BUILDING RESILIENCY IN THE PACIFIC

How ADB is Addressing Climate Change and Disaster Risks

- Cook Islands
- Fiji
- Kiribati
- Marshall Islands
- Federated States of Micronesia
- Nauru
- Palau
- Papua New Guinea
- Samoa
- Solomon Islands
- Timor-Leste
- Tonga
- Tuvalu
- Vanuatu
Climate change and disaster risks in the Pacific are increasing.

The 14 Pacific developing member countries (DMCs) of the Asian Development Bank (ADB)\(^1\) are exposed to a wide range of worsening climate-related hazards, such as tropical cyclones, floods, droughts, storm surges, and sea level rise. The region also faces geophysical hazards such as volcanic eruptions and earthquakes (see table below).

<table>
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<tr>
<th>PROJECTED FUTURE IMPACTS</th>
<th>COUNTRY EXAMPLES</th>
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<tr>
<td>Although the frequency of tropical cyclones may not increase, they are expected to become stronger and cause more damage in the coming decades.</td>
<td>Fiji. In 2016, Cyclone Winston killed 44 people and damaged or destroyed over 300,000 houses, as well as schools, businesses, and infrastructure. Total estimated damage was one-third of the country’s gross domestic product (GDP).</td>
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<td>Many climate projections indicate that precipitation will increase in amount and intensity. Flood risk is increasing, especially in urban areas.</td>
<td>Solomon Islands. In 2014, heavy rains caused extensive flooding in Honiara. 22 people died in flooding along the city’s river, 675 houses were destroyed, and 10,000 people were displaced. Total damage was estimated at over 9% of GDP.</td>
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<td>Some climate models are projecting more frequent and intense El Niño events, which could trigger more severe droughts.</td>
<td>Palau. An El Niño-related drought in the summer of 2016 led to severe water shortages, which contributed to a significant drop in visitor arrivals.</td>
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<td>Most people in ADB’s Pacific DMCs live near the coast and are, therefore, exposed to coastal hazards such as storm surges and tsunamis.</td>
<td>Samoa. In 2009, the country was struck by a tsunami that killed 143 people. Over 12,000 people were affected by waves that inundated communities along the south coast of Upolu.</td>
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<td>The populations of low-lying atoll island nations like Kiribati, the Marshall Islands, and Tuvalu are extremely vulnerable to projected sea level rises.</td>
<td>Kiribati. The country’s atolls rise to an average of only 1.8 meters above sea level. If the seal level continues to rise at its current rate, Kiribati could disappear by 2100.</td>
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<td>Home to over 100 volcanoes, the Pacific sits along the “Ring of Fire.” Eruptions can cause fast floods, mud slides, rock falls, and lava flows.</td>
<td>Vanuatu. In 2017, an eruption of the Manaro Voui volcano led to the evacuation of the entire island of Ambae. Its 11,000 residents were temporarily relocated to three neighboring islands.</td>
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<td>Pacific DMCs are located on or near a major fault between the Australian and Pacific tectonic plates, making the region seismically active and vulnerable to large earthquakes.</td>
<td>Papua New Guinea. In early 2018, a 7.5 magnitude earthquake hit the Highlands region. Over 500,000 people were impacted and more than 270,000 required immediate humanitarian assistance. Fatalities exceeded 100.</td>
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\(^1\) The Cook Islands, Fiji, Kiribati, the Marshall Islands, the Federated States of Micronesia, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu.
Pacific developing member countries are highly vulnerable to natural disasters.

Pacific DMCs share many sustainable development challenges. Their small size, isolation, narrow economic bases, limited resources, and dependence on trade make them highly vulnerable to climate change and natural disasters. With the exception of Papua New Guinea, Pacific DMCs are small island developing states (SIDS), and seven are fragile and conflict-affected situation (FCAS) countries.²

Extreme events, such as strong tropical cyclones, can push governments into debt distress, businesses into insolvency, and individuals into extreme hardship. Vulnerability is greatest for the poorest populations, who live in small communities on remote outer islands. Women rely more on natural resources for their sustenance and livelihood, which makes them particularly vulnerable to climate extremes.

The economic impacts of natural disasters in the Pacific are severe. Pacific DMCs are among the highest-ranked countries in terms of average annual disaster losses scaled by GDP. A recent risk assessment estimated that Pacific island countries together suffer $284 million (or nearly 2% in regional GDP) in economic losses from natural disasters annually. As shown in the figure to the right, Vanuatu and Tonga have the highest losses, due in part to their higher exposure to natural disasters.

