and resilience—supporting domestic stakeholders to understand, evaluate, plan for, and respond to natural hazards.

Land Transport Sector Development Project

Status: Active

Total financing (ADB): \$5.00 million

The government has recognized the vulnerability to climate change of existing road and bridge sections in Savai'i and Upolu. This vulnerability is exemplified by frequent obstruction to drainage channels, and partial to sometimes full closure of the road. The government has upgraded coastal roads in Savai'i and inland roads and bridges in Upolu to make land transport more sustainable and resilient to climate hazards.

The proposed project readiness financing (PRF) facility will support the government in project preparatory activities and help manage technical and implementation issues, upfront, to achieve high readiness of the ensuing projects. The PRF will finance the engagement of consultants to (i) conduct a feasibility study to identify the investment scope for the ensuing projects; (ii) prepare detailed designs for civil works; and (iii) carry out due diligence that covers the technical, economic, financial, gender aspects, environmental and social safeguards, coronavirus disease impacts, and climate change and disaster risk resilience. The PRF will also build capacity of the executing and implementing agencies to implement the PRF and enable the timely start-up of ensuing projects.





Solomon Islands is a relatively large Pacific island country with a land area of about 28,000 km² (distributed across more than 900 islands), and one of the largest maritime exclusive economic zones in the world, at 1.59 million km². The country has a narrow economy, centered on forestry and mining, and needs new drivers of growth to enter an equitable and financially sustainable development path. ADB recognizes Solomon Islands as a fragile and conflict-affected situations nation, owing to civil tensions from 1998 to 2003 and its extreme susceptibility to natural hazards that will be exacerbated by climate change. Despite its fragility, Solomon Islands enjoyed 3% economic growth from 2015 to 2019, and growth is forecasted to recover from the pandemic moving into 2022.

Some of its best prospects for growth include commercializing agriculture, and expanding its fishery and tourism industries. The successful development of these sectors will depend largely on the ability to increase the connectivity of people and goods across its 300 inhabited islands.

Solomon Islands' extensive multimodal transport network comprises 1,523 km of road (about 170 km sealed and 1,330 km unsealed), 91 wharves, and 22 airfields. Despite its extensive transport network, critical assets are falling into disrepair and need upgrades to improve efficiency, safety, and accessibility, particularly by rural populations.

Solomon Islands is working with ADB to improve intermodal transport links, and to ensure that domestic stakeholders have the capacity to manage and maintain key assets in the future. ADB has been a central player in supporting the country to implement its National Transport Plan, and is scaling up lending in the transport sector to support inclusive economic growth. Strengthening the existing transport network will enable Solomon Islands to leverage its considerable wealth of natural and human capital to drive socioeconomic growth.

Domestic Maritime Support Sector Project

Status: Completed

Total financing (ADB): \$15.60 million

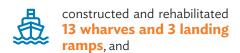
Interisland maritime transport is essential for connecting communities, goods, and social services across Solomon Islands. The provision of frequent, reliable, and safe domestic shipping services is of particular importance to rural communities, as their distance from larger domestic markets can limit access to modern goods and services.

"Just recently, we transported 40 blind people from Avu Port to Honiara so they could utilize services at the National Referral Hospital. Many of them had cataract removal surgery to improve their vision. Two weeks later, the same 40 people, their sight restored, boarded the vessel back to Avu Avu. The franchise shipping scheme made that possible."

Peter Boyers

Co-director of Concrete Industries, Solomon Island—a shipping company that serves the Guadalcanal Weather Coast.

The project has:





Sustainable Transport Infrastructure Improvement Program and Attached Technical Assistance for Strengthening the Capacity of the Ministry of Infrastructure Development

Status: Active

ADB financing: \$21.04 million

Cofinancing (Government of Australia): \$57.70 million Cofinancing for the associated TA for Strengthening

the Capacity of the Ministry of Infrastructure Development: \$4.50 million

Total financing: \$83.20 million

Solomon Island's extensive road network gives 77% of its rural population access to an all-weather road within a 2 km radius of home. However only 67% of the road network and 51% of the country's wharves are in maintainable condition, and overall safety conditions across are poor. Improving land and maritime transport assets is essential to supporting inclusive economic growth across the country. At the same time strengthening domestic maintenance capacity is critical to ensuring assets are maintained in the future.

