



# FIJI NATIONAL CLIMATE FINANCE STRATEGY





## Foreword



For Fiji, the impacts of climate change are growing more severe every year. They are visible in the increasingly intense cyclones that have flattened infrastructure and homes, in the slow march of sea levels that encroach on farmland and force communities to relocate, and in the emergence of new pests and diseases that ruin crops. These climate impacts—which carry significant human and development consequences for Fiji—have motivated us to integrate climate change across every facet of our economic and development agenda.

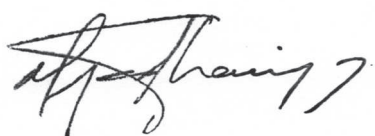
Fiji's National Climate Finance Strategy (NCFS) is an ambitious, detailed explanation of the climate-related policies, interventions, targets, and projects across 12 economic sectors that, if funded and implemented by 2030, will help Fiji adapt its economy to worsening climate impacts. The NCFS is unique among Fiji's

climate strategies—it covers the mitigation and adaptation priorities across all economic sectors by synthesizing the priorities laid out in Fiji's National Adaptation Plan, Climate Vulnerability Assessment, Low Emissions Development Strategy, NDC Investment Plans, and the strategic plans of all relevant line Ministries. It identifies the climate-related projects that faced budget cuts due to the COVID-19 pandemic and reflects feedback from consultations with more than 40 organizations.

The NCFS should be the starting point for anyone looking to support Fiji's climate and development agenda. For each of the 12 sectors, the NCFS explains the sector's projected climate vulnerabilities, key stakeholders, recent climate finance trends, and climate finance priorities. The NCFS includes a shortlist of mitigation and adaptation project pipelines for both the Green Climate Fund and for the Ministry of Economy's Climate Change and International Cooperation Division.

The climate finance priorities cover the top three policy objectives for each sector. For each policy, the NCFS identifies up to three interventions that would help implement the policy, and for each intervention, there are up to three bankable projects or targets that would help achieve the intervention.

While the severity of climate impacts hinges on actions taken by high emitting countries, current climate impacts leave Fiji no choice but to begin adapting its economy. Fiji's NCFS is an innovative and ambitious summary of climate-related priorities that, if fully funded, will ensure the Fijian economy is climate-resilient by 2030.



**Hon. Aiyaz Sayed-Khaiyum**

*Attorney-General and Minister responsible for climate change*







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## Acronyms

<b>CCICD</b>	Climate Change and International Cooperation Division	<b>IISD</b>	International Institution for Sustainable Development
<b>CFS</b>	Climate Finance Snapshot	<b>LEDs</b>	Low Emissions Development Strategy
<b>CIU</b>	Construction Implementation Unit	<b>LMMAs</b>	Locally Managed Marine Areas
<b>CRESHF</b>	Climate Resilient and Environmentally Sustainable Healthcare Facilities	<b>MOA</b>	Ministry of Agriculture
<b>CROC</b>	Climate Relocation of Communities	<b>MOE</b>	Ministry of Economy
<b>CRVAF</b>	Comprehensive Risk and Vulnerability Assessment Framework	<b>MSME</b>	Micro, Small and Medium Enterprises
<b>CVA</b>	Climate Vulnerability Assessment	<b>NAP</b>	National Adaptation Plan
<b>DOE</b>	Department of Energy	<b>NCCP</b>	National Climate Change Policy
<b>EFL</b>	Energy Fiji Limited	<b>NCFS</b>	National Climate Finance Strategy
<b>FDB</b>	Fiji Development Bank	<b>NDCR</b>	Nationally Determined Contributions Roadmap
<b>FMS</b>	Fiji Meteorological Services	<b>NDP</b>	National Development Plan
<b>FNU</b>	Fiji National University	<b>PRG</b>	Planned Relocation Guideline
<b>FREF</b>	Fiji Rural Electrification Fund	<b>SOP</b>	Standard Operating Procedure
<b>GDP</b>	Gross Domestic Product	<b>SIDS</b>	Small Island Developing State
<b>GGGI</b>	Global Green Growth Institute	<b>SRIF</b>	Sugar Research Institute of Fiji
<b>GHG</b>	Greenhouse gas	<b>TNA</b>	Technology Needs Assessment
<b>IFAD</b>	International Fund for Agriculture Development	<b>WAF</b>	Water Authority of Fiji

# Overview: National Climate Finance Strategy

## INTENTION OF NATIONAL CLIMATE FINANCE STRATEGY

The National Climate Finance Strategy (NCFS) lays out Fiji's main investment priorities for cultivating a climate-resilient, low-carbon economy from 2022 to 2029 and will be the climate finance blueprint for the Fijian government and its development partners. It is a living document, to be reviewed every 4 to 6 years to reflect evolving climate finance priorities and financing options.

## ROLE OF NATIONAL CLIMATE FINANCE STRATEGY RELATIVE TO OTHER INITIATIVES

The NCFS was developed using the existing climate policies and strategic plans of the Fijian government. These include Fiji's 5-Year & 20-Year National Development Plan (2017 to 2030) (NDP), National Adaptation Plan (NAP), Low Emission Development Strategy (2018–2050) (LEDS), Nationally Determined Contribution (NDC), Nationally Determined Contribution Implementation Roadmap (2017–2030) (NDCR), Climate Vulnerability Assessment (CVA), and the individual strategic plans of the relevant line ministries. The NCFS was informed by the World Bank's examination of "How to Build Back Better After COVID-19 in Fiji," and it draws on Fiji's NDC Investment Plan, which identifies mitigation investment priorities in the energy efficiency and transport sectors.

The NAP and Fiji Climate Finance Snapshot (CFS) form a core part of the NCFS. The NAP identifies Fiji's adaptation priorities interventions and links to documents such as the National Climate Change Policy (NCCP), Framework for Resilient Development in the Pacific, CVA, National Disaster Risk Reduction Policy, NDP, Green Growth Framework, and the Climate Change and Health Strategy Action Plan. The NAP was developed through an extensive consultation process. The CFS, published in October 2020, compares Fiji's climate finance investments from January 1, 2016 to December 31, 2019 to the available assessments of how much finance Fiji needs to meet its climate goals. The CFS examined 12 climate-vulnerable sectors, drawn from the priorities laid out in Fiji's strategic documents, and is based on data that was provided by the Fijian government and external stakeholders.<sup>1</sup>

The process to develop the NCFS mimics the ones used to develop Fiji's NAP and NDC Investment Plan. The NCFS examines the same 12 sectors as the CFS, mapped all climate-related activities in Fiji's climate strategies, and prioritized these activities using an extensive stakeholder consultation process.

## **STAKEHOLDER ENGAGEMENT**

Virtual and face-to-face stakeholder consultations were held with more than 130 experts and 40 organisations working in all 12 sectors.<sup>ii</sup> These stakeholders represent the full range of institutions that will be involved with NCFS implementation and include line ministries, bilateral partners, multilateral institutions, regional agencies, the private sector, and civil society organisations. A full list of stakeholders is on page 75.

## **OVERVIEW OF IMPLEMENTATION PLAN**

The Ministry of Economy's Climate Change and International Cooperation Division (CCICD) will monitor implementation. The line ministries and statutory bodies will develop appropriate projects and programs and primarily guide implementation, based on their internal expertise and operational capacity, and with support from regional agencies and development partners.



# Fiji: Country Profile and Climate Context





## FIJI: COUNTRY CONTEXT

Fiji, a small island developing state in the Pacific, has almost 900,000 people and spans 330 islands, roughly one-third of which are permanently inhabited (see Map 1). Two main islands—Viti Levu and Vanua Levu—account for 87% of Fiji's landmass and 96% of its population. Fiji is the economic hub of the Pacific, classified as an upper middle-income country, and highly vulnerable to external shocks, from climate change to other global crises, such as pandemics or economic recessions. From 2010 to 2022, Fiji sustained numerous external shocks, including 20 cyclones and the global coronavirus pandemic. Severe Tropical Cyclones (TC) Winston, Gita, Keni, Harold, Yasa, and Ana inflicted lasting and significant damage to Fiji's infrastructure, economy, and communities. To build resilience, Fiji is proactively identifying and strategizing about to integrate climate considerations into its development priorities.

## FIJI'S DEVELOPMENT AND ECONOMIC CONTEXT

Fiji experienced average economic growth of 3.72% from 2010 to 2019 and its total GDP increased from FJ\$6.02 billion in 2010 to FJ\$11.87 billion in 2019 (Reserve Bank of Fiji 2020). This occurred despite TC Winston, which hit as a severe category 5 storm in February 2016 and wiped out one-third of the value of Fiji's Gross Domestic Product (GDP) in 36 hours.

Fiji's economy was projected to grow by 3% in 2020, but instead contracted by 19 percent due to the global coronavirus pandemic, which forced Fiji to close its borders to international tourists from March 22, 2020 to December 1, 2021 (International Monetary Fund, 2021). Tourism accounts for 38% of government revenues and a significant portion of Fiji's domestic climate finance revenues (Reserve Bank of Fiji 2020). As of publication, more than 90% of Fijians were fully vaccinated and the country had reopened its international borders to travel partner countries.<sup>iii</sup> Beyond tourism, Fiji's main economic sectors are community and personal services (21.2%

**Figure 1 | Map of Fiji Islands**



of GDP), financial and real estate services (17.8%), manufacturing (13.5%), agriculture (8.9%), and construction (3.6%).

Fiji's economic development pathways are guided by its NDP, which was published in 2017 and sets out Fiji's development targets and policy objectives. Several of these targets—such as achieving near

100% renewable energy in electricity generation, reaching 100% access to electricity, and delivering 100% access to clean water and sanitation services to urban and rural areas—are compatible with Fiji's overarching commitment to build a climate-resilient, low-emission economy by 2050. To reach this goal, Fiji has published several other economic and climate strategies (see Table 1).

**Table 1 | Fiji's Development and Climate Documents**

DOCUMENT TITLE	PUBLISHING INSTITUTION AND YEAR	DESCRIPTION
<b>Fiji 5- year &amp; 20-year National Development Plan (NDP)</b>	Fijian Ministry of Economy (2017)	The NDP sets out five-year development targets and policy priorities (2017 to 2021) and the top goals over 20 years (2017 to 2036). For both timelines, the NDP lays out the government's strategy, policy objectives, and economic development targets across all components of Fijian society. The NDP covers key economic sectors, such as agriculture and fisheries, and key cultural priorities, such as promoting youth, sports, and preserving Fijian culture.
<b>Nationally Determined Contribution Implementation Roadmap 2017-2030 (NDCR)</b>	Fijian Ministry of Economy in collaboration with the Global Green Growth Institute (2017)	The NDCR lays out options for Fiji to reach the two targets established in its first NDC. The first is an unconditional target to reduce emissions from electricity generation by 10% by 2030. The second is a conditional target to reduce emissions from electricity and transport by 30% below BAU levels by 2030. It covers specific projects and interventions in electricity generation, transmission, demand-side energy efficiency, and transport.
<b>Fiji Low Emissions Development Strategy: 2018 to 2050 (LEDS)</b>	Fijian Ministry of Economy in collaboration with the Global Green Growth Institute (2018)	The LEDS lays out four pathways and relevant investments for Fiji to decarbonize by 2050. In the least ambitious scenario, Fiji's reaches its unconditional NDC target by 2030 and continues this trajectory through 2050. In the most ambitious scenario, Fiji's economy becomes net-negative between 2040 and 2050. The LEDS includes cost estimates, cumulative through 2050, of the specific investments required under each pathway.
<b>Climate Vulnerability Assessment (CVA)</b>	Fijian Ministry of Economy in collaboration with the World Bank (2018)	The CVA is a detailed assessment of how climate impacts will undermine Fiji's economic development. It identifies the most vulnerable sectors, the development implications if climate change is unaddressed, and the interventions that would reduce Fiji's climate exposure. It includes cost estimates, cumulative for 10 years, of each intervention.
<b>National Adaptation Plan (NAP)</b>	Fijian Ministry of Economy in collaboration with the International Institute for Sustainable Development (IISD) (2018)	The NAP identifies 160 interventions across 10 sectors that should be prioritized to help Fiji adapt to climate change. The NAP was developed through an intensive consultation process to ensure its findings were consistent with and reflected in other planning process. UNICEF recognized Fiji's NAP process as "best practice."
<b>Nationally Determined Contribution Investment Plan</b>	Fijian Ministry of Economy in collaboration with the Global Green Growth Institute (2022)	The NDC Investment Plan was developed through an 18-month consultation process and provides detailed information about 31 potential projects in the transport, renewable energy, energy efficiency, and building sectors. The Investment Plan builds off the NDC Implementation Roadmap.



## FIJI'S CLIMATE CHANGE PROFILE

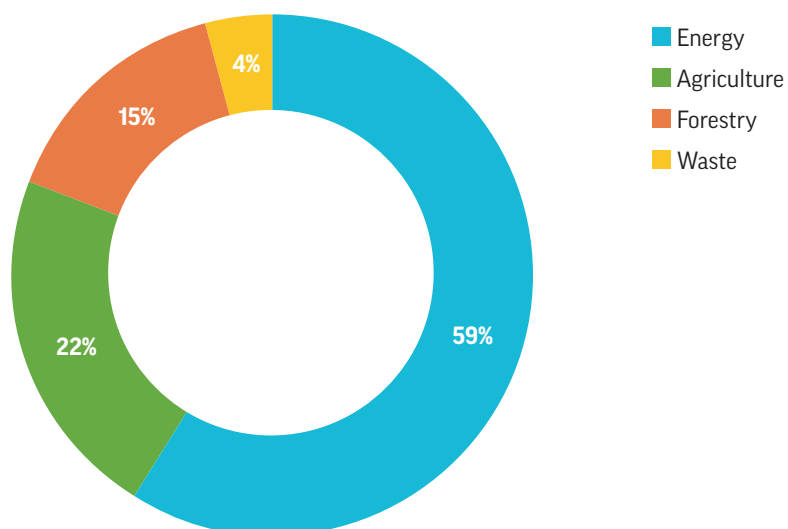
Fiji accounts for only 0.006% of the world's emissions, Fiji's most pressing climate challenge is how to effectively adapt to intensifying climate impacts (Ministry of Economy, 2020). Fiji's policies and

strategies (see Table 1) identify how it can build a climate-resilient and low-carbon economy by 2050. Fiji's 2021 Climate Change Act provides the legal framework and accountability mechanisms to aggressively address climate change.