ADB is providing multifaceted support to its Pacific DMCs.

ADB’s efforts to strengthen resilience to climate change and disasters in the Pacific are guided by five core principles:

1. Finance climate-resilient infrastructure.
2. Promote low-carbon development
3. Improve disaster risk reduction, response, and resiliency.
4. Increase climate and disaster risk finance.
5. Strengthen country and regional capacities.

ADB’s interventions support Pacific DMCs in implementing their Nationally Determined Contributions (NDCs) and Joint National Action Plans for Disaster Risk Management and Climate Change Adaptation (JNAPS). At the regional level, ADB’s support is guided by the Framework for Resilient Development in the Pacific, (FRDP), which recognizes that resilience is central to development and emphasizes that responses must involve multiple sectors and stakeholders.

² Kiribati, the Marshall Islands, the Federated States of Micronesia, Nauru, Papua New Guinea, Solomon Islands, and Tuvalu.
ADB’s principles for climate change and disaster risk management in the Pacific

1. FINANCE CLIMATE-RESILIENT INFRASTRUCTURE

**Pacific challenge.** Across the Pacific region, there is an urgent need to build and replace infrastructure to ensure greater resiliency to climate change and natural disasters. Much of the critical infrastructure in the region is at risk from future sea level rise, storm surge, flooding, and/or drought.

**ADB’s response**

Throughout the Pacific region, ADB continues to strengthen resilience by “climate-proofing” infrastructure and building more sustainable communities.

In Fiji, an ADB project cofinanced by the Green Climate Fund will provide sustainable water supply and sewerage services for more than 290,000 people in Suva. The project will improve climate resilience by taking water from further up the Rewa River system to avoid salinity. ADB is also developing climate-resilient water supply and waste management systems in Kiribati, Tonga, and Vanuatu.

In Nauru, ADB is developing a climate-resilient port that can operate year-round. The new port, cofinanced by the Green Climate Fund and the Government of Australia, will provide a much-needed lifeline for the 11,300 residents of this fragile and vulnerable island nation.

In Solomon Islands, ADB provided financing for bridges, stream crossings, and culverts to boost East Guadalcanal’s connectivity with the rest of the country, while helping 39,000 residents better withstand the impact of climate change and more frequent natural disasters.

These projects are among a growing number of ADB investments that benefit from rigorous climate risk and vulnerability assessments (CRVAs). ADB uses CRVAs to determine climate risks and explore alternative approaches and designs, such as elevating roads and bridges, increasing drainage capacity, and drought-proofing water supplies. Since 2016, ADB has developed CRVAs for nearly all of its Pacific projects in the transport and water sectors.

2. IMPROVE DISASTER RISK REDUCTION, RESPONSE, AND RESILIENCY

**Pacific challenge.** Disaster risk presents one of the most serious threats to sustainable socioeconomic development in the Pacific. While disasters cannot be prevented, measures can be taken to help Pacific DMCs reduce their vulnerabilities and also recover faster and become more resilient in the wake of a disaster.

**ADB’s response**

In the Pacific, ADB provides a range of financial products for disaster and emergency assistance, from initial disaster response to recovery and reconstruction.

In the Cook Islands, ADB approved its first ever contingent line of credit to help improve resilience and provide quick disbursement of financing after a disaster occurs. Such ex ante financial assistance has since been expanded to three more Pacific DMCs—Samoa, Tonga, and Tuvalu—through ADB’s Pacific Disaster Resilience Program, and there are plans to extend this assistance to more countries in the future.

In Fiji, Vanuatu, and most recently in Tonga, ADB disbursed postdisaster grants in the immediate aftermath of tropical cyclones Winston, Pam, and Gita. ADB also provided grants to Papua New Guinea after a destructive earthquake (2018), Vanuatu in the wake of volcanic eruptions on Ambae.
3. PROMOTE LOW-CARBON DEVELOPMENT

Pacifi c challenge. Despite low greenhouse gas emissions, Pacifi c DMCs have ambitious plans to shift away from their traditional reliance on diesel to more renewable energy sources of power generation. As the cost of solar and wind power declines, Pacifi c DMCs are transforming their energy systems and improving access to more affordable electricity.

**ADB’s response**

ADB has the largest portfolio of energy projects among development partners in the Pacifi c. Throughout the region, ADB is helping DMCs achieve a renewable energy future.

Central to ADB’s eff orts in the energy sector is the Pacifi c Renewable Energy Investment Facility. This facility is the largest single source of renewable energy fi nancing in the Pacifi c, and is supporting a series of individual small-value projects in the Pacifi c’s 11 smaller island countries.