ADB approved the Sustainable Transport Infrastructure Improvement Program in May 2016 as a results-based lending (RBL) modality. RBL is a performance-based form of financing, where disbursements are linked to the achievement of results, as opposed to upfront expenditures. The RBL modality was selected for this program because of its ability to (i) align infrastructure and capacity targets with donor support to meet longer-term development goals; (ii) incentivize greater accountability to meet development goals and lower transaction costs, which can lead to more efficient public spending; and (iii) rely on country systems to deliver a well-defined and monitored program to support the sustainability of results beyond program completion. The program and the associated TA for Strengthening the Capacity of the Ministry of Infrastructure Development are building

domestic capacity to plan, build, and maintain key transport assets. Crucially, they are pooling government and development partner resources to deliver comprehensive support for developing the transport sector. The RBL is increasing access to socioeconomic opportunities to drive inclusive growth.

The program will improve as much as 40% of all maritime networks and 50% of the road network. It is producing the immediate outcome of a safer, more efficient transport sector by rehabilitating degraded infrastructure. It will help ensure long-term results by building domestic capacity to develop, monitor, and maintain assets. Outputs include:





Upgrading 30 km of road from unsealed to sealed roads



Reconstructing four wharves for improved safety and genderresponsive access





Increasing the proportion of roads under regular maintenance from 41% to 85%



Building six genderresponsive facilities in appropriate locations





Increasing the proportion of wharves under regular maintenance from 9% to 100%



Annually updating transport action plans—based on sustainability criteria such as inclusiveness, economic effectiveness, and accessibility to basic services—and improving fiduciary controls and safeguard systems







Rehabilitating transport infrastructure for all users, with safety, genderresponsiveness, and climateand disaster-resilient features



Building the capacity of the Ministry of Infrastructure Development to implement projects and maintain assets effectively, with reduced levels of technical assistance



Supporting the government to increase its annual contributions to the National Transport Fund by 60%



"Before the Mbalasuna and Mberanda bridges were upgraded, the staff and 230 students in the school really suffered during floods. Roads were impassable, children couldn't come to school and, during times of medical emergency, we had to carry sick or injured students to the nearest clinic for several hours on foot. The improved roads and bridges in the area have transformed lives for the better at Ruavatu Secondary School."

> Daniel Manengelea Headmaster at Ruavatu Secondary School East Guadalcanal

Transport Sector Project Development Facility

Status: Active

Total financing (ADB): \$6.00 million

Lessons from completed and ongoing ADB-funded projects in Solomon Islands show that significant delays occur at the project start-up stage, shortly before and after project approval. As ADB continues to work with Solomon Islands on priority projects under its National Transport Plan, building domestic capacity to design and implement projects can improve the efficiency and efficacy of investments, while helping reduce similar barriers in the future.

The Transport Sector Development Facility is supporting domestic stakeholders in pre-design activities (including the preparation of safeguards and due diligence assessments) as well as in procurement and contracting. The facility will enable Solomon Islands to implement its ambitious pipeline of transport works, increase efficiency in processing corresponding loans, and support deeper coordination of investments between the government and its development partners.

Solomon Islands Land and Maritime Connectivity Project

Status: Active

Total financing (ADB): \$148.88 million

In 2016, Solomon Islands launched its National Development Strategy, 2016–2035. The strategy lays a framework for supporting inclusive socioeconomic growth and diversifying the economy through regional trade. The strategy also commits to providing 40% of rural populations with access to essential services as a direct result of infrastructure investments. Improving the national road networks is essential to providing populations with access to essential services; while upgrading maritime assets is critical to supporting growth, protecting the economy from natural hazards, and increasing broader resilience to climate change.

In May 2021, ADB's Board of Directors approved the Solomon Islands Land and Maritime Connectivity Project. The MFF will deliver more than \$170 million (about 11% of national GDP) to strengthen critical road stretches and upgrade maritime infrastructure that are threatened by seismic events, changing weather patterns, and rising sea level associated with climate change.

The first tranche of the MFF will upgrade 35 km or roadway on the east-west corridor of Guadalcanal, which houses 90% of all vehicles in the country. Upgrades along the roadway will increase the climate resilience of infrastructure, introduce safety furniture, and integrate gender-responsive measures such as footpaths, lighting, concrete steps, and washing slabs.

Civil works on maritime infrastructure will significantly increase safety and climate resilience of people and goods. The project will finance upgrades to two national priority provincial wharves at Ahanga in Rennell and Bellona Province; and Kira Kira, the capital of Makira-Ulawa Province. These locations are currently threatened by rising sea levels and severe waves. The project will construct new and reinforced wharves that allow boat-to-shore transfers, jetties for smaller boats, and shelter areas for passengers.