**Table 2 | Fiji Climate Profile**

<b>Geographical Location</b>	Oceania
<b>Land Area</b>	18,333 km <sup>2</sup> and 1.3 million km <sup>2</sup> in the exclusive economic zone
<b>Population</b>	Approximately 900,000
<b>Types of climate</b>	Tropical: Fiji experiences average temperatures of 26°C with annual rainfall between 1,800mm and 2,600 mm
<b>Emissions profile</b>	According to Fiji's Third National Communication, Fiji emits nearly 2.5 million tons per year or around 0.006 per cent of world emissions (based on 2006-2011 data). The energy sector accounted for 59% of Fiji's emissions. Within the energy sector, land transport accounts for 64% of emissions and electricity accounts for the remaining 36%. The agriculture sector (22% of all emissions), forestry sector (15% of all emissions) and waste sectors (4% of all emissions) account for the rest of Fiji's emissions. See Figure 2.
<b>Key Emitting Sectors</b>	Transport, Electricity, Waste, and Agriculture, Forestry and Other Land Use (AFOLU)
<b>Key Climate Risks</b>	<p>Fijian communities are already experiencing the following climate change impacts:</p> <ul style="list-style-type: none"> <li>◆ Eroding shorelines and riverbanks.</li> <li>◆ Increasingly severe and frequent natural disaster events, including cyclones and inland flooding.</li> <li>◆ An increase in ocean acidification, which is likely to deplete fishery stocks and weakens the structural integrity of coral reefs.</li> <li>◆ An increase in ocean temperatures, which can trigger coral bleaching</li> <li>◆ Saltwater inundation and coastal flooding due to sea level rise.</li> <li>◆ Changes in the predictability and intensity of rainfall.</li> <li>◆ Decrease in the water supply available in catchments and water table and, ultimately, the water available to ordinary Fijians.</li> </ul> <p>These impacts are beginning to reduce food production, increase large-scale flooding events in both coastal cities and inland villages, increase outbreaks of vector borne diseases, increase climate-induced relocation, reduce economic opportunities for subsistence communities, and reduce the land available for farming and housing.</p>
<b>Primary Sectors</b>	Twelve vulnerable sectors: agriculture, blue economy, climate-induced relocation, disaster risk management, electricity, forestry, gender and social inclusion, housing, human health, climate policy and governance, transport, and water and sanitation.

Figure 2 | Key Emitting Sectors of Fiji



### Mitigation Pathways

All mitigation pathways depend on Fiji being able to reach 100% renewable energy by 2030. In 2020, Energy Fiji Limited (EFL), Fiji's national electricity utility, generated 57.18% of its electricity from hydropower, 0.12% from wind power, and 6.87% from biomass generated by independent power producers (Energy Fiji Limited 2020). The remaining 35.83% came from imported diesel fuel. EFL has ambitious targets for renewable energy to account for 80% of power generation by 2021 and almost 100% by

2030 and is developing six new renewable energy projects, three from hydro and three from solar. In early 2021, the Fijian Government agreed to sell 44% of EFL's shares to Sevens Pacific Pte Limited, owned by Chugoku Electric Power Company and the Japan Bank for International Cooperation. This deal will give EFL access to world-leading operational expertise, project development experience, technological prowess, and financial capacity. Fiji's ongoing mitigation initiatives are discussed in Table 3, below.

**Table 3 | Ongoing Initiatives to Implement Fiji's Mitigation Priorities**

CURRENT MAJOR INITIATIVES	DESCRIPTION
<b>NDC Investment Plan</b>	Built under a partnership between the MOE, the NDC Regional Hub, and GGGI, this lays out specific, detailed investment projects to reduce emissions in energy efficiency, water and sanitation, and land, maritime and aviation transport. At the time of publication, the NDC Investment Plan was being finalized.
<b>NDC Enhancement</b>	MOE worked with the Energy and Resources Institute to develop and submit Fiji's enhanced NDC. The revised NDC includes: <ul style="list-style-type: none"> <li>♦ a reaffirmation of its 2030 target,</li> <li>♦ a commitment to achieve net-zero greenhouse gas emissions by 2050,</li> <li>♦ up-front information to facilitate clarity, transparency and understanding,</li> <li>♦ a commitment to operationalise its National Adaptation Plan.</li> </ul>
<b>"30 million trees in 15 years initiative"</b>	Under the leadership of Ministry of Forestry, the government has committed to replant and nourish 30 million trees by 2035. This reflects Fiji's overarching commitment to use nature-based solutions to build resilience to climate change.
<b>Fiji Rural Electrification Fund (FREF)</b>	Launched during Fiji's COP23 Presidency with support from the Leonardo DiCaprio Foundation, this provides renewable energy to Fiji's outlying islands and villages. FREF has successfully electrified the community of Vio Island, on the coast of Lautoka. Currently, five rural communities have been identified for electrification, three of which have undergone a site survey. FREF is actively seeking donor support for Phases 3 and 4, which will electrify all five communities.
<b>Technology Needs Assessment (TNA)</b>	Fiji is undertaking a TNA for change mitigation (rural electrification and domestic maritime shipping) and adaptation (agriculture and coastal communities). This involves prioritizing technology needs and developing technology action plans, concept notes, and project proposals to help Fiji procure the required technologies. The technologies in maritime sector were reprioritized to align with the 40% Emissions Reduction target announced at the 2020 PIFS Forum and in the 2020 Updated NDC. The final phase of the project will develop Technology Action Plans, which will contribute to the development of concept notes for critical technologies.

### Adaptation Profile

As a small island developing state, Fiji is extremely vulnerable to the severe impacts of climate change, some of which are already visible in its agricultural sector, marine ecosystems, and coastal villages. Although Fiji has always been vulnerable to extreme weather events, such as tropical cyclones and inland flooding, climate change is projected to increase the frequency and severity of these events. Fiji's recent experience with cyclones makes it clear that extreme weather and climate events pose a significant, ongoing threat to Fiji's development potential.

To understand its climate vulnerabilities, Fiji and the World Bank released the CVA in 2017. The CVA recommends 124 interventions that, if implemented, will reduce Fiji's climate vulnerabilities. Fiji's NAP complements the CVA analysis and identifies 10 priority sectors and 160 interventions. These were identified through intensive stakeholder consultations and focus on actions that would yield an immediate adaptation benefit once implemented. These interventions were used as the basis of the stakeholder consultations for the NCFS. In 2020, the World Bank developed a "sustainability checklist" to help the Fijian government identify possible investments to promote a green recovery from the pandemic (Fargher 2020). To accelerate implementation of these plans, the CCICD has several initiatives (see Table 4).



**Table 4 | Ongoing Initiatives to Implement Fiji's Adaptation Priorities**

MAJOR INITIATIVES	DESCRIPTION
<b>National Adaptation Plan Costing Methodology and Finance Plan</b>	The CCICD and IISD developed two approaches to create a costing methodology for the NAP. One is an aggregate approach, which estimates the costs of one portion of an intervention (say the cost to build one kilometre of seawall) and then applies that cost to all portions (all kilometres of the seawall). The other is a bottom-up approach, which approximates the costs of every component of each intervention and adds them together. For example, this estimates the costs of the feasibility studies, materials, and construction processes for every kilometre of seawall needed. CCICD will select an approach and then train line ministries on how to use it.
<b>National Adaptation Plan Monitoring and Evaluation Framework</b>	The NAP Monitoring and Evaluation Framework, developed in April 2020, assesses the implementation and effectiveness of the NAP and provides guidance on how to design a government process to monitor and evaluate NAP implementation. It will support an update of the NAP before 2030.
<b>Comprehensive Risk and Vulnerability Assessment Framework (CRVAR) for the Planned Relocation Guidelines</b>	CRVAF will guide the Fijian Government about the economic, social, and cultural considerations of relocating 15 rural communities that need to move due to increased climate-related impacts. It ensures inclusive and consultative relocation processes are used. It analyses potential risks during or after relocation and lays out ways to minimize or combat these risks. It is expected to be completed by mid-2022.
<b>Standard Operating Procedures (SOP) for the Planned Relocation Guideline (PRG)</b>	The SOP provides a systematic, operational approach to implementing Fiji's PRG. The SOP creates a governance and institutional framework that will be guided by the legislative mandate set out in sections 11 and 12 of the 2021 Climate Change Act. The SOP sets the process that guarantees standardized coordination among government ministries, vulnerable communities, and other partners involved in the relocation process. This will ensure that all relocated communities go through the same transparent and inclusive process. A soft launch of the draft SOP happened in December 2020. The final SOP should be completed by mid-2022.

# Fiji National Climate Finance Strategy





# Summaries of Priority Projects

## SHORTLIST OF PROJECTS FOR THE GREEN CLIMATE FUND

While the Fiji Development Bank (FDB) is Fiji’s national direct access entity to the Green Climate Fund (GCF) and the MOE is the National Designated Authority, there are many other institutions who are active in Fiji’s climate space and accredited to the GCF. These include multilateral development banks, bilateral development agencies, regional organizations, and UN Agencies.<sup>iv</sup> In light of this, MOE developed the following GCF project pipeline. Six projects are aligned with Fiji’s domestic priorities, and six are regional programs that include Fiji. Concept notes for each are in Annex II.

### National Adaptation Projects for the Green Climate Fund

#### 1. Climate Resilient Homes

**Description:** The program will have innovative construction processes and materials that reduce home construction costs and solar for low-cost housing flats in Fiji. FDB could be the conduit for lending to commercial banks, the Fiji Housing Authority, and the Public Rentals Board – all of whom help Fijians to finance new or upgraded climate-resilient houses.

**Relevant Entities:** Ministry of Economy, Fiji Development Bank, Housing Authority, Ministry of Housing and Community Development and the private sector.

**Estimated Project Budget:** US\$10 million

#### 2. WWF Coral Reef Resilience Program

**Description:** Led by the World Wildlife Fund and beginning in Fiji, this will help seven countries ensure the continued productivity of coral reefs and connected coastal ecosystems by addressing climate-related threats, stresses from land-based pollution, and over-exploitation of reefs from fishing, tourism, and other extractive reef products.

**Relevant Entities:** World Wildlife Fund, Fiji Development Bank, Ministry of Economy, and Ministry of Waterways and Environment.

**Estimated Project Budget:** US\$65 million (Fiji component only)



## Regional Adaptation Projects for the Green Climate Fund

1. Adapting tuna-dependent Pacific Island communities and economies to climate change

**Description:** The 14 Pacific Island countries participating in the programme are extremely dependent on coral reefs for food security and exported tuna production, but coral reefs are at severe risk from climate change. Ocean warming and acidification are degrading the coral reefs that have traditionally provided most of the fish for coastal communities. This programme will integrate information on tuna connectivity, tuna stock structures, and meso-scale oceanography to develop and implement localized adaptation plans for each country.

**Relevant Entities:** Conservation International, Pacific Community, Forum Fisheries Agency, Pacific United Nations Food and Agriculture Organisation, Secretariat of the Pacific Environmental Programme

**Estimated Project Budget:** US\$171.65 million

2. Enhancing resilience of agriculture and food security in the Pacific Island Countries by managing threats from climate-induced transboundary plants and invasive animals

**Description:** This project strengthens national, regional, and transboundary systems and institutional capacities to monitor, detect, and manage risks from climate-induced biosecurity threats in Fiji, Samoa, and the Solomon Islands.

**Relevant Entities:** The Pacific Community (SPC), Ministry of Economy (Fiji), Ministry of Finance (Samoa), and Ministry of Environment, Climate Change, Disaster Management, and Meteorology (Solomon Islands)

**Estimated Project Budget:** US\$41.7 million

3. Climate Information and Early Warning Systems, One Pacific Programme

**Description:** This One Pacific Programme is designed to make a concerted effort across 14 Pacific SIDS to gather and apply the critical hydrological and meteorological information commensurate with the perceived urgency to provide early warnings of the multiple hazards associated with climate change and to undertake effective, science-based responses over the next decade.

**Relevant Entities:** Pacific Regional Environment Program (SPREP) National Meteorological and Hydrological Services, APEC Climate Centre

**Estimated Project Budget:** US\$189 million

4. Supporting Resilient Island Communities in Tuvalu, the Solomon Islands, Fiji, and Vanuatu through the Local Climate Adaptive Living (LoCAL) Mechanism

**Description:** This is an enhanced direct access project that strengthens the climate resilience of local communities and economies by improving the ability of communities and local governments to access and use finance for adaptation. The project will establish a performance-based climate finance transfer mechanism and use targeted capacity development to improve how local communities use climate funds.

**Relevant Entities:** SPC, Ministry of Environment, Climate Change, Disaster Management and Meteorology (Solomon Islands), Ministry of Economy (Fiji), Ministry of Climate Change, Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management (Vanuatu), Government of Tuvalu (Tuvalu)

**Estimated Project Budget:** US\$48.6 million

## National Mitigation Projects for the Green Climate Fund

1. Climate Resilient Forests, Communities and Value Chains in Fiji

**Description:** This helps implement the Emissions Reduction Programme that was prepared under the Forest Carbon Partnership Facility Carbon Fund. It will occur on Viti Levu, Vanua Levu, and Taveuni and cover about 1,685,742 hectares (about 90% of Fiji). The area is home to roughly 734,307 people (86% of the Fiji population).

**Relevant Entities:** Food and Agriculture Organization, Ministry of Forestry, Conservation International, Ministry of Economy.

**Estimated Project Budget:** US\$44.56 million

2. Promoting Electric Bus Transport in Fiji

**Description:** Fiji's long-term goal is to decarbonise the public bus fleet and this develops the institutional architecture and regulatory environment to do so. The project will pilot electric buses on multiple passenger routes and build local technical capacity to operate and maintain electric buses.

**Relevant Entities:** Ministry of Economy, Fiji Development Bank, Fiji Roads Authority, Land Transport Authority of Fiji, Fiji Bus Operators Association, and the private sector.

**Estimated Project Budget:** US\$14.2 million

3. Solar Energy for Off-grid hotels

**Description:** This helps micro, small, and medium off-grid hotels access solar technology. Because of the high upfront cost of solar technology, these hotels cannot currently access the technology, even if it is financially viable.

**Relevant Entities:** Ministry of Economy, Fiji Development Bank, Department of Energy, Global Green Growth Institute, Energy Fiji Limited and Fiji Hotel and Tourism Association.

**Estimated Project Budget:** US\$10 million

## Regional Mitigation Projects for the Green Climate Fund

1. Komai Haltec: Typhoon-resistant wind power facility installation in the SIDS and Philippines

**Description:** The project develops feasibility studies for wind power projects and provide loan financing to trigger private investment, with the overall goal of installing wind energy facilities of 300kW capacity that are typhoon resistant in the SIDS and Philippines.

**Relevant Entities:** Deutsche Bank Aktiengesellschaft, CCICD of the Office of the Prime Minister (Cook Islands), Ministry of Economy (Fiji), Office of the President (Palau), Climate Change Commission (Philippines), Ministry of Finance (Samoa), Ministry for Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (Tonga)

**Estimated Project Budget:** US\$201 million

## PROJECT PIPELINE FOR THE MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

### Adaptation Projects for the Climate Change and International Cooperation Division

#### 1. Climate Change Relocation

**Description:** The impact of current and future climate change on Fiji's food and water security, cultural practices, rural and coastal livelihoods, is quite significant—and, in some cases, are likely to surpass viable adaptation options in Fiji's communities. In response, the government launched the Climate Relocation of Communities (CROC) Trust Fund to attract bilateral and multilateral financing for planned relocation efforts and complement Fiji's own financing for the trust fund. The CCICD has identified 15 communities that need to be relocated, but techno-economic studies and social baselines assessments need to be completed. The CROC needs new resources to fund these studies and become operational.

**Relevant Entities:** Office of the Prime Minister, GIZ Global Programme on Human Mobility in the Context of Climate Change, New Zealand High Commission, iTaukei Affairs Board, and the Ministries of Economy, iTaukei Affairs, Lands and Mineral Resources, and Rural, Maritime and Disaster Management.