In the Federated States of Micronesia, ADB supported the construction of a wind farm and grid-connected solar panels on the island of Yap. These renewable energy sources will replace nearly 20% of the power currently generated by diesel generators, while strengthening energy reliability and security for the island’s 11,400 residents.

In Samoa, ADB invested $3 million to expand an existing 2.2-megawatt solar power project developed by a local fi rm. As the fi rst nonsovereign renewable energy investment in the Pacifi c, this project signals ADB’s intent to encourage new private investment in renewable energy throughout the Pacifi c.

In Papua New Guinea, ADB is providing aff ordable, clean, and reliable power in provincial centers through the Town Electrifi cation Investment Program. This investment program includes the construction of a small run-of-river hydropower plant with a preliminary capacity of 3 megawatts.
4. INCREASE CLIMATE AND DISASTER RISK FINANCE

Pacific challenge. While Pacific DMCs have been successful in accessing climate finance, current amounts are not nearly enough to cover the expenditures needed to protect people and communities from the impacts of future climate change.

ADB’s response

ADB is facilitating greater flows of climate finance into the region. ADB’s Pacific Department mobilized roughly $250 million in climate financing from 2013 to 2016, with energy and transport as the leading two sectors.

In 2017, the Pacific Department set a goal to mobilize more than $500 million in climate finance from 2017 to 2020, double the amount secured in the previous 4 years.

This $500 million target represents 13% of ADB’s investment portfolio in the Pacific for 2017–2020. Given the high climate risks and vulnerabilities of Pacific DMCs, nearly half of climate finance for ADB’s projects in the Pacific will support adaptation.

Achieving this target requires mainstreaming climate change, particularly adaptation, into the design and implementation of investment projects, thereby increasing the “climate component” of investments.

ADB will also use its internal resources to leverage increased levels of external climate finance. ADB is an accredited entity to all global climate funds, and is also a partner with major Pacific cofinancers, including Australia, Japan, and New Zealand.
5. STRENGTHEN COUNTRY AND REGIONAL CAPACITIES

**Pacific challenge.** In many Pacific DMCs, lack of capacity to address climate change and natural disaster risks is a central constraint. Building a robust understanding of available tools and resources is essential for planning for and responding to future impacts and disaster events.

**ADB’s response**

ADB supports a range of policy and capacity development interventions to reduce climate change and disaster risks in Pacific DMCs, working with various partners throughout the region.

In 2017, ADB supported Fiji’s presidency for the 23rd annual Conference of the Parties, and also helped Fiji consider options for more sustainable transport and expand insurance coverage for vulnerable households in the event of disasters.

Through its investment projects, ADB is helping integrate disaster risk considerations into land use planning and strengthening building standards and codes. For instance, as part of current efforts to upgrade the Alotau provincial wharf in Papua New Guinea (PNG), ADB has committed to working with the PNG Ports Corporation to develop new national standards for designing climate-resilient ports.

ADB will also help Pacific DMCs increase opportunities for private sector participation, including investment, risk insurance, and technology development and deployment. Such support will be in coordination with ADB’s Private Sector Operations Department.

Another area of focus is addressing the linkages between gender and climate change. For instance, ADB is conducting analysis on gender and social inclusion for an ongoing Climate Change and Disaster Risk Finance Assessment in Kiribati, an initiative of the Pacific Islands Forum Secretariat and the Pacific Community.

To help advance these and other policy and capacity building activities, ADB is developing new and strengthening its existing networks in the region. Perhaps most significantly, ADB is partnering with the newly created Regional Pacific Nationally Determined Contributions Hub, which will bring together key country focal points, regional organizations, development partners, civil society, and private sector organizations.
ADB’s Pacific Offices

ADB has four field offices—the Pacific Liaison and Coordination Office (PLCO), in Sydney, Australia; the Pacific Subregional Office (SPSO), in Suva, Fiji; PNG Resident Mission; and Timor-Leste Resident Mission. The PLCO is responsible for Nauru, Solomon Islands, and Vanuatu. The SPSO is responsible for the Cook Islands, Fiji, Kiribati, Samoa, Tonga, and Tuvalu. The Pacific Department in the ADB headquarters is responsible for the Marshall Islands, the Federated States of Micronesia, and Palau. ADB also has four extended missions and seven development coordination offices supported by national experts who assist in coordinating with the government and other stakeholders, and in supervising operations.

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