The project will also finance the reconstruction and improvement of an existing wharf in Honiara International Port to make it more resilient to earthquakes. Works on the wharf at Honiara will protect it against seismic shocks which threaten to disrupt economic activity. An extension of the wharf and dredging works will allow it to receive more vessels, reduce ship waiting times, and increase annual freight throughput. Ultimately, the project will contribute to reducing the cost of international trade, increasing the population's access to essential goods and services, and reducing vulnerability to climate change and natural hazards.

Government of Solomon Islands. 2016. National Development Strategy, 2016-2035. Honiara.



Tonga comprises five island groups—'Eua, Ha'apai, Niuas, Tongatapu, and Vava'u—spread across 171 islands in the western South Pacific. Approximately 70% of the population (100,000 people in total) live on the main island of Tongatapu, which houses the national capital, Nuku'alofa. The rest of the population is distributed across 36 surrounding islands. Maritime transport plays a critical role in connecting communities on the outer islands to goods and services on Tongatapu, as well as driving economic growth through tourism and trade.

Transport infrastructure in Tonga is relatively well-developed compared with other Pacific DMCs. Tongatapu enjoys a high density of roads (though many are unpaved) and, unlike most of the South Pacific nations, maritime infrastructure in Nuku'alofa has a range of docking facilities. Despite the prevalence of assets, however, Tonga's land and maritime transport assets need upgrades to increase resilience to disasters and the effects of climate change.

Tonga's development goals include safer, more reliable, and more affordable transport. ADB is supporting Tonga to prepare and implement two corresponding projects that will improve land and maritime infrastructure to cope with increased traffic demand and the impacts of climate change and natural hazards. ADB's support for transport infrastructure planning in Tonga factors in risks of flooding and other climatic hazards, alongside the need for evacuation routes from low-lying coastal areas to higher elevations.

Transport Project Development Facility

Status: Active

Total financing (ADB): \$5.00 million

The Transport Project Development Facility is providing project preparatory support to the Government of Tonga to streamline the implementation of the Nuku'alofa Port Upgrading Project and the Fanga'uta Lagoon Bridge Project.

The facility is helping to increase the project readiness of the projects by preparing detailed engineering designs, updating safeguards due diligence, and completing advanced procurement activities. It also explores opportunities to establish gender-inclusive human resource policies, help establish a project management unit, and build the capacity of domestic stakeholders to implement the maritime and land transport projects.

Nuku'alofa Port Upgrade Project

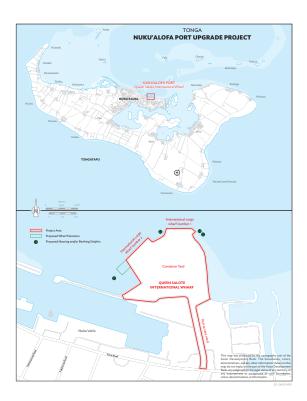
Status: Active

Total financing (ADB): \$45.00 million

Tonga's main port—the Nuku'alofa Port—was built in 1967 and has a domestic island ferry terminal, a cruise liner terminal, and two international container vessel wharves—or the Queen Salote International Wharf (QSIW). A structural assessment undertaken in 2019 found that wharf number 1 at QSIW was in an advanced state of deterioration, requiring immediate upgrades. Operations were suspended in April 2019 and wharf 1 continues to be out of service.

Tonga is heavily reliant on imports, and as such, the efficient functioning of its commercial wharves has critical implications on the price of goods and broader economic development. However, even when both wharves were fully functioning, size constraints restricted the ability of cargo vessels to transport goods to and from shore. At the same time, overall port operations do not make full use of technology to optimize efficiency, and there are considerable safety hazards linked to operational practices. Crucially, the port is highly exposed to natural hazards, weather variability, and the effects of climate change.

The Nuku'alofa Port Upgrading Project will rehabilitate all degraded infrastructure at the cargo wharves to bring wharf 1 back into commercial operation and extend the overall lifespan of QSIW. The project will also extend wharf number 2 by 50 meters to allow international cargo ships to dock at both wharves, and add mooring equipment to enhance safety. These interventions will allow the deployment of larger vessels, which will reduce shipping costs and ultimately the cost of importing and exporting goods. The project will deliver robust capacity building to enhance gender equality, business practices, and asset management. Overall, the project will improve port capacity and operations to cope with demand for the coming 20 years; and crucially, increase safety and resilience to the effects of natural hazards.