**Estimated Project Budget:** FJ\$1 million per community

#### 2. Improving infrastructure, technology, and products of 5 health care facilities as part of building climate resilient and environmentally sustainable health care facilities in Fiji

**Description:** Fiji's healthcare facilities are exposed to many natural disasters—namely tropical cyclones, flooding, and droughts—that can undermine healthcare access and service quality. The Climate Resilient and Environmentally Sustainable Health Care

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The impact of current and future climate change on Fiji's food and water security, cultural practices, rural and coastal livelihoods, is quite significant—and, in some cases, are likely to surpass viable adaptation options in Fiji's communities. In response, the government launched the Climate Relocation of Communities (CROC) Trust Fund to attract bilateral and multilateral financing for planned relocation efforts and complement Fiji's own financing for the trust fund.

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Facilities (CRESHCF) program upgrades and adapts the healthcare facilities so they can remain fully functional during and after extreme weather events. This uses the CRESHCF guidelines to identify the five most vulnerable facilities and upgrade their facilities to be climate-resilient.

**Relevant entities:** the World Health Organization and the Ministries of Economy and Health and Medical Services

**Estimated budget:** To be determined

#### 3. Efficient operation and maintenance of wastewater treatment systems

**Description:** This project will expand upgrades of 11 wastewater plants and the wastewater system in the Viti Levu and Vanua



Levu islands. The upgrades include technical assistance for a water and mass balance study of the wastewater system, identifying major wastewater sources, and determining major infiltrations into the wastewater system.

**Relevant Entities:** Department of Energy, Water Authority of Fiji (WAF), Fiji National University, Pacific Water and Wastewater Association, The Pacific Community, and the private sector.

**Estimated Project Budget:** US\$6.57 million

4. Efficient operation and maintenance of water supply systems

**Description:** This helps the WAF improve efficiency in water production, reduce water demand, and improve the efficient operation and maintenance of the water distribution system. This includes technical assistance for mass balance, energy and maintenance auditing of the water systems, feasibility studies, and infrastructure improvements.

**Relevant Entities:** Department of Energy, WAF, Fiji National University, Pacific Water and Wastewater Association, The Pacific Community, and the Private sector.

**Estimated Project Budget:** US\$5.07 million

5. Rehabilitation of Schools and Public Buildings damaged by TC Gita, Keni, Harold, and Yasa

**Description:** The Ministry of Economy through the Construction Implementation Unit (CIU) is rehabilitating schools and public buildings affected by TCs Winston, Keni, Gita, Harold, Yasa and Ana. These cyclones severely damaged 173 schools and 33 public buildings. These

buildings will be upgraded to withstand wind speeds of between 45m/s and 75m/s under CIU's ongoing Rehabilitation Program. These building designs will be certified by the Fiji Institute of Engineers. MOE seeks additional funding partners to complete the upgrades.

**Relevant Entities:** Ministry of Economy, Engineering Firms, Contractors and Ministry of Education, Heritage and Arts

**Estimated Project Budget:** FJ\$174.26 million

6. Savusavu Blue Town

**Description:** The Savusavu Blue Town Model (SBTM) creates a circular blue economy in the coastal city of Savusavu. This links economic growth with environmental protection and preservation. It sets forth seven areas of work, including to expand renewable generation options, establish zero-waste systems, and promote ecotourism. The goal is for Savusavu and other coastal communities to become sustainable Blue Towns.

**Relevant Entities:** Fiji Hotel and Tourism Association, Savusavu Town Council, and the Ministries of Economy, Waterways and Environment, Local Government, Fisheries, Youth and Sports, and Commerce, Trade, Tourism and Transport

**Estimated Project Budget:** Estimated initial investment of US\$60,000.00 is required for consultation fees and to create the SBTM framework.

## Mitigation Projects for the Climate Change and International Cooperation Division

### 1. Bus Network Information Transport System

**Description:** This installs GPS monitoring systems for all bus operators and real-time Passenger Information System (PIS) displays. A GPS monitoring system could gather and disseminate data about the distance, speed, and routes of each bus. The PIS displays would provide a real-time, central data management platform that would update digital/LED boards showing the arrival/departure times and delay announcements at bus stands and terminals throughout the 1,707 kilometres of Fiji's sealed road network.

**Relevant Entities:** Ministry of Commerce, Trade, Tourism and Transport, Ministry of Infrastructure and Meteorological Services, Land Transport Authority, Fiji Roads Authority, Fiji Bus Operators Association, Ministry of Economy, Department of Energy, Fiji Limited, Municipal Councils, Ministry of Communication (Dept. of Information Technology & Computing Services), Vodafone, and private sector bus companies

**Estimated Project Budget:** US\$113.55 million

### 2. Capacity building in the assessment, design, and construction of low energy/carbon buildings

**Description:** This provides technical assistance to Ministry of Infrastructure and Meteorological Services to develop guidelines for low carbon building design and construction, an energy efficient building code, and a green building rating system.

**Relevant Entities:** Department of Energy, the Pacific Community and University of the South Pacific.

**Estimated Project Budget:** US\$180.37 million

### 3. End-of-Life Vehicle Programme

**Description:** Fiji relies on used cars imported from other countries that reach the end of their life in Fiji. This builds up and expands public-private partnerships to collect and reuse scrap materials from recovered vehicles.

**Relevant Entities:** Ministry of Infrastructure and Meteorological Services, Ministry of Commerce, Trade, Tourism and Transport, Land Transport Authority, Ministry of Economy, Fijian Competition and Consumer Commission, SPREP, United Nations Environment Program, and the private sector.

**Estimated Project Budget:** US\$5.45 million

### 4. Fiji Rural Electrification Fund (FREF)

**Description:** Roughly 96% of Fijians have access to electricity, but the remaining 4% are either too far away from the electricity grid or on maritime islands not serviced by EFL. The Fijian Government established the Fiji Rural Electrification Fund (FREF) in 2017 to provide affordable, reliable, and renewable electricity to the rural communities without electricity. The FREF has successfully electrified Vio Island, on the coast of Lautoka and has identified five additional rural communities for electrification.

**Relevant Entities:** Fiji Rural Electrification Fund, Ministry of Economy, Department of Energy, Global Green Growth Institute, Fiji Bureau of Statistics, Energy Fiji Limited and the Private sector.

**Estimated Project Budget:** US\$6.5 million to electrify 20 rural communities

### 5. National Maritime Action Plan

**Description:** This creates a coordinated, national-level action plan to decarbonize maritime transport, particularly for international ships and domestic vessels. It identifies opportunities for the Fiji Ports Corporation Limited to decarbonise international shipping and a coordinated programme of actions to transition domestic shipping to zero-carbon future, starting with reducing GHG emissions from shipping 40% by 2030.

**Relevant Entities:** Ministry of Commerce, Trade, Tourism and Transport, Maritime Safety Authority of Fiji, Fiji Ports Corporation Limited, Fiji Revenue and Customs Service, Reserve Bank of Fiji, FDB, Vessel Owners/Operators, Fiji Maritime Academy, Shoreside maritime

industries, USP's Micronesian Centre for Sustainable Transport, International Maritime Organisation and SPC.

**Estimated Project Budget:** US\$0.55 million

#### 6. Pacific Blue Carbon Shipping Program (PSBP)

**Description:** This is led by Fiji, the Marshall Islands, Solomon Islands, Tuvalu, and Vanuatu and aims to decarbonize shipping in the Pacific by 2050.

**Relevant Entities:** Ministry of Commerce, Trade, Tourism and Transport, Ministry of Economy, Fiji Ports Corporation Limited, Maritime Safety Authority of Fiji, Fiji Hotel and Tourism Association, USP, and SPREP.

**Estimated Project Budget:** US\$500 million

#### 7. Promotion of lithium-ion batteries for renewable energy storage

**Description:** This provides technical assistance to expand the use of Lithium-Ion batteries. It would develop the policies, regulations, fiscal incentives, and financing schemes required to create a market for lithium-ion batteries to support on- and off-grid energy storage in Fiji.

**Relevant Entities:** Department of Energy, EFL, FNU, Pacific Power Association, Pacific Centre for Renewable Energy and Energy Efficiency, MOE, USP, and the private sector.

**Estimated Project Budget:** US\$185.16 million

#### 8. Reforestation of Degraded Forest Areas

**Description:** This is an attempt to restore degraded forests to enhance carbon stock, connect forest corridors, restore coasts, improve food security, mitigate the flood risks of riparian systems, and restore water catchments in community woodlots and industrial operations.

**Relevant Entities:** Ministry of Forests, iTaukei communities and other forest-owning communities, logging companies, FNU, USP, and development partners.

**Estimated Project Budget:** FJ\$1 million

## How to read and use this document

The NCFS is the blueprint for where to channel transformative public climate finance into systematically identified interventions and projects in Fiji. The NCFS ensures a more coordinated distribution of public climate finance and enhances a country-driven approach to climate finance. It integrates the priorities, strategies, and plans for the Fijian government and focuses on actions that should be supported with public resources, even if the objective of the public resources is to mobilize private sector finance. The NCFS breaks down the climate finance priorities for the twelve sectors analysed in the CFS.

Each sector has the following five sub-sections:

1. Summary of key points and priorities for the sector.
2. Summary of the climate impacts and risks facing the sector. These draw on the impacts identified in the CVA, NAP, NDC, and Fiji's other climate strategies.
3. Identification of relevant partners active in the sector.
4. Summary of the CFS, which analysed the annual climate finance needs, allocations, and government expenditures.
5. The sector's climate finance priorities, which are discussed in the following way:
  - a. **COVID-related cuts to climate finance**
    - i. These summarize and rank the climate-related projects in Fiji's domestic budget that were scaled back or halted due to the pandemic. These are the most urgent priorities and selected through the consultation process.
  - b. **Medium and long-term priorities.** These are presented at four levels of detail based on the information provided in the national climate documents and strategic plans.
    - i. **Policy objectives** These provide the overarching climate-related policy objectives

for each sector. They were narrowed to the top three policies based on the stakeholder consultations.

ii. **Priority interventions** Based on interventions in the NAP, strategic plans from the line ministries, and CVA, these are some of the interim steps that, if implemented, will help achieve the policy objective. The stakeholder consultations selected the top three interventions.

iii. **Strategic Targets** The targets laid out in the CVA, NAP, NDC Investment Plans, and line Ministry strategic plans were each matched with a priority intervention. The targets are metrics that would help achieve the priority interventions and were narrowed during the consultations.

iv. **Possible projects, if identified** These were identified in the stakeholder consultations and the NDC Investment Plan. They support a specific target or intervention.

5. Expand education and training programmes about the use of pesticides and business development practices.

- ◆ The CFS analysis found that although the sector needs at least FJ\$1.25 million per year to address climate change resilience, significant data limitations mean the true climate finance needs are far higher.
- ◆ The COVID-19 pandemic created an additional need of FJ\$4.96 million as several climate-related agricultural projects had their budgets cut.

### Projected Climate Vulnerabilities

The agriculture sector provided 6.4% of Fiji's GDP in 2018 and provides direct and indirect income to 37% of Fijians, including to almost half of those living below the poverty line (Ministry of Agriculture 2019). Fiji's CVA estimates that each 1% reduction in agricultural income would push an additional 1,000 Fijians into poverty, while the NAP estimates that climate change could increase annual costs from inland flooding by 100 to 300 percent and expose many farmers to higher flood risks. Indeed, in the 16 years prior to TC Winston, floods and cyclones caused more than FJ\$791 million in agricultural damages (Government of Fiji 2017). TC Winston alone brought agricultural damages of FJ\$542 million (Global Facility for Disaster Reduction and Recovery 2016).

Fiji's agriculture sector has limited irrigation capacity and is largely dependent on regular and robust rainfalls. The initial impacts of climate change are already adversely affecting Fiji's agriculture sector by altering the predictability of rainfall, raising temperatures, introducing new pests, and driving saltwater intrusion into coastal farms. These impacts are eroding soil quality and reducing the productivity of Fiji's smallholder farmers. Most climate impacts are affecting women, who are primarily responsible for overseeing subsistence agriculture. It is essential that all stakeholders mainstream climate-smart agricultural practices that do not encroach on native forests or otherwise degrade other ecosystems.

### Key Stakeholders

The Ministry of Agriculture (MOA) and Ministry of Sugar Industry, along with relevant statutory bodies in the agricultural space, will implement these priorities. MOA provides economic opportunities, environmental sustainability, and food security

## Sector Summaries

### Introduction

This section provides an in-depth discussion of the priority actions that need to be financed so Fiji can build a climate-resilient and low-carbon economy. It breaks down 12 sectors: agriculture, blue economy, climate governance, climate-induced relocation, disaster risk management, electricity, forestry, gender and social inclusion, housing, human health, transport, and water & sanitation.

### AGRICULTURE

#### Key Points

- ◆ Stakeholders identified the top five priority interventions in the sector to be:
  1. Embrace climate-smart agriculture,
  2. Implement disaster risk financing for agriculture,
  3. Promote sustainable agricultural methods,
  4. Provide support for sustainable agribusiness and e-commerce on the outer islands and in rural areas, and



to commercial and subsistence farmers, while the Ministry of Sugar promotes a sustainable sugar industry and provides income for the people engaged in the sugar industry. The CFS found that the following external partners have recently or are currently supporting climate-related projects in the sector:

- ◆ European Union
- ◆ Food and Agriculture Organisation
- ◆ International Fund for Agricultural Development
- ◆ Japan International Cooperation Agency
- ◆ New Zealand Ministry of Foreign Affairs and Trade
- ◆ United Nations Development Programme

### Recent Climate Finance Trends

The CFS estimates that roughly FJ\$74 million was allocated annually to support climate-related

activities in Fiji's agriculture sector, including just over FJ\$4.5 million for research and development, FJ\$5 million for loans to small and medium-sized agriculture businesses, and FJ\$2.5 million to improve the drainage of some fields (see Table 5 below). Although the CFS suggests climate-related activities in the agricultural sector are receiving sufficient support when compared to the identified needs, it could not find cost estimates for climate adaptation by the private sector and subsistence farmers—the two largest investors in the sector.

The coronavirus pandemic upended the global economy in March 2020, after research on the CFS was completed and precipitated a sharp decline in Fiji's domestic government revenue. The resulting budget meant FJ\$3.45 million was cut from climate-related

**Table 5 | Climate Finance Snapshot—Agriculture Sector**

GOVERNMENT POLICY OBJECTIVES	ANNUAL CLIMATE FINANCE NEEDS** (FJD PER YEAR)	ANNUAL BUDGET ALLOCATIONS* (FJD PER YEAR)	ANNUAL ACTUAL SPENDING* (FJD PER YEAR)
Develop a national food and nutrition security policy or framework	FJD 200,000	FJD 1,939,444	FJD 643,279
Raise more awareness on the importance of food and nutrition security	Not costed in any documents	FJD 1,986,832	FJD 4,892
Encourage the better implementation of food and nutrition security priorities in agriculture, fisheries, and other sectors	FJD 550,000	FJD 10,836,874	FJD 1,398,502
Continue broad-based support to agriculture as a key driver to economic growth and poverty alleviation	Not costed in any documents	FJD 22,786,689	FJD 4,243,798
Provide targeted support to selected commodities	FJD 200,000	FJD 5,087,805	FJD 3,913,121
Empower farms through agriculture land use practices and improved farm efficiency that promote sustainability in resource utilisation	FJD 297,429	FJD 2,355,496	FJD 8,040
Enhance the growth of the sugar industry	Not costed in any documents	FJD 29,067,825	FJD 22,469,683
<b>TOTAL: AGRICULTURE SECTOR</b>	<b>FJD 1,247,429</b>	<b>FJD 74,060,965</b>	<b>FJD 32,681,315</b>

\* NOTE: The annual budget allocation provides an indication of the total possible amount of public climate finance that was available to the relevant activities and from all known funders. The availability of data on actual spending varies significantly by funder and could not be secured for every project that was implemented.

\*\* Note: Cost estimates for the agriculture sector are provided by the CVA. The CVA cost estimates focus on interventions that fall under the jurisdiction of the public sector, such as promoting climate resilience farming practices and expanding research and development into climate-resilient seed varieties.

Source: Reproduced from the Fiji Climate Finance Snapshot, 2016 to 2019.

agriculture projects from the COVID-19 Response Budget (released in March 2020) and FJ\$1.51 million from the 2020–2021 National Budget (released in July 2020). During consultations, we asked stakeholders to rank the most affected projects in order of importance. Their feedback is discussed below, in Box 1.

### Climate Finance Policy Priorities

The climate finance priorities come from Fiji's NAP and the 5-year strategic plans of MOA and the Ministry of Sugar Industry. MOA's strategic plan estimates that implementation will cost just over FJ\$52 million over five years, or roughly FJ\$9.3 million to FJ\$11.5 million per year. The consultations prioritized the following three climate-related policies:

1. Improve research and academic partnerships and its institutional, technical, and scientific

capacity to do evidence-based planning and programming to support sustainable agroforestry practices.

2. Expand and improve the effectiveness of bottom-up outreach to subsistence and smallholder farmers to ensure they can access resilient crop varieties, livestock breeds, and affordable crop insurance.
3. Increase awareness and adoption by farmers of sustainable agroforestry systems and agriculture practices, with a specific focus on improving soil health and soil conservation.

### GOAL ONE: IMPROVING INSTITUTIONAL, TECHNICAL AND SCIENTIFIC CAPACITY

This is essential for Fiji to successfully mainstream climate considerations into its agricultural practices. The MOA has proposed to create a Climate and

#### Box 1: Cuts to Domestic Climate Finance as a result of COVID-19—Agriculture Sector

##### Top Priority: Food Security Programme.

This will strengthen commercial agriculture development by promoting non-sugar agri-businesses and expanding domestic production of crops and livestock that can reduce Fiji's import bill. After March 2020, subsistence agriculture became a rural social safety net for those unemployed by the COVID-19 pandemic. The project allocation was reduced by FJ\$603,930 in the COVID-19 Response Budget.

##### Second Priority: Watershed Management.

Implemented by the Ministry of Waterways and Environment, this protects farmers from flooding by regulating streams, river discharge capacity, and excessive run-off. It constructs small retention dams and reservoirs, builds drainage & irrigation facilities, promotes flood and drought mitigation, and expands riverbank protection and land conservation efforts. Most Fijians are heavily dependent on local, or subsistence farming and this helps reduce their flood risks. The project allocation was reduced by FJ\$1.35 million in the COVID-19 Response Budget and further cut by FJ\$110,000 in the 2020–2021 National Budget.

##### Third Priority: FDB Subsidy—Interest on Agricultural Loans.

Implemented in collaboration with FDB, this provides agriculture and commercial loans to Fijian farmers. The project allocation was reduced by FJ\$500,000 in the COVID-19 Response Budget.

##### Fourth Priority: Farm Mechanization.

The project supports farm mechanization for all farmers by providing necessary equipment and resources to increase productivity, reduce production costs, and increase farmers' incomes. It establishes machinery pools, develops model farms, organises field days, and conducts trainings for farmers and the Ministry staff. It will bolster the climate resilience of Fiji's agriculture sector by ensuring smallholder and subsistence farmers have access to the equipment and knowledge necessary to adapt to growing climate impacts. The project allocation was kept the same in the COVID-19 Response Budget but reduced by FJ\$400,000 in the 2020–2021 National Budget.

##### Fifth Priority: Farm and Cane Access Roads.

Implemented by the MOA in collaboration with the Ministry of Sugar Industry and Fiji Sugar Corporation, this assists farmers by upgrading more than 3,602 kilometres of roads to ensure sugarcane is delivered efficiently to the mills and by upgrading more than 120km of (non-sugar) farm roads in the Northern Division. This includes grading, gravelling, installing culverts, and constructing river crossings. Between 2016 and 2019, it assisted more than 38,000 farmers, upgraded more than 3,876 kilometres of road, constructed 86 crossings, and provided 6,367 culverts free to sugarcane farmers. Project allocation was reduced by FJ\$1 million in the COVID-19 Response Budget and by FJ\$1 million 2020–2021 National Budget.

Disaster Risk and Resilience Unit within its Economic Planning and Statistics Division to facilitate coordination across different Ministry divisions and external stakeholders, provide leadership, and build technical knowledge.

In addition, the Sugar Research Institute of Fiji (SRIF) is determined to improve its research capacity to address climate impacts by improving the collection

of microclimate data, inculcating sustainable land and soil management strategies, improving sugar varieties to suit a changing climate, and using an integrated management approach for climate-related pests and diseases. During consultations, stakeholders were asked to rank the interventions, discussed in Box 2, to build this capacity.

## Box 2: Priorities to “Improve institutional, technical and scientific capacity and partnerships for evidence-based planning”

**Top Priority:** *Strengthen research collaboration with farmers, communities, and national research institutions— supported (but not led) by regional and international institutions—to create a community of practice and to support knowledge networks, which facilitate innovative and climate adaptive farming practices.*

This will strengthen climate adaptation by facilitating knowledge sharing about climate impacts and climate resilient techniques. As nearly 70% of farmers engage in subsistence farming, the goal is to cluster them to promote knowledge sharing. IFAD is trying to get GCF approval for a project to “Build resilience of smallholder farming communities, landscapes and institutions to contend with climate change.” The project will train 150 MOA staff on climate-smart agriculture practices and sustainable resource management techniques.

SRIF intends to undertake high quality research, development, and advisory services to identify, develop, and distribute cane varieties that are tolerant of droughts, salt water, and high winds. SRIF is promoting three climate-resilient varieties—Viwa (tolerant of high winds), Mana (drought tolerant), and Galoa (tolerant of salt water)—to farmers, but SRIF needs additional funding and support to scale distribution to more farmers.

**Second Priority:** *Develop and deploy policies, risk financing instruments, and training services that incorporate climate change adaptation principles.*

Talanoa Consulting is managing the *Pacific Agri-business Research in Development Initiative Phase 2* programme, which helps agribusinesses assess and manage potential business and climate risks.

Additionally, three interim targets could guide implementation:

1. Develop and implement a consolidated framework for Climate Change Resilient Agriculture.

2. Institutionalise the *Drua Incubator*, a sub-unit dedicated to piloting and developing innovative financial products such as parametric micro-insurance. The CCICD is working with various partners, including the Grand Duchy of Luxembourg and the UN Capital Development Fund to further institutionalize the Drua Incubator. The Drua recently piloted a low-cost ‘livelihood protection’ insurance product for farmers and fisherman but needs help scaling it. The Drua is also working with private sector partners to develop a private-sector-led investment fund for renewable energy infrastructure in the Pacific and is supporting Fiji’s efforts to issue a blue bond.

3. Support FDB to develop several initiatives to facilitate medium and long-term credit resources, lower interest rates and potentially include a ‘climate smart agriculture’ risk sharing facility to unlock financial instruments for Micro, Small and Medium Enterprises (MSME). One example is to have climate-resilient value chains and production processes for smallholder farms. A second proposal is on-lending/on-granting to MSME’s and farmer-based associations lead by women.

**Third Priority:** *Improve bio-security efforts (including border controls, early warning systems, on-site visits, and breeding programmes) to enhance protection and action against invasive species, pests, and diseases, which affect planting and livestock production, and establish good bio-security facilities that follow sustainable agriculture practices.*

This will protect Fiji’s ecosystem from additional environmental stressors that could be compounded by climate change. To get there, stakeholders identified an interim target to build two diagnostic labs for disease sampling and diagnostics in the Western and Northern divisions. The Australian Government-funded Market Development Facility is working to introduce and distribute higher quality seeds into the Fijian market.



**GOAL TWO: INCREASING ACCESS TO RESILIENT CROP VARIETIES, LIVESTOCK BREEDS, AND SOCIAL SAFETY NET OR MARKET PRODUCTS THAT MITIGATE CLIMATE RISKS FOR FARMERS**

This policy aims to expand and accelerate market-driven solutions to climate-resilient agricultural products and practices to improve the lives of

smallholder and subsistence farmers. If implemented, these actions will enhance agricultural production despite increasingly adverse climate conditions and decrease the time required for the agricultural industry to return to normal operations after a disaster event. During consultations, stakeholders identified the top three investment priorities (see Box 3).

**Box 3: Priorities to “Increase access to resilient crop varieties, livestock breeds, and society safety nets and market products that mitigate risks for farmers.”**

**Top Priority:** *Promote and integrate climate-smart agriculture (CSA) practices into farmer trainings, extension services, and policies (while being responsive to the needs of disadvantaged groups and tailoring them to subsistence, semi-commercial, and commercial farmers) and adopt nature-based and urban solutions where possible.*

The above priority will enhance agricultural sustainability, increase productivity and farmer incomes, help subsistence farmers adapt to climate change, and reduce greenhouse gas emissions. Stakeholder identified two interim targets:

1. 500 farms supported with quality breeding stock and nutritional plans based on climate smart agricultural practices.
2. 250 hectares of land that adopt and utilize climate-resilient agricultural techniques. As of publication, no relevant projects were under development or implementation.

**Second Priority:** *Increase adoption of sustainable soil and land management techniques to address soil erosion, desertification, increased soil salination and to improve soil fertility, nutrient management, arability, and soil restoration and by revising and enacting the Soil Conservation Improvement Bill.*

This will allow for greater soil preservation and improved land management techniques for farmers by expanding policies, education efforts, and awareness trainings. If achieved, farmers will be able to adopt more sustainable soil management techniques going forward, which will ensure soils are healthier and more resilient.

The sugar industry is continuously promoting soil management techniques that reduce soil erosion, sequester carbon, and improve soil health. The industry is developing programmes to use green manure to revitalize soil. The sugar industry has the potential to produce bio compost by using mill

by-products. Capital investment is required to set up the bio compost plants to promote sustainable organic farming.

**Potential Investment Opportunity:** The Fiji Sugar Corporation's *Green Manure* project sequesters carbon and improves soil health. Following several successful pilots, Fiji Sugar Corporation is looking for partners to help this work.

**Third Priority:** *Encourage the diversification of agricultural produce for subsistence consumption, encourage market sales (especially in the sugarcane belt, coastal and interior areas, and marginal land), and expand access to financial literacy programmes and services for farmers.*

This will enable farmers in rural and outer islands to produce crops for their own use and access financial programmes that allow them to sell their products. This will enhance the livelihoods and economic resilience of Fiji's rural communities.

The European Union, in association with the Fijian Government, has a project to *Support Sustainable Rural Livelihoods*, which will help eradicate poverty, enhance rural livelihoods, and promote food (and nutrition) security. It needs to be scaled to cover more rural communities and the following five targets should be implemented:

1. Ensure 200 hectares of pulses (nutritionally dense seeds) are planted,
2. Establish 3 new climate-resilient crop varieties in the non-sugar sector,
3. Release two animal breeds to farmers,
4. Implement a taro leaf blight-resistant breeding programme, and
5. Expand the use of enteric fermentation in livestock.

### GOAL THREE: INCREASING AWARENESS AND ADOPTION BY FARMERS FOR SUSTAINABLE RESOURCE MANAGEMENT AND CLIMATE-SMART AGRICULTURE

Expanded knowledge and use of climate-smart techniques will increase farmers' knowledge about how to cultivate climate resilient agriculture in their

day-to-increase productivity, enable the introduction of new products, and expand the efficiency and resilience of the sector. Box 4, below, details the top three investment priorities.

#### Box 4: Priorities to “Increase awareness and adoption by farmers for sustainable resource management and climate-smart agriculture practices.”

**Top Priority:** Strengthen Fiji's disaster preparedness efforts in the agriculture sector first by encouraging agronomy practices, climate-based crop planning, and the protection, breeding, and cultivation of traditional and improved seed varieties, cultivars, and livestock breeds; and second, by advancing research and nurseries; and third, by enhancing the resilience of crop and livestock breeding infrastructure, supply systems, seed, and food storage facilities.

Since Fiji is so vulnerable to climate impacts such as floods, tropical cyclones, and sea-level rise, cultivating disaster preparedness across the sector will help decrease the potential negative impacts of climate change. Stakeholders identified two interim targets:

1. 500 farmers to be trained in climate-smart agriculture practices
2. 25% increase in the number of farmers adopting organic production with secure market access.

FDB's *Resilient Agriculture Fiji* project consists of two complementary and mutually reinforcing components: create climate-resilient value chains and rural infrastructure, with cross-cutting activities supporting both components. .

**Second Priority:** Assess farm community and sectoral attitudes to climate adaptation actions in agriculture to develop appropriate and inclusive education and

awareness programmes, extension services, farmer field schools, and institutionalized peer group systems that stimulate the take-up of agriculture aligned with adaptation actions.

These actions will educate farmers on the process and techniques of climate smart agriculture and help them share this knowledge. The interim target in this priority area is to have a 20% increase in the number of farmers using climate adaptation programmes.

FDB has a potential project named *Climate Smart Agriculture Risk Sharing Facility for MSMEs* which will provide credit lines exclusively targeted to MSMEs and farmer-based associations led by women and young entrepreneurs that support low-emissions and climate-resilient agriculture practices.

**Third Priority:** Work with diverse and inclusive stakeholders to ensure farmers (including disadvantaged groups) have inclusive access to hazard maps and climate information services, through a range of information communication technology to support inclusive participatory scenario planning at the local level.

Working with a variety of stakeholders will both help farmers and the MOA to gather climate data and make data-driven decisions about how best to create a climate-resilient agricultural sector.

## BLUE ECONOMY

### Key Points

- ◆ From the stakeholder consultations, climate finance priorities are to:
  1. Conserve and manage natural and ocean resources.
  2. Establish methods that promote climate-smart and ecosystem-based fishing practices to ensure the sustainable management of fisheries resources.
  3. Protect ocean ecosystems from the severe effects of climate change.
  4. Pivot away from a fisheries-focused approach to an ecosystem-based and climate resilient approach
- ◆ The CFS estimated the total allocated public finance to be FJ\$72.3 million annually, but the data on identified needs is very limited.
- ◆ The COVID-19 pandemic decreased funding for climate-related blue economy projects by FJ\$4.16 million.