Under ADB technical assistance, ADB is supporting Tonga in the preparation of a Master Plan for the Development of the Maritime Transport Sector in Tonga. The master plan covers the following: (i) an assessment of the sector, covering the existing infrastructure, operating scheme, and institutional and legal framework; (ii) development of a vision and strategy for the future development of the sector; (iii) preparation of a roadmap to guide future investments; and (iv) identification of policy improvements to the existing institutional and legal framework.

Fanga'uta Lagoon Bridge Project

Status: Proposed

Total financing (ADB): \$30.00 million

Nuku'alofa is located on a low-lying area of Tongatapu, which is particularly vulnerable to severe weather events such as tsunamis. At the same time, the main road network on Nuku'alofa is experiencing increased traffic demand and has limited evacuation routes. It requires improvements to cope with congestion and to build resilience to natural hazards.

The proposed Fanga'uta Lagoon Bridge Project will build a bridge connecting Nuku'alofa to southern Tongatapu, across Fanga'uta lagoon. The bridge will span the shortest crossing over the lagoon (about 720 meters), and will provide (i) shorter journeys to the capital for people living in central and eastern parts of Tongatapu, (ii) a higher-capacity evacuation route out of Nuku'alofa that can be used to reach higher ground in the event of a tsunami, and (iii) an arterial road for future urban development areas that are higher above sea level and less vulnerable to disasters.



Tuvalu is one of ADB's smallest Pacific DMCs and consists of 26 km² of land spread across nine atolls and 680 km² of ocean in the Southwest Pacific. Approximately 60% of Tuvalu's 12,000 inhabitants live in the capital, Funafuti, with the remainder distributed across its outer islands. International flights depart to and from Funafuti twice a week, and a commercial cargo ship arrives in the capital once every 3 weeks. Domestic transport relies entirely on two government-owned ships that travel between Funafuti, the outer islands, and Fiji, to provide essential goods and services, including food, fuel, and medical care.

Currently, none of Tuvalu's outer islands have docking facilities large enough to accommodate government shipping vessels. As such, goods and passengers must be transferred to and from shore by small workboats. Only three of the outer islands—Vaitupu, Nanumea, and Nukufetau—have docking facilities for even these smaller crafts, and they are in need of repair. Transfers between government ships and the outer islands are inefficient, unsafe, and often cannot take place during rough waters, low tide, or at night.

Tuvalu's National Strategy for Sustainable Development, 2016–2025 calls for safer and more efficient maritime transport to (i) enhance economic development, especially local fisheries; (ii) improve livelihoods and safety conditions in the outer islands; and (iii) reduce migration from the outer islands to Funafuti, which is experiencing overcrowding and associated urban challenges. Improving maritime transport in Tuvalu can support more equitable service delivery, increase access to economic opportunity, and foster greater resilience to the effects of climate change.

Outer Island Maritime Infrastructure Project

Status: Active

Total financing (ADB): \$47.22 million¹³

The Outer Island Maritime Infrastructure Project is helping Tuvalu overcome connectivity constraints by improving maritime facilities on three outer islands, and by building government capacity to plan, implement, and maintain transport infrastructure.

¹³ Includes \$35.42 million in additional financing from ADB.

The project is increasing access to the outer islands by (i) constructing a new harbor on Nukulaelae and rehabilitating boat ramps on Nanumaga and Niutao; (ii) building capacity to operate and maintain assets; and (iii) developing a transport sector master plan for further sequenced investments, with a view toward promoting economic activity through fisheries and tourism.

Overall, the project will deliver the impact of safe and efficient domestic maritime transportation that increases the climate resilience of community infrastructure. The new docking facilities will support inclusive economic development for outer island communities by promoting growth in the fisheries and tourism sectors.