### Projected Climate Vulnerabilities

The blue economy refers to the use of ocean resources— such as fisheries and coastal ecosystems including mangroves, sea grass, and coral reefs—to support ecosystem health, economic growth, and improved livelihoods. Fiji's oceans account for nearly 40% of its GDP—as tourism (38% of GDP) and fisheries (2% of GDP) comprise a significant portion of the Fijian economy (Reserve Bank of Fiji 2020). Additionally, roughly 27% of the population lives within 1 kilometre of the coast (Andrew 2019). In the Pacific, women account for 66% of workers in large-scale marine fisheries and 54% of workers in small-scale inland fisheries and thus are especially vulnerable to the negative climate impacts on the blue economy (Michalena 2019). Coastal ecosystems also provide protection against natural disasters and help sequester carbon.

However, climate impacts and ongoing environmental pressures are undermining Fiji's blue economy. Mangrove coverage in Fiji declined by 25% between 2003 and 2013, with about 17% of coral reefs protected by conservation areas and Fiji's Locally Managed Marine Area (LMMA), which is a

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**The blue economy refers to the use of ocean resources—such as fisheries and coastal ecosystems including mangroves, sea grass, and coral reefs—to support ecosystem health, economic growth, and improved livelihoods.**

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network of resource conservation NGOs, government agencies, academic institutions, and more than 400 communities (Government of Fiji 2017). Fiji's marine biodiversity is at risk due to a fuel intensive marine transport fleet and the absence of proper waste collection systems in coastal communities.

Meanwhile, more intense storms and increasingly warmer waters threaten fish stocks, coral reefs, and other marine ecosystems to a degree that could lead to irreversible ecosystem collapse. For example, the fisheries sector sustained more than FJ\$40.7 million in damages from TC Winston (Global Facility for Disaster Reduction and Recovery 2016). The Post-Disaster Needs Assessment estimates that it will take at least 12 years for the sector to recover. Unless the management of Fiji's blue economy pivots away from a fisheries-focused approach to an ecosystem-based, climate-resilient approach, climate impacts will cripple Fiji's blue economy.

### Key Stakeholders

Key stakeholders include the Ministries of Fisheries, Waterways and Environment, Rural and Maritime Development and Disaster Management, and Lands and Mineral Resources. The Ministry of Waterways and Environment oversees some environmental policies and regulations, such as the Environment Management Act, to protect marine ecosystem. The Ministry of Fisheries is responsible for implementing policies and projects to protect sustain and manage Fiji's fisheries on a scale that ensures nationwide food security and economic resilience. The Ministry of Lands and Mineral Resources governs mining activities. The Ministry of Rural and Maritime Development and Disaster Management oversees



efforts to improve livelihoods of people associated with the blue economy in the rural and maritime regions. The CFS identified the following external stakeholders that are currently or have recently supported climate-related projects in the sector:

- ◆ Asian Development Bank
- ◆ Australian Government and Bureau of Meteorology
- ◆ BMU–International Climate Initiative
- ◆ David and Lucille Packard Foundation
- ◆ European Union
- ◆ French Development Agency
- ◆ German Federal Ministry of Nature Conservation, Environment, Building and Nuclear Safety (BMU)
- ◆ Global Environment Facility
- ◆ Gordon and Betty More Foundation
- ◆ Japan International Cooperation Agency
- ◆ New Zealand Ministry of Foreign Affairs and Trade
- ◆ Pacific Community

- ◆ Principality of Monaco
- ◆ United Nations Development Programme
- ◆ Wildlife Conservation Society
- ◆ Waitt Foundation

#### Recent Climate Finance Trends

The CFS estimated that public climate finance allocated FJ\$72.3 million annually from 2016–2019, including FJ\$13.5 million for fisheries and almost FJ\$58 million for coastal ecosystems (see Table 6). The Ridge to Reef project (funded by the Fijian Government, the Global Environmental Facility, United Nations Development Program, and others) accounted for around half of this funding, while the Coastal Erosion Protection Works project, funded by the Fijian Government, accounted for a quarter.

COVID-19 led to cuts of FJ\$4.16 million for climate related projects. During consultations, stakeholders prioritized the affected projects (see Box 5).

**Table 6 | Climate Finance Snapshot—Blue Economy Sector**

GOVERNMENT POLICY OBJECTIVES	ANNUAL CLIMATE FINANCE NEEDS** (FJD PER YEAR)	ANNUAL BUDGET ALLOCATIONS* (FJD PER YEAR)	ANNUAL ACTUAL SPENDING* (FJD PER YEAR)
Sustainably manage the benefits from offshore fisheries resources	Not costed in any documents	FJD 4,288,729	FJD 294,167
Support inshore coastal fisheries through sustainable fisheries management and development	FJD 1,140,000	FJD 9,229,373	FJD 4,174,228
Expand the restoration, revitalization, and conservation of coastal ecosystems, such as mangroves and coral reefs	FJD 4,030,000	FJD 57,158,524	FJD 2,682,255
Support growth of aquaculture industries	FJD 300,000	FJD 1,697,757	FJD 634,153
<b>TOTAL: BLUE ECONOMY SECTOR</b>	<b>FJD 5,470,000</b>	<b>FJD 72,374,383</b>	<b>FJD 7,784,803</b>

\* NOTE: The annual budget allocation provides an indication of the total possible amount of public climate finance that was available to the relevant activities and from all known funders. The availability of data on actual spending varies significantly by funder and could not been secured for every project that was implemented.

\*\* Note: Cost estimates for the blue economy sector are provided by the CVA and the LEDS. The CVA cost estimates focus on interventions that fall under the jurisdiction of the public sector, such as strengthening community-based fisheries management and strengthened managing and monitoring of coastal ecosystems. The LEDS provides cost estimates on interventions to protect and revitalize Fiji's mangroves, seagrass, and other sources of blue carbon sequestration.

Source: Reproduced from the Fiji Climate Finance Snapshot, 2016 to 2019.

## Box 5: Cuts to Domestic Climate Finance as a result of COVID-19—Blue Economy Sector

### **Top Priority:** *Coastal Erosion protection works.*

This is similar to the Ministry of Waterways and Environment's ongoing riverbank protection works but focuses on building the resilience of coastal communities. It is implementing protective measures, such as building seawalls, groynes, and wave breakwaters, to slow coastal erosion. The project allocation was reduced by FJ\$2.76 million in the COVID-19 Response Budget and by FJ\$517,450 in the 2020–2021 National Budget.

### **Second Priority:** *Construction of Ice Plants.*

Implemented by the Ministry of Fisheries, this builds ice plants, fisheries offices, and staff quarters in the rural and maritime fishing communities that rely heavily on marine resources for their daily sustenance. The project allocation was not affected in the COVID-19 Response budget but was reduced by FJ\$519,831 in the 2020–2021 National Budget.

### **Third Priority:** *Assistance to Commercial Aqua-culture farmers.*

Implemented by the Ministry of Fisheries, this increases the business acumen of farmers and the adoption of improved aquaculture practices. The

project allocation was reduced by FJ\$250,000 in the COVID-19 Response budget and was allocated the same amount in the 2020–2021 National Budget.

### **Fourth Priority:** *Ongoing construction of Multi-species hatchery.*

Implemented by the Ministry of Fisheries, this establishes a multi-species hatchery centre in Caboni, Ra and aims to cultivate and distribute high-value marine species such as grouper, sandfish, mullet, rabbit fish, milkfish and shrimps to farmers and communities. It will supply tilapia fry and prawn post larvae to farmers in the Western Division. As of September 2020, the project delivered more than 246,000 tilapia fries to 87 tilapia farmers with 113 ponds, 83,000 prawns to 19 prawn farmers with 32 ponds, and 18,000 grass carps to 1 farmer with 2 ponds. The project allocation was reduced by FJ\$233,769 in the COVID-19 Response budget.

## Climate Finance Priorities

The climate finance priorities for the blue economy come from Fiji's climate strategies and from the strategic plans for the Ministries of Fisheries, Waterways and Environment, Forestry, and Rural and Maritime Development and Disaster Management. These priorities were further refined during the consultation process. The top three climate-related policies are:

1. Rehabilitate and conserve Fiji's oceans and coastal ecosystems, particularly the coral reefs, mangroves, sea grass and infrastructure.
2. Ensure Fiji's coastal fisheries can continue to provide food and nutrition security and local employment to coastal communities throughout the islands.

3. Support the growth and sustained economic contributions of the fisheries sector, including offshore fisheries and large- and small-scale inshore fisheries production.

## GOAL ONE: OVERSEE THE REHABILITATION AND CONSERVATION OF FIJI'S OCEANS AND COASTAL ECOSYSTEMS

Protecting the coastal ecosystems will ensure they can continue to provide clean water and abundant fish stocks, protect the livelihoods of people living along coastal areas, and build coastal resilience against climate impacts. Consultations identified the top three priorities (see Box 6).

Box 6: Priorities to “Rehabilitate and conserve Fiji’s oceans and coastal ecosystems.”

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**Top Priority:** *Strengthening and enforcement of planning and environmental legislative and institutional frameworks.*

The top priority is to strengthen and enforce the policies that protect Fiji’s coastal ecosystems. Policies including the Fiji Fisheries Act, Environment Management Act, National Oceans Policy, and the Climate Change Bill. Stakeholders identified three targets:

1. At least 30% of offshore areas managed as part of Fiji’s LMMAs
2. Establish a government wide database to inform management of coral reefs, sea grass, and mangroves. This could be built off the CommonSensing project discussed under the Housing section.
3. Develop and implement Fiji’s National Maritime Action Plan (see CCICD adaptation projects in Annex II)

**Second Priority:** *Prioritize, assess, monitor, and delineate critical areas for the protection and sustainable management of ecosystems-based services, cultural importance, biodiversity, food security, water security, access and benefit sharing, and their importance to adaptation and disaster risk reduction.*

This covers efforts to prioritize, assess, and monitor critical areas and to establish processes that can sustainably protect these ecosystems. Achieving this will help bolster Fiji’s defences to climate change, slow ongoing biodiversity loss, reduce land and sea pollution, and protect the livelihoods of the coastal communities. The International Union for Conservation of Nature is setting up a regional Nature-based Solutions (NbS) Hub based in Fiji to provide capacity and technical support for NbS practitioners. It will

incorporate the key principles of the new Global Standard for NbS in the design, de-risking, and implementation of Fiji’s NbS investments.

The Makogai Mariculture Research Center with the Ministry of Fisheries needs to be upgraded to produce resilient seeds for marine species and help Fiji address issues around food security, increase coastal fisheries production, promote coastal conservation, and build its adaptive capacity.

**Third Priority:** *Implement ecosystem-based approaches to adapt, protect, maintain, and restore degraded habitats and to prioritize restoration of critical watersheds, riparian, and coastal zones, with active community, NGO, and private sector engagement.*

The NDC Investment Plan proposes the Savusavu Blue Town project, which targets coastal communities with tropical marine biodiversity and would conduct a comprehensive town development plan of Savusavu that lays out a complete transition to alternative renewable energy sources by 2030, promotes enhanced waste management and solid waste recycling, preserves the marine ecosystems, and enhances sustainable tourism. This project is in the CCICD’s adaptation project pipeline. See Annex II for the concept note.

The FDB is looking for help to support the Coral Reef Resilience Program, led by the World Wildlife Fund that adapts the world’s most resilient reefs. Beginning in Fiji, it will ensure the continued productivity of reef and connected coastal ecosystems by addressing climate-related threats and key stresses from land-based pollution and over-exploitation of reefs. This project is on the shortlist for GCF adaptation projects. See concept note in Annex II.



## GOAL TWO: ENSURE FIJI'S COASTAL FISHERIES CAN CONTINUE TO PROVIDE FOOD SECURITY AND LOCAL EMPLOYMENT TO COASTAL COMMUNITIES

Many individuals who lost their jobs due to the pandemic returned to small scale and commercial fishing to support their families. Sustainably managing coastal fisheries is vital for Fiji's long-term economic and social development. Stakeholders recommended three investment priorities (see Box 7).

## GOAL THREE: SUPPORTING THE GROWTH AND SUSTAINED ECONOMIC CONTRIBUTIONS OF THE FISHERIES SECTOR, INCLUDING OFFSHORE, LARGE, AND SMALL-SCALE INSHORE FISHERIES

Fiji's fisheries sector accounts for almost 2% of national GDP and 7% of its export income (Ministry of Fisheries 2019). Climate change is projected to decrease productivity from all types of fishing operations and to increase food insecurity and poverty unless the sector adapts. Box 8 recommends the top investment priorities.

### Box 7: Priorities to “Ensure Fiji’s coastal fisheries can continue to provide food security and local employment to coastal communities throughout the islands.”

**Top Priority:** *Support the restoration, enhancement, and conservation of coastal ecosystems such as mangroves, sea grasses and coral reefs, in collaboration with the Ministries of Forestry and Fisheries, local communities and actors, community fishery reserves, and other partners.*

This will harness relevant technical expertise, expand the scope of agencies working to sustainably manage marine ecosystems, and create more knowledge about how to best preserve the coastal ecosystems. To get there, stakeholders identified an interim target to prepare divisional coastal management plans by 2024.

Additionally, provisions should be made to conserve seagrass meadows, which can sequester more carbon emissions. The Ministry of Fisheries launched the *One Million Coral Planting Initiative* on October 9th, 2020 to protect and restore Fiji's natural assets. Under this initiative, the Ministry collaborates with the fishing industry, coral reef scientists and restoration practitioners, conservation partners, and communities to protect and restore Fiji's coral reefs.

**Second Priority:** *Intensify collaboration with development partners (land and marine) to strengthen community-based fisheries management, to develop*

*integrated sustainable resource management plans, and to implement ongoing fisheries programmes.*

The private sector is the primary actor in the fisheries sector, but fisheries resources are threatened by overfishing and by growing ocean pollution and waste mismanagement, which fall under the jurisdiction of local and national governments. The interim target is for 100% of inshore fishing grounds to be managed in LMMAs.

**Third Priority:** *Upgrade existing database to capture data on the status of inshore/coastal and offshore marine resources (including regeneration and harvesting levels) and implement processes to ensure this database informs planning processes and guides decision-making.*

This database will help build local institutional capacity regarding the proper planning and management of sustainable fisheries-related projects and help stakeholders understand how fisheries are affected by climate change and how to adapt. To get there, an interim target is to develop a coastal fisheries database, based on data collected and coordinated by a Blue Economy Working Group, by 2024. The creation of this database is not currently underway.

**Box 8: Investment priorities to “Support the growth and sustained economic contributions of the fisheries sector.”**

**Top Priority:** *Promote sustainable fisheries and non-extractive cultured fisheries management by developing and implementing management tools that include the establishment and better management of inshore and deep-water marine protected and locally managed areas.*

Recommended actions include seasonal closures of fisheries, enforcement of size limits and quotas for species, restrictions on gear, review of the offshore fishing license caps, and limits on the use of fish aggregating devices. The primary target is to reach 100% compliance among commercial fishing operations with the Standard Operating Procedures and Environment Management Acts.

Additionally, Conservation International has a GCF concept note titled “Adapting Pacific Island Tuna Fisheries to Climate Change.” The project looks to secure tuna stocks in eight Pacific Island countries, including Fiji, to protect coastal communities and support economic development. More details can be found in the concept note in Annex II (shortlist of GCF Adaptation projects) and on the GCF website.<sup>vii</sup>

**Second Priority:** *Strengthening of community-based fisheries management.*

Enhancing effective community-based fisheries management will require a wide range of stakeholder engagement and capacity building efforts so communities gain a better understanding of how to adapt. The Ministry of Fisheries is collaborating with conservation partners and relevant government agencies to establish community-based marine protected areas and a suitable management plan.

**Third Priority:** *Create a sustainable market environment for non-tuna species and for two new cultured species.*

Creating a sustainable market for other fishing products will help preserve the existing tuna stock, diversify Fiji’s fishing economy, and promote a healthier marine ecosystem. An interim target is to have Fijian farmers sustainably produce and supply 1000MT of Tilapia, 1000 MT of shrimps, and two new species of cultured products for the local and export markets.

## CLIMATE POLICY AND GOVERNANCE

### Key Points

- ◆ The stakeholder consultations identified that the top investment priority is to integrate climate considerations into national, sub-national, and community planning processes.
- ◆ Stakeholders emphasized the importance of monitoring and evaluating the effectiveness of climate interventions and targets, including those in the NCFS.
- ◆ The CFS found that more than FJ\$59 million per year in public climate finance was allocated between 2016 and 2019 to strengthen climate governance, compared to the identified costs, of FJ\$500,000 per year. This cost estimate is based on data with very significant constraints and unlikely to be truly representative.

### Projected Climate Relevance

Climate change poses a clear and present danger to Fiji's development prospects, so designing, implementing, and enforcing a robust system of climate-related policies, regulations, and government processes is vital. These governing mechanisms need to ensure that extensive domestic climate expertise is mainstreamed throughout the government process and that the technical tools to screen projects and establish climate-informed decision-making processes are developed and integrated into all relevant government operations. Fiji's NDP, CVA, LEDS, NDC Roadmap and NAP provide guidance on how to create this system.

### Key Stakeholders

The Ministry of Economy and relevant line ministries are doing this work, with support from the following external organizations:

- ◆ Asian Development Bank
- ◆ Australian Department of Foreign Affairs and Trade
- ◆ Australian Government and Bureau of Meteorology
- ◆ BMU–International Climate Initiative
- ◆ David and Lucille Packard
- ◆ Duke of Edinburgh
- ◆ European Union
- ◆ Food and Agriculture Organisation
- ◆ Forum Fisheries Agency

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Climate change poses a clear and present danger to Fiji's development prospects, so designing, implementing, and enforcing a robust system of climate-related policies, regulations, and government processes is vital.

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- ◆ German Federal Ministry of Economic Cooperation and Development
- ◆ Global Environment Facility
- ◆ Government of Canada
- ◆ Government of Italy
- ◆ Government of Switzerland
- ◆ International Atomic Energy Agency
- ◆ Japan International Cooperation Agency
- ◆ Multilateral Fund for the Implementation of the Montreal Protocol
- ◆ New Zealand Department of Foreign Affairs and Trade
- ◆ People's Republic of China
- ◆ The Energy Resources Institute
- ◆ United Nations Development Programme
- ◆ United Nations Educational, Scientific and Cultural Organisation
- ◆ United Nations Environment Programme
- ◆ United Nations Framework Convention on Climate Change
- ◆ United States Agency for International Development
- ◆ Water Financing Partnership Facility

### Recent Climate Finance Trends

The CFS found that around FJ\$59 million was allocated annually from 2016 to 2019 for activities related to climate governance. This includes efforts to develop more comprehensive policies on climate change, oceans, and fisheries. Actual spending was lower than the allocated amount.

Only the CVA has relevant cost estimates, which are that it would cost FJ\$50 million over 10 years to “strengthen and enforce planning and environmental legislative and institutional frameworks.” While this is less than the funding allocated in recent years, the Ministries of Economy, Forestry, Environment and Waterways, Rural, Maritime, and Disaster Management, iTaukei Affairs, and Land and Mineral Resources report that they cannot fully mainstream climate considerations throughout their operations because they do not have sufficient internal resources on climate change.

### Climate Finance Priorities

Fiji’s NAP includes a detailed discussion of the interventions required to improve Fiji’s climate governance and the stakeholder consultations identified the top four interventions (see Box 9).

#### Box 9: Priorities to “Integrating climate adaptation into national and sub-national channels.”

**Top Priority:** *Deploy portfolio screening to ensure policies, programmes, and projects integrate adaptation and mitigation priorities.*

A standardised screening tool that examines all climate risks in all government-funded projects will help uncover how existing policies, programmes, and projects can better account for climate risks, and will help build the knowledge required to mainstream climate considerations into future projects.

**Second Priority:** *Build capacity of national and sub-national Government representatives and other stakeholders to be able to mainstream costing tools—such as the NAP costing methodology tool, cost-benefit analysis tools, multi-criteria analysis approaches, and gender analysis tools—into decision-making processes regarding climate change adaptation and disaster risk reduction.*

This will teach national and subnational government officials how to mainstream climate considerations into newly developed policies, plans, and projects. This will increase the technical expertise and knowledge of government employees, increase the effectiveness and efficiency with which climate data is incorporated into relevant projects, and improve decision-making regarding climate adaptation and disaster risk reduction.

**Third Priority:** *Strengthen the capacities of national level Government entities to enhance planning processes so that these processes not only incorporate*

*the needs of particularly vulnerable groups through inclusive analysis and responsive decision-making systems but also ensure the effective delivery of climate-resilient development initiatives and compliance with the NAP Framework.*

To do this, two things are needed:

1. Analytical tools that can identify the most climate-vulnerable communities
2. Conduct relevant trainings for national and sub-national government staff.

**Fourth Priority:** *Ensure climate budget codes use standardized criteria to define climate relevant activities at the sub-national level in a way that also contributes towards gender, social and disability responsiveness, transparency, accountability, and the reduction of corruption.*

Integrating climate budget tagging into national and sub-national budget and financial systems will enable the Fijian government to efficiently track climate-related spending to identify and scale the most impactful climate-resilient projects, and better prioritize climate investments. This will also provide better data about which projects support climate action, gender inclusiveness, or other development priorities. The MOE and UNDP are developing and implementing a climate budget tagging system that will help lay the foundation for this mechanism.



## CLIMATE-INDUCED RELOCATION

### Key Points

- ◆ Stakeholders identified three investment priorities related to climate-induced relocation:
  1. Provide clarity about the processes required to relocate climate-vulnerable communities.
  2. Create systemic approaches to identify which communities need to be relocated and to where they could move.
  3. Build up the capacity of national and subnational institutions to guide the relocation processes.
- ◆ The CFS found that around FJ\$5.3 million was allocated to climate-induced relocation projects annually from 2016 to 2019, but that no relevant cost estimates exist.

### Projected Climate Vulnerabilities

With roughly 110 inhabited islands and 27% of the population living within one kilometre of the coastlines, Fiji is helping relocate communities that are vulnerable to climate change due to sea-level rise and other climate impacts (Government of Fiji 2017). At COP24, the Fijian Government's approach to relocation is described as: "Planned relocation in Fiji is a relatively new response to the effects of climate change, and it is only viewed as a last resort. Relocation is a complex process and can be traumatic for those involved. It is not just a case of economics and physical structures, there are a number of complexes, non-tangible aspects associated with relocation, which can include challenges to identity, as well as various psychological, social, emotional, and cultural damages." The Fijian Government has identified around 15 communities that need immediate relocation and has launched a Climate Relocation of Communities Trust Fund<sup>v</sup> to begin shoring up financial resources to fund relocation activities.

### Recent Climate Finance Trends

The CFS found that around FJ\$59 million was allocated annually from 2016 to 2019 for activities related to climate governance. This includes efforts to develop more comprehensive policies on climate change, oceans, and fisheries. Actual spending was lower than the allocated amount. The CVA estimates it would cost FJ\$50 million over 10 years to

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**"Planned relocation in Fiji is a relatively new response to the effects of climate change, and it is only viewed as a last resort. Relocation is a complex process and can be traumatic for those involved. It is not just a case of economics and physical structures, there are a number of complexes, non-tangible aspects associated with relocation, which can include challenges to identity, as well as various psychological, social, emotional, and cultural damages."**

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"strengthen and enforce planning and environmental legislative and institutional frameworks." While this is less than the funding allocated in recent years, the Ministries of Agriculture, Health, Rural and Maritime Development, and Waterways report that they cannot fully mainstream climate considerations throughout their operations because they do not have sufficient internal resources on climate change.

### Key Stakeholders

The MOE and Ministry of Rural and Maritime Development and Disaster Management, through the Fiji Taskforce on Relocation, are building out the processes of relocating vulnerable communities. External stakeholders such as the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the International Organization for Migration, and the New Zealand Department of Foreign Affairs and Trade have recently supported climate-related projects in the sector.

### Climate Finance Priorities

The NCFS consultations identified three investment priorities (see Box 10).

The Fijian government has identified 15 communities that need to be relocated. Three communities went through the relocation processes spelled out in the relocation guidelines and standard operating

Since climate-induced relocation is inherently a regional or local issue, subnational Governments need to be able to respond effectively and efficiently. At present, Fiji's subnational governments are very resource constrained and many do not have the technical and operational capacity to support relocation efforts.

## DISASTER RISK MANAGEMENT

### Key Points

- ◆ The Disaster Risk Management sector is very active in Fiji, but the consultations identified several critical areas that need to be addressed. These areas include projects to
  1. Enhance knowledge about and implementation of building codes throughout Fiji, including for the private sector and rural and outer islands.
  2. Develop, enhance, coordinate, and communicate disaster risk financing products.
  3. Integrate disaster risk practices across sub-national policies and plans.
- ◆ The CFS finds that all stakeholders allocated an average of FJ\$779 million annually between 2016 and 2019 to disaster risk management activities, of which at least FJ\$197 million was spent by the Fijian Government million. This is shy of the FJ\$275 million in climate finance needs identified in the CVA.
- ◆ Data constraints made it difficult to identify the actual amount spent by external partners.
- ◆ The COVID-19 pandemic created an additional gap of FJ\$21.48 million in the sector.

### Projected Climate Vulnerabilities

Climate change will increase the intensity and frequency of natural disaster events, such as tropical cyclones and floods, which already pose ongoing threats to Fiji's economic development prospects. The CVA estimates that between 1970 and 2016, 130 major disasters, including 110 tropical cyclones and major floods negatively affected almost 3.3 million Fijians. These disaster events currently push an average of 25,700 Fijians into poverty every year, but this number could reach 32,800 by 2050. This is consistent with Fiji's recent experience, as TC Winston negatively affected 540,000 people, or 61% of the population, and caused damages worth more than FJ\$2 billion. Cyclones Harold and Yasa (April and December 2020, respectively) totalled damages worth FJ\$100 million and FJ\$500 million respectively, with an estimated 325,000 people affected. Similarly, pandemic-induced economic recession forced 150,000 Fijians, or roughly half the workforce, to accept reduced hours or job losses. Fiji's economy and fiscal stability are highly

vulnerable to exogenous shocks, such as cyclones or pandemics.

### Key Stakeholders

The Ministries of Infrastructure and Meteorological Services, Lands and Mineral Resources, Rural and Maritime Development and Disaster Management, and Waterways and Environment handle disaster risk management. The CFS identified the following development partners that are active in this sector:

- ◆ Asian Development Bank
- ◆ Australian Department of Foreign Affairs and Trade
- ◆ British High Commission
- ◆ David and Lucille Packard Foundation
- ◆ Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
- ◆ European Union
- ◆ Government of Malaysia
- ◆ International Finance Corporation
- ◆ International Organisation for Migration
- ◆ Japan International Cooperation Agency
- ◆ New Zealand Ministry of Foreign Affairs and Trade
- ◆ Pacific Community
- ◆ United Nations Children's Fund
- ◆ United States Agency for International Development
- ◆ United Nations Development Programme
- ◆ United Nations Office for Disaster Risk Reduction
- ◆ United Nations Educational, Scientific and Cultural Organisation
- ◆ United Nations Office for the Coordination of Humanitarian Affairs
- ◆ United Nations Population Fund
- ◆ World Bank
- ◆ World Food Programme

### Recent Climate Finance Trends

Damages from extreme weather events left a lingering financial burden on the Fijian Government—the CFS estimated that 79% of Fiji's annual climate finance went to rebuilding the schools, roads, and other public infrastructure damaged by TC Winston (see Table 7). Since climate change will increase the risks of extreme weather events and their impact on Fiji's fiscal stability, economic development, and social wellbeing, the country's best option is to pre-emptively upgrade.

As shown in Table 7, FJ\$144 million per year from 2016 to 2019, or 73% of actual climate finance expenditures and almost 18% of the annual national budget, was spent on recovering from TC Winston. This includes FJ\$68 million on rebuilding and upgrading schools to withstand category 5 cyclones. The CFS also found that the FJ\$53 million in public climate finance was spent on non-Winston related disaster risk management and was about FJ\$131 million short of

the identified annual funding needs (see Table 8). This financing gap is for integrating climate considerations into Fiji's built environment.

The COVID-19 pandemic created an additional financing gap of FJ\$21.48 million. To understand how best to close these gaps, we asked stakeholders to rank the most affected projects (see Box 11).

**Table 7 | Spending in Disaster Risk Management Attributed to Tropical Cyclone Winston**

	PROJECTS IN SNAPSHOT	ANNUAL BUDGET ALLOCATIONS* (FJD PER YEAR)	PERCENT OF ALL ALLOCATIONS	ANNUAL ACTUAL SPENDING* (FJD PER YEAR)	PERCENT OF ALL SPENDING
Non Tropical Cyclone Winston Spending	98	FJD 163,587,088	21%	FJD 53,132,219	27%
Response to Tropical Cyclone Winston	39	FJD 616,196,919	79%	FJD 144,208,502	73%
<b>TOTAL</b>	<b>137</b>	<b>FJD 779,784,007</b>	<b>100%</b>	<b>FJD 197,340,721</b>	<b>100%</b>

\* NOTE: The average annual amount allocated provides an indication of the total possible amount of public climate finance that was available to the relevant activities and from all known funders. The availability of data on actual expenditures varies significantly by funder and could not be secured for every project that was implemented.

Source: Reproduced from the Fiji Climate Finance Snapshot, 2016 to 2019.

**Table 8 | Climate Finance Snapshot—Disaster Risk Management Sector**

GOVERNMENT POLICY OBJECTIVES	ANNUAL CLIMATE FINANCE NEEDS** (FJD PER YEAR)	ANNUAL BUDGET ALLOCATIONS* (FJD PER YEAR)	ANNUAL ACTUAL SPENDING* (FJD PER YEAR)
Include vulnerability assessments and climate change and natural hazards impact projections in infrastructure and urban planning	FJD 58,575,000	FJD 70,049,767	FJD 15,549,320
Develop an integrated policy, approach, and operational plan to effectively address disaster management	FJD 695,000	FJD 23,623,857	FJD 1,095,053
National and subnational budgets include processes to plan for disaster events and include emergency funding to respond to natural disasters	FJD 10,000	FJD 362,614,055	FJD 57,475,994
Ensure rural community buildings are cyclone and flood resistant	FJD 216,590,000	FJD 323,496,328	FJD 123,220,354
<b>TOTAL: DISASTER RISK MANAGEMENT</b>	<b>FJD 275,870,000</b>	<b>FJD 779,784,007</b>	<b>FJD 197,340,721</b>

\* NOTE: The annual budget allocation provides an indication of the total possible amount of public climate finance that was available to the relevant activities and from all known funders. The availability of data on actual spending varies significantly by funder and could not be secured for every project that was implemented.