Strengthening Domestic Shipping Project

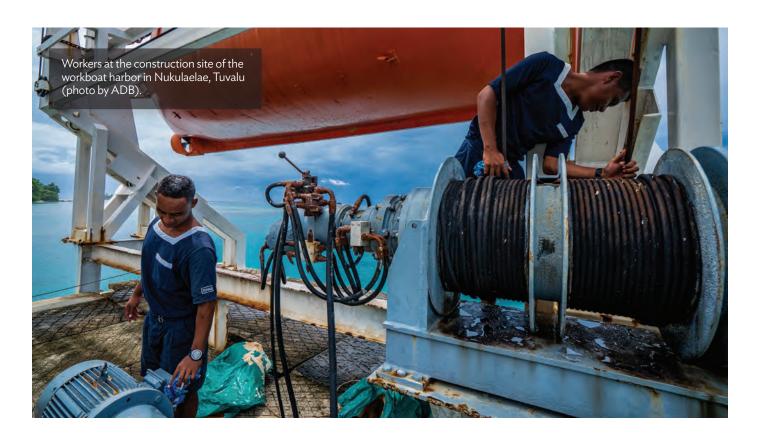
Status: Proposed

Total financing (ADB): \$35.00 million

Maritime transport is the only means for communities across Tuvalu to stay connected and access essential services. The nearest outer island to Funafuti is 64 nautical miles away, and the furthest is 247 nautical miles from the capital. These distances can take several days to transverse and require well-equipped vessels and capable crew to operate safely in the open ocean conditions that prevail at these latitudes. Safe and reliable shipping services are an essential lifeline for Tuvalu.

Complementing ADB's support to Tuvalu in the maritime infrastructure sector by constructing harbors on its outer islands, the project will improve the maritime services and shipping by replacing the current state-owned cargo and passenger ship, *Manu Folau*, with a new vessel, certified to international standards. The project will greatly improve safety conditions for passengers moving to and from the capital.

The Strengthening Domestic Shipping Project will fund a modern ship to serve Tuvalu's outer island communities, and will replace the fenders of the international port of Funafuti. The project will also deliver capacity building in support of high-caliber operation and maintenance capacity among government shipping operators. The project will improve access to social services, support small businesses in accessing markets and opportunities, strengthen social networks and familial ties, and foster a more sustainable transport system for the country.





Vanuatu is a western Pacific archipelago with a total landmass of 12,274 km² spread across 84 volcanic islands. Approximately 75% of its 285,000 residents live in highly dispersed rural areas, where the provision of goods and services is limited. Increasing access to safe, efficient, and reliable transport is essential for driving socioeconomic development, and for ensuring that benefits are distributed across the population. Existing transport infrastructure includes a 2,300 km road network, 26 domestic airfields and 3 international airports, 10 public ports and jetties on the outer islands, and 2 international ports.

Despite existing assets, transport services are limited, and the condition of transport infrastructure is deteriorating. This is largely due to unpredictable financial allocations and limited government capacity to support routine maintenance. Vanuatu's placement on the Pacific Ring of Fire exposes it to heightened risk of disasters and emphasizes the need to factor climate-resilient design into all transport sector development.

ADB is working with the Government of Vanuatu to improve and maintain transport assets, enhance service delivery, and increase transport safety. Collaboration is supporting increased resilience planning and disaster response, in both urban and remote areas.

Cyclone Pam Road Reconstruction Project

Status: Completed

ADB financing: \$20.85 million

Cofinancing (Global Environmental Facility): \$2.68 million

Total financing: \$25.53 million

In 2015, the Category 5 Tropical Cyclone Pam struck Vanuatu with wind speeds estimated at 250 km per hour and gusts peaking at 320 km per hour. The storm caused severe flooding and widespread damages. A rapid post-disaster needs assessment called for swift repairs along the Efate Ring Road to minimize secondary economic impacts, and to restore connectivity to essential service centers, including hospitals, schools, and markets.

The Cyclone Pam Road Reconstruction Project reconstructed and climate-proofed damaged portions of the Efate Ring Road to restore connectivity between Port Vila and communities across Efate. The project took a "build back better" approach to reconstruction and helped restore socioeconomic activities to pre-cyclone levels.

IMPACTS OF THE TROPICAL CYCLONE PAM

Human Impacts



65,000 people displaced



Economic Damage and Losses







Note: ADB and its development partners are collaborating on a range of projects to directly address social sector needs, in tandem with the transport sector work described above.

Physical works commenced in August 2017 and rehabilitated a 10 km road section, reconstructed 9 bridges, reconstructed 9 culverts and causeway structures, and oversaw ground improvement to 1 landslip site.

The ADB Board of Directors approved \$8.2 million in additional financing to rehabilitate an additional 6.2 km of road and reconstruct four bridges not covered in the initial project scope.

The project was completed in July 2020 and helped increase climate resilience by protecting sealed pavement against erosion, improving drainage, and training rivers to cope with surges. The project also built government capacity in the areas of climate and disaster risk preparedness for both rural and urban areas.