\*\* Note: Cost estimates are provided by the CVA and cover interventions that could be implemented by the public sector.

Source: Reproduced from the Fiji Climate Finance Snapshot, 2016 to 2019.



### Box 11: Cuts to Domestic Climate Finance as a result of COVID-19—Disaster Risk Management Sector

#### **Top Priority:** *Drainage and Flood Protection.*

Implemented by the Ministry of Waterways and Environment, this project upgrades drainage systems. The poor drainage conditions have increased flooding events and shown that town drainage systems need to be upgraded to mitigate flood risks. The project allocation was reduced by FJ\$1.8 million in the COVID-19 Response Budget and FJ\$320,000 in the 2020–2021 National Budget.

#### **Second Priority:** *Water Emergency Response Contingency.*

Implemented by WAF, this programme is a standby contingency fund that may be used during times of natural disasters or states of emergency. These funds procure equipment and tools, conduct aerial and land surveys to assess the extent of damages, and repair damaged water infrastructure. The project allocation was reduced by FJ\$300,000 in the 2020–2021 National Budget.

#### **Third Priority:** *Ongoing Rehabilitation and Construction of Schools.*

Implemented by CIU, this rebuilds and rehabilitates the schools and public buildings destroyed by TCs Winston, Keni, Gita and Harold, and Yasa. CIU

oversees these repairs, in consultation with Ministry of Education and the Fiji Institute of Engineers. The project allocation was reduced by FJ\$5 million in the COVID-19 Response Budget and FJ\$10 million in the 2020–2021 National Budget.

#### **Fourth Priority:** *Maintenance of Drainage–Municipal Councils.*

Implemented by the Ministry of Waterways and Environment, project activities include desilting & realigning existing drains, installing V drains with rock linings, making structural improvements, excavating earthen drains; implementing riverbank protection projects; dredging and aligning creeks; and upgrading or maintaining old drains. The project received FJ\$2.26 million in the COVID-19 Response Budget but was not funded in the 2020–2021 National Budget.

#### **Fifth Priority:** *Upgrade and Maintenance of Evacuation Centres.*

This builds evacuation centres and retrofits existing halls to help vulnerable areas minimize flood risks and to ensure communities can always access evacuation sites during a disaster. The project was not funded in the 2020–2021 National Budget.

### Climate Finance Priorities

These come from Fiji's NAP, the 5-year strategic plan of Ministry of Waterways and Environment, and the 4-year strategic plan of the Ministry of Infrastructure and Meteorological Services. The strategic plans lay out each Ministry's operational priorities, targets, and processes to implement Fiji's NAP and NDP. The following were identified as the top three climate-related policies in the sector:

1. Construct cyclone-resilient infrastructure that complies with disaster regulations, the national building code, and renewable energy targets ensuring compliance.
2. Improved disaster management preparation, including expanded disaster risk financing mechanisms, improved hazard mapping for rural communities, and enhanced flood and drought warning systems.

3. Improved access to and use of hydrological, telemetry, and meteorological information infrastructure, expanded training programmes about how to use and communicate the relevant data, and strengthened forecasting systems that support hydrological, telemetry and meteorological services.

### GOAL ONE: ENSURE INFRASTRUCTURE MEETS CYCLONE-RESILIENT STANDARDS, BUILDING CODES AND INCORPORATES RENEWABLE ENERGY STANDARDS

With rural and maritime communities frequently exposed to severe natural hazards, climate-resilient national building codes and energy efficiency standards must be enforced. The top three investment priorities are in Box 12.



## GOAL TWO: IMPROVE DISASTER MANAGEMENT PREPARATION

Through well- coordinated emergency plans, improved hazard mapping, and expanded disaster management trainings, these preparation procedures

will empower people to act quickly and self-sufficiently during times of emergency. The top three climate-related interventions to reach this goal, based on feedback from consultations for the NCFS is in Box 13.

### Box 13: Priorities to “Improve disaster management preparation.”

**Top Priority:** *Develop user-friendly hazard assessments, maps and models that focus on site-specific risks across coastal, riverine, urban, and inland areas in Fiji and that cover all potential hazards (including sea level rise, storm surge, flooding, drought, salt intrusion, landslide, tsunamis etc.) and make these accessible to all to guide development planning at the national and sub-national level.*

This information will both allow national and sub-national governments to better understand their climate risks and better equip them to make data-informed decisions to mitigate these risks. During consultations, stakeholders identified two targets and a project:

1. Build a GIS database of drainage infrastructure for the Northern, Central, and Western divisions. It could be paired with forthcoming climate data to forecast which communities and infrastructure are exposed to flood risks
2. Complete four divisional vulnerability assessments and hazard maps every 3 years
3. Fiji's adaptation pipeline for the GCF includes the regional project called “Supporting resilient island communities in Tuvalu, the Solomon Islands, Fiji, and Vanuatu through the Local Climate Adaptive Living Mechanism.” This would establish a performance-based climate finance transfer mechanism and use targeted capacity development to improve how climate funds are used at the local level. The concept note is in Annex II.

**Second Priority:** *Conduct flood management and forecasting activities for high-risk flood towns and priority river systems, such as Nadi River, Sigatoka River, Rewa River, and Labasa River.*

The consultations identified three targets that will help implementation:

1. Complete coastal and flood protection projects in 58 sites that are prone to flooding
2. Provide drainage grants to 13 municipal councils in Suva, Lami, Nasinu, Nausori, Sigatoka, Lautoka, Nadi, Ba, Labasa, Savusavu, Levuka, Tavua and Rakiraki.
3. Complete infield drainage for 200 km of Fiji Sugar Corporation farming sites.

The Australian Infrastructure Financing Facility for the Pacific is funding essential catchment management and upstream flood mitigation work for the Nadi Flood Alleviation Project. This analyses the upper Nadi catchment to develop flood models that will guide the development of flood models, which will inform land management practices, and assist with disaster preparedness. It complements work by the Japanese government and the Asian Development Bank.

**Third Priority:** *Create flood risk and management action plans that operate at the catchment scale, involve either hybrid or nature-based solutions and payments for ecosystems services, and cover all human settlements.*

The plans shall provide people and relevant government agencies with the detailed actions to take (with a focus on nature-based solutions) and specific details about how communities are likely to be negatively impacted by floods or changes in water patterns.

**GOAL THREE: IMPROVE ACCESS TO AND USE OF HYDROLOGICAL, TELEMETRY AND METEOROLOGICAL INFORMATION**

Improved access to climate-relevant data, plus strengthened education and awareness programs, will strengthen planning and recovery efforts. The top three investment priorities are in Box 14.

**Box 14: Priorities to improve “Access to and use of hydrological, telemetry, and meteorological information.”**

**Top Priority:** Upgrade the existing infrastructure, resources, and technical capacity of Fiji Meteorological Services (FMS) so that FMS data can provide the basis for climate monitoring and projecting, user-friendly climate information services, GIS modelling of critical economic sectors, hazard and risk information, and early warning and prediction systems to key stakeholders.

This will improve the accuracy and speed at which FMS can ascertain the threat of climate-related events and help ensure critical infrastructure is climate resilient. The best target is to ensure all black spots in major island observation areas have enhanced meteorological infrastructure. A concept note is on the GCF shortlist of adaptation projects and can be found in Annex II.

**Second Priority:** Establish a standardized approach to collecting information on climate change interventions that would facilitate the monitoring and evaluation of outcomes relative to policy targets and that includes the use of data supply and reporting obligation agreements to ensure that the data needed to track adaptation are provided to a centralized database.

This will improve the national and subnational planning and project development processes, including the quality of climate impact modelling and risk assessments. The current target is to build and operationalize regional instruments and training programmes so stakeholders can gather, analyse, and incorporate climate related data into their planning processes.

**Third Priority:** Enhance meteorological prediction systems for flooding and droughts and establish a multi-hazard early warning system.

Robust climate models can accurately inform everything from disaster risk financing to investment decisions in housing, agriculture, and transport. Stakeholders identified two targets:

1. Develop and deploy integrated, multi-hazard early warning systems
2. Develop impact-based forecast and risk-based warnings to install radar systems on the outer islands.



## ELECTRICITY

### Key Points

- ◆ Stakeholders emphasized that more efforts from the public sector are needed to build new renewable energy generation from solar, wind, and hydro.
- ◆ A more robust enabling environment so the private sector can invest in renewable energy options is also needed.
- ◆ The CFS found that actual expenditures in the electricity sector were about 62% of the allocated levels and that there are financing gaps of between FJ\$324 million (allocated finance) and FJ\$336 million (spent climate finance) for new renewable energy generation.

### Projected Climate Vulnerabilities

Fiji currently generates between 50 to 60 percent of its electricity from renewable sources. Fiji's NDP and first NDC both set targets to generate almost 100% of all electricity from renewable energy resources by around 2030. Both the NDP and CVA call for prioritizing investments, such as building additional transmission lines, adding new generation capacity, undergrounding distribution lines in targeted locations, and improving the uptake of rural mini-grids and solar home systems, that will decarbonize the sector and improve its resilience.

### Key Stakeholders

The key stakeholders are the Department of Energy (DOE), which sits in the Ministry of Infrastructure and Meteorological Services and EFL. DOE creates the enabling environment and provides electricity to the rural areas and outer islands. EFL is responsible for the generation, transmission, and distribution of electricity on Viti Levu, Vanua Levu, Ovalau, and Taveuni. EFL works closely with DOE and other relevant agencies to develop renewable energy projects. Current or recent external organizations include the:

- ◆ Asian Development Bank
- ◆ BMU–International Climate Initiative
- ◆ Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ)
- ◆ Global Environment Facility
- ◆ Global Facility for Disaster Reduction and Recovery
- ◆ Global Green Growth Institute
- ◆ Government of Taiwan
- ◆ Institute of Environmental Science and Research
- ◆ Investment Fiji
- ◆ Japan International Cooperation Agency
- ◆ Korea International Cooperation Agency
- ◆ Leonardo DiCaprio Foundation
- ◆ New Zealand Ministry of Foreign Affairs and Trade
- ◆ Pacific Community
- ◆ Strategic Climate Fund
- ◆ United Nations Development Programme
- ◆ World Bank Group

### Recent Climate Finance Trends

Despite the targets to achieve 100% renewable generation by 2030, the CFS found that only 16% (FJ\$14 million) of the allocated public climate finance went to new renewable energy generation and only 3% (or FJ\$1.65 million) was spent. The data on actual spending is incomplete as it only covers spending from the Fijian government (see Table 9). Although EFL has started efforts to design several renewable energy projects, their completion has been delayed by several factors, including the pandemic.

The CFS found a shortfall of more than FJ\$162 million annually for new generation from solar and wind, with each needing roughly \$81 million. Instead, 72% of all identified public climate finance went to expand the grid. From a climate perspective, investments to expand the grid increase emissions unless the electricity generated and transmitted across the grid comes exclusively from renewable sources. Budget cuts due to COVID-19 eliminated FJ\$6.14 million from climate-related projects in the electricity sector. During consultations, stakeholders ranked the most affected projects (see Box 15).

**Table 9 | Climate Finance Snapshot—Electricity Sector**

GOVERNMENT POLICY OBJECTIVES	ANNUAL CLIMATE FINANCE NEEDS** (FJD PER YEAR)	ANNUAL BUDGET ALLOCATIONS* (FJD PER YEAR)	ANNUAL ACTUAL SPENDING* (FJD PER YEAR)
Access to affordable, reliable, modern and sustainable energy services for all Fijians	FJD 163,576,800	FJD 70,558,613	FJD 52,423,274
Increase share of electricity generation from renewable energy resources	FJD 338,279,146	FJD 14,277,244	FJD 1,655,944
Reduce cost of petroleum imports and further develop biofuels for electricity and transport	FJD 35,765,786	FJD 2,194,443	FJD 671,920
Improve energy efficiency in the electricity sector	FJD 24,022,009	FJD 547,574	FJD 453,380
Increase private sector participation in electricity supply through reform of regulatory aspects of the electricity sector	FJD 20,000	FJD 839,260	FJD 0
<b>TOTAL: ELECTRICITY SECTOR</b>	<b>FJD 561,663,741</b>	<b>FJD 88,417,134</b>	<b>FJD 55,204,518</b>

\* NOTE: The annual budget allocation provides an indication of the total possible amount of public climate finance that was available to the relevant activities and from all known funders. The availability of data on actual spending varies significantly by funder and could not been secured for every project that was implemented.

\*\* Note: Cost estimates for the electricity sector are provided by the LEDS, NDCR, and CVA. These estimates cover investments that are the responsibility of the public sector, such as grid expansion, and investments that are the responsibility of the private sector, such as new renewable energy generation.

Source: Reproduced from the Fiji Climate Finance Snapshot, 2016 to 2019.

### Box 15: Cuts to Domestic Climate Finance as a result of COVID-19—Electricity Sector

#### Top Priority: Solar Home Systems Programme.

This installs solar home systems in Fiji's rural communities. According to the NDP, the government's goal for the sector is to achieve 100% electricity access up from 96% in 2017 That remaining 10% is primarily in communities across Fiji's outer islands and rural areas. The project allocation was reduced by FJ\$3.41 million in the COVID-19 Response Budget and FJ\$2 million in the 2020-2021 National Budget.

#### Second Priority: Energy Efficiency and Energy Conservation Programme.

Promotion of energy efficiency and energy conservation awareness is being achieved through the WE-ECO (Water, Environment and Energy Conservation) competition and through

the Zayed Sustainability Prize for schools. The project allocation was reduced by FJ\$100,000 in the COVID-19 Response Budget.

#### Third Priority: Investigation for Development of Geothermal Power.

The World Bank's Energy Sector Management Assistance Programme assesses the viability of geothermal power in Fiji and support exploration. The first stage concluded that geothermal resources on Vanua Levu could support geothermal power plants. Stage two will support efforts to identify exploration-drilling sites at Savusavu and Labasa (Waiqele). The project was not funded in the 2020-2021 National Budget, a cut of FJ\$250,000 from the 2019-2020 budget.

## Climate Finance Priorities

The priorities for climate related activities for the electricity sector come from Fiji's NAP, from the 4-year strategic plan of the Ministry of Infrastructure and Meteorological Services, and the NDC Investment Plan. These were refined during NCFS consultations and are to:

1. Provide universal access to affordable, reliable, and sustainable energy services.
2. Increase the share of electricity generation from renewable energy sources.
3. Improve energy efficiency in the electricity sector.

### GOAL ONE: UNIVERSAL ACCESS TO AFFORDABLE, RELIABLE, AND SUSTAINABLE ELECTRICITY

The Fijian government aims to provide universal electricity, create a low-carbon economy, and support the targets laid out in the NDP, LEDS, NDC Roadmap, and NAP. The immediate investment priorities were identified during consultations and are in Box 16.