Interisland Shipping Support Project

Status: Active

ADB financing: \$26.89 million

Cofinancing (Government of New Zealand): \$17.25 million

Total financing: \$44.14 million

Status: Proposed (additional financing)

ADB financing: \$40.61 million Total financing: \$84.75 million

Many of Vanuatu's outer islands lack the infrastructure and services needed to link rural populations with essential goods and services on the capital, Port Vila. 14 Prior to the project, the domestic terminal on Port Vila lacked adequate berthing facilities, which caused long delays and high transport costs. At the same time, lack of counterpart jetties and the degraded condition of outer island wharves contributed to limited services and unsafe conditions for passengers and goods moving to and from the capital.

The Interisland Shipping Support Project is increasing access to socioeconomic opportunities by constructing one new domestic wharf, undertaking dredging works and building a new terminal at Port Villa, constructing two new island wharves, and repairing two island wharves.

All sites will be fitted with appropriate ancillary infrastructure, such as market shelters and storage areas, and will be designed to endure a life span of 50 years. Design considerations include climate-proofing measures and low-maintenance strategies, in recognition of limited maintenance capacity on the outer islands.

The project is improving service delivery alongside infrastructure by helping appoint representatives to communicate the transport needs of rural communities, and by providing subsidies for voyages to islands that would otherwise be commercially

The five outer islands are Ambae, Espiritu Santo, Malekula, Pentecost, and Tanna.

New and refurbished facilities will reduce wait times, provide all-weather access to transport services, and improve safety conditions for loading and unloading. The shipping support schemes will increase access to safe and reliable transport services for outer islanders.

Infrastructure and Public Financial Management Support Facility (Supplementary)

Status: Active

Total financing (ADB): \$2.25 million

ADB is supporting the implementation a number of projects in Vanuatu in various sectors including transport. At the same time, ADB is working in close partnership with the government to plan future infrastructure works in line with national development priorities. As the lending portfolio grows and national experts take on increasing responsibilities, domestic capacity to implement, manage, and maintain these projects is at risk of being stretched thin.

Accordingly, ADB is helping build human and institutional capacity to implement a growing portfolio of projects. The Infrastructure and Public Financial Management Support Facility is enhancing the government's implementation capacity to support ongoing and future ADB-funded transport sector projects in Vanuatu. The project will strengthen government capacity to implement donor-financed projects and financial management capacities, which, in turn, will lead to more efficient project delivery in multiple sectors, including energy and transport.

Transport Sector Project Readiness Financing

Status: Approved

Total financing (ADB): \$5.00 million

Vanuatu 2030: The People's Plan is the national sustainable development strategy and covers the period from 2016 to 2030. It prioritizes equitable and affordable access to efficient transport by air, land, and sea in urban and rural areas. ADB is supporting Vanuatu to design and implement an ambitious pipeline of transport sector projects to address this priority.

The Transport Sector Project Readiness Financing will support the government in preparing ensuing ADB-funded projects in the transport sector. The project readiness financing will support the preparation of feasibility studies, engineering designs, surveys, procurement, and other start-up activities for ensuing projects. This will reduce start-up times and increase implementation efficiency. ADB is also supporting in the preparation of Vanuatu Ports Development and Management plan using individual consultants from various resources. This plan provides a future vision for the ports sector up to 2040, from a technical, operational, and organizational standpoint on how to remove the current constraints to development. The plan will be based on international best practice for the development, operation, and management of ports and related maritime infrastructure. It will complement Vanuatu's Sustainable Development Goals, set forward in the People's Plan.

Box 5: Delivering Impacts in the Pacific

The work of the Asian Development Bank (ADB) in the Pacific transport sector focuses on constructing and upgrading key infrastructure, and on ensuring that domestic stakeholders have the capacity to manage and maintain it for generations to come. Through its lending and technical assistance activities in the Pacific transport sector, ADB seeks to:

- (i) connect people to essential resources and to each other;
- (ii) increase the resilience of communities and infrastructure;
- (iii) support economic development and the creation of jobs;
- (iv) provide safe, efficient, and reliable transport services; and
- (v) ensure equitable access to opportunity.

Source: ADB Pacific Department.

Pacific Transport Update 2022

This publication provides an update on transport projects and assistance of the Asian Development Bank (ADB) in the Pacific as of 2021. ADB continues to assist in the development of the transport sector in its 14 Pacific developing member countries through technical assistance, loans, and grant financing. It also provides support for transport sector policy, investment planning, capacity building, and new capital infrastructure investment. ADB's overall transport sector support in the Pacific is focused on connecting communities to essential goods and services, while supporting socioeconomic growth and building resilience to climate change, disasters, and future shocks.

About the Asian Development Bank

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members —49 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.