#### Box 16: Priorities to provide “Universal access to affordable, reliable, and sustainable electricity services.”

**Top Priority:** Review the design and construction standards for new and existing electricity facilities so that they are climate change resilient, including a review of design, technical, and installation standards of solar home systems.

The top priority highlights the need to review and update electricity and construction standards to be climate resilient. This will help ensure all new infrastructure is energy efficient and climate resilient. Additionally, promoting natural lighting and ventilation will help Fiji achieve its national net-zero targets. No projects that would support these targets are currently under development.

**Second Priority:** Create a long-term resilience strategy for the electricity sector underpinned by a climate risk model that identifies which power systems and network components are most vulnerable to climate change, that ensures cost-effectiveness of measures can be properly evaluated, that prioritizes measures delivering the greatest net benefits, and that is financeable using a variety of international and domestic sources from both the private and public sources.

A long-term strategic plan for the energy sector based on in-depth information on climate risk models and with cost-effective implementation measures and identified financing opportunities is needed. GGGI has completed feasibility studies on how to expand grid capacity and increase renewable energy generation in Ovalau and Taveuni. Stakeholders supported an interim target to conduct two similar studies per year until the entire country has been analysed.

**Third Priority:** Expansion of under-grounding distribution lines.

Expanding efforts to under-ground electricity distribution lines, while considering the water pipes and communication infrastructure that is already underground, would avoid infrastructure damage and reduce service outages during disaster events. Although undergrounding cables has a high upfront cost, it lowers maintenance and rehabilitation costs over time. Underground cables also have lower transmission losses, can absorb greater emergency power loads, and can ensure vulnerable communities retain access to electricity during and after natural disasters. The current target is to expand the undergrounding of distribution lines in Suva, Lautoka, Ba, Labasa and Savusavu.

## GOAL TWO: INCREASE SHARE OF ELECTRICITY GENERATION FROM RENEWABLE ENERGY SOURCES

From 2018 to 2020, Fiji generated between 52.74% and 57.18% of its electricity from hydro, with biomass contributing between 3.87% and 6.87%, wind power accounting for less than 0.25%, and diesel generation filling the generation gap of roughly 35%

to 45%, respectively (Energy Fiji Limited, 2020). Thus, investments in renewable energy will need to be drastically scaled up if Fiji is to achieve its twin targets of generating 100% of its electricity from renewable sources and of building a net-zero carbon economy by 2050. Stakeholders prioritized a list of climate-related interventions and targets (see Box 17).

### Box 17: Priorities to “Increase share of electricity generation from renewable energy sources.”

**Top Priority:** Increase the resiliency of the power system by investigating more diversified and distributed generation options, including mini grids.

A more distributed grid will localize any damage to the grid from extreme weather events and ensure that most people continue to have power during extreme weather events. The target to complete five 5MW solar plants with storage on Viti Levu, a 5 MW solar project in Vanua Levu, a 1MW solar power plant on Taveuni, and a 4MW solar power plant on Ovalau would implement this. Projects with Concept Notes in Annex II and NDC Investment Plan:

1. Complete 10 Fiji Renewable Energy Fund (FREF) projects by 2025. The FREF provides renewable energy to Fiji's outlying islands and villages. Vio village was launched as the first pilot site in 2019 and FREF has identified six additional sites. Additional funding is needed to electrify these sites and scale FREF. More details can be found in Annex II and on the CCICD shortlist of mitigation projects.
2. FDB has concept notes for one GCF mitigation projects (see Annex II):
  - a. Deploy renewable energy solutions for off-grid hotels.
  - b. Provide low-cost, high efficiency loan products for businesses to transition to climate-friendly operations.
3. The NDC Investment Plan details the *Promoting Lithium-Ion Batteries for Renewable Energy Storage* project. This develops policies, regulations, fiscal

incentives, and financing schemes to promote the use and safe disposal of lithium-ion batteries (and newer technology) for on-grid and off-grid storage. More details can be found in the NDC Investment Plan and in Annex II.

**Second Priority:** Diversify renewable energy generation to improve its resilience, including increasing generation from new hydro and solar facilities, expanding rural mini-grids and solar home systems, and completing feasibility studies for new biomass power plants.

The main target is to install 10 mini hydro systems. EFL has identified four potential projects (Qaliwana, Upper Wailoa, lower Ba, and Namosi) but needs additional financial support to complete them. Additionally, the GCF mitigation pipeline has a project to install typhoon resistant wind power facilities in Fiji, Samoa, Tonga, Palau, the Cook Islands, and the Philippines (see Annex II for a concept note).

**Third Priority:** Implement a research, data collection and investment identification programme to accelerate the addition of renewable energy generation.

Fiji's NDC Investment Plan is the framework for this. Fiji is developing a National Measurement, Reporting and Verification System that will include an NDC registry system to track the support Fiji receives to implement the NDC targets.



### GOAL THREE: IMPROVE ENERGY EFFICIENCY

This will enable Fiji to reduce its emissions and lower electricity costs. It can be achieved by incorporating energy efficiency measures into Fiji's

built environment, electricity sector, transportation sector, consumer goods market, and industrial sector. The top two investment priorities, based on the consultations, are explained in Box 18.

#### Box 18: Priorities to “Improve energy efficiency.”

**Top Priority:** *Investigate options for increasing electricity sector resilience by ascertaining the benefits of energy efficiency and other demand side management options.*

These options could include alternative transmission routes, altered load capacities, and more energy efficient products. The NDC Investment Plan outlines a few potential investment opportunities:

- ◆ “Capacity Building for Integrated Energy Planning and Energy Statistics in Fiji.” This covers technical assistance to implement energy statistics and to establish a data-driven, integrated energy planning process. It sets up the institutional infrastructure to promote integrated energy planning and collect energy statistics. The project requires US\$500,000 (2020–2030) in investment.
- ◆ “Capacity Building in Energy Efficiency in Industry.” This provides technical assistance to conduct a national survey of the energy intensive equipment currently used by Fiji's domestic industries. This would include detailed energy audits for up to 50 industrial companies, the development of a certification system for energy auditors, and creation of a system to report and aggregate energy data from medium-sized and large companies. The project requires a total of US\$9.1 million (2020–2030) in investment.
- ◆ “Programme to Manage Peak Demand and Savings in Fiji.” This revises existing power tariff regulations for industrial and large commercial end users to incorporate time of day pricing. Technical assistance would develop and implement a demand response programme. This project requires US\$1.3 million

(2020–2030) for technical assistance and US\$708.6 million (2020–2030) for investments.

**Second Priority:** *Update the energy codes used for ventilation, appliances, cooling, and lighting and enforce the application of these in both the public and the private sectors.*

Better energy codes will reduce total energy consumption from buildings, reduce carbon emissions, and deliver more energy savings for consumers. The NDC Investment Plan outlines two projects that would support this priority:

- ◆ “Assessment, Design and Construction of Low Energy/ Carbon Buildings” provides technical assistance to the Ministry of Infrastructure and Meteorological Services to develop guidelines for low-carbon building design and construction, an energy efficient building code, and a voluntary green building rating system. The project runs from 2020 to 2030 and requires US\$1.4 million for capacity building and US\$177.6 million as investment. See concept note on the GCF shortlist of mitigation projects.
- ◆ “Strengthening and Expanding the Minimum Energy Performance and Labelling Standards,” includes technical assistance to review, update, and strengthen the existing Minimum Energy Performance and Labelling Standards programme to cover freezers, refrigerators, and other appliances, such as televisions, air conditioners, and lights. The project requires US\$1.4 million for capacity building and technical assistance and US\$10 million as investment between 2020 and 2030.

## FORESTRY

### Key Points

- ◆ During consultations, stakeholders identified the following climate-related investment priorities:
  1. Protect forest cover.
  2. Expand collection of forestry related data.
  3. Better identify and strengthen the use of sustainable forest management practices.
- ◆ The CFS found that the available climate finance between 2016 and 2019 for the forestry sector exceeded the annual estimated needs but that the available data on cost estimates underestimates the true climate-related needs.
- ◆ The COVID-19 pandemic created an additional need of FJ\$148,797.

### Projected Climate Vulnerabilities

Forests account for roughly 60% of Fiji's total land area. Healthy forests provide essential services, such as the fertile soils that enable Fiji's smallholder farmers to remain productive and the stable hillsides and riverbanks that protect Fiji's villages from flooding, landslides, and disasters. Additionally, healthy forests sequester carbon and will play a critical role in helping Fiji meet its domestic climate targets.

The NDP establishes a goal to strengthen sustainable forest management with climate mitigation and adaptation. The NAP, CVA, and NDCR identify several actions, such as planting native trees and restoring degraded forests, that can help Fiji's forests adapt. Fiji's CVA and NAP identify key interventions that will boost all ecosystems, from inland forests to marine ecosystems. While these interventions underscore the interconnectedness and shared stresses of Fiji's ecosystems, they do not provide actions unique to the forestry sector. That list comes from the Ministry of Forests Strategic Plan, which is guiding the Ministry's pivot away from managing forests as an extractive resource and towards managing them as a sustainable resource.

### Key Stakeholders

The Ministry of Forestry is responsible for researching sustainable forest management practices, for product development, and for monitoring and evaluating

current and future policies. The CFS found that the following partners have recently or are currently supporting forests:

- ◆ Australian Centre for International Agricultural Research
- ◆ Conservation International
- ◆ European Union
- ◆ German Federal Ministry for Environment, Nature Conservation, and Nuclear Safety (BMU) – International Climate Initiative
- ◆ Global Environment Facility
- ◆ International Tropical Timber Organisation
- ◆ World Bank

### Recent Climate Finance Trends

The CFS estimates that the Fijian Government spent \$4.2 million, on average per year from 2016 to 2019 to achieve the policy objective to “strengthen sustainable forest management” (see Table 10). This included projects to reforest degraded forests and to support Fiji's programme to Reduce Emissions from Deforestation and Degradation.

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**Forests account for roughly 60% of Fiji's total land area. Healthy forests provide essential services, such as the fertile soils that enable Fiji's smallholder farmers to remain productive and the stable hillsides and riverbanks that protect Fiji's villages from flooding, landslides, and disasters. Additionally, healthy forests sequester carbon and will play a critical role in helping Fiji meet its domestic climate targets.**

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**Table 10 | Climate Finance Snapshot—Forestry Sector**

NDP POLICY OBJECTIVES	SPECIFIC PROGRAMS	ANNUAL CLIMATE FINANCE NEEDS* (FJD PER YEAR)	ANNUAL BUDGET ALLOCATIONS* (FJD PER YEAR)	ANNUAL ACTUAL SPENDING* (FJD PER YEAR)
Strengthen Sustainable Forest Management	New Regulatory Framework for native & pine forests	Not costed in any documents	FJD 292,683	FJD 237,805
	Establish total area under long-term conservation	FJD 3,350,000	FJD 2,477,141	FJD 311,850
	Monitoring of permanent sample plots	FJD 148,714	FJD 713,402	FJD 585,613
	Reforestation of degraded forests	FJD 2,498,400	FJD 2,774,735	FJD 1,762,681
	Drafting of Emissions Reduction Program Document (REDD+)	FJD 1,721,120	FJD 3,880,720	FJD 1,323,118
Encourage Private Sector Participation in Plantation Development	Preparation of plantation policy	FJD 71,429	Not in active projects	Not in active projects
	Fire Management Strategic Plan	Not costed	Not in active projects	Not in active projects
Encourage the growth of timber product	Training and Development (upgrade Nasinu sawmill)	Not costed	Not in active projects	Not in active projects
	Upgrade Tropik Wood Industries Limited's Sawmill, Kiln and Boiler Coils	Not costed	Not in active projects	Not in active projects
	Upgrade of Tropik Wood Industries Limited's Wairiki wood chipping facility	Not costed	Not in active projects	Not in active projects
	Upgrade of Fiji's Forest Industry Limited Plant Machinery	Not costed	Not in active projects	Not in active projects
<b>TOTAL: FORESTRY SECTOR</b>		<b>FJD 7,789,663</b>	<b>FJD 10,138,681</b>	<b>FJD 4,221,067</b>

\* NOTE: The annual budget allocation provides an indication of the total possible amount of public climate finance that was available to the relevant activities and from all known funders. The availability of data on actual spending varies significantly by funder and could not be secured for every project that was implemented.

\*\* Note: Cost estimates for the forestry sector are provided by the CVA and the LEDS. The CVA provides cost estimates for interventions that the public sector could take to strengthen the resilience and health of Fiji's forests. The LEDS provides cost estimates for some actions that are likely to be implemented by the public sector, such as reducing deforestation and others that would fall under the purview of the private sector, such as improved plantation productivity. The Ministry of Forestry strategic plan from 2017 to 2023 projects an annual budget of between FJ\$16 million and FJ\$19 million in operating and capital expenses.

Source: Reproduced from the Fiji Climate Finance Snapshot, 2016 to 2019.

The CFS found that the allocated climate finance between 2016 and 2019 exceeded the annual estimated needs (see Table 10), but that the available cost estimates underestimate the true climate-related needs. For example, the cost estimates available used in the CVA identify FJ\$7.7 million in climate finance needs, but the Ministry of Forestry's Strategic Plan 2017–2030 estimates that Fiji will need around FJ\$16 million to FJ\$18 million per year through 2023 to reach the Ministry's climate-related forest goals.

During the COVID-19 pandemic, the Fijian government allocated an additional FJ\$949,606 to support climate-related activities. Regardless, projects to upgrade Colo-I-Suva and to support the REDD+ programme had their spending cut (see Box 19, below).

### Climate Finance Priorities

The NAP interventions refer to all ecosystems (combining inland forests and marine ecosystems). Given how vital healthy ecosystems are, these

actions are included in both this section and the blue economy section. The Ministry of Forestry's Strategic Plan lays out the operational priorities to implement the NAP and NDP and programmes to enhance and implement sustainable forest management frameworks and to develop and launch forest financing plans and products. Stakeholders identified the top three goals to be:

1. Develop and implement sustainable forest management frameworks.
2. Build capacity for the Ministry and stakeholders to improve service delivery and the socio-economic impact of forests.
3. Develop a financing mechanism to capture the socio-economic impact of forests and promote the conservation and preservation of forests.

#### Box 19: Cuts to Domestic Climate Finance as a result of COVID-19—Forestry Sector

**Top Priority:** *Reducing Emissions from Deforestation and Forest Degradation (REDD+).*

This implements Fiji's Readiness Preparation Proposal by strengthening institutional arrangements, training programs, and outreach campaigns and by establishing a National Forest Monitoring System to develop REDD+ guidelines and REDD+ pilot development site. The project allocation was reduced by FJ\$35,797 in the COVID-19 Response Budget.

**Second Priority:** *Upgrade of Forest parks.*

This converts registered forest reserves into forest parks, which both help conserve forest ecosystems and provide Fijians with good access to recreational activities that promote mental and physical well-being. The current focus is to upgrade Colo-I-Suva, by improving footpaths, waiting sheds, and other park facilities. The project allocation was reduced by FJ\$112,606 in the COVID-19 Response Budget.

## GOAL ONE: DEVELOP AND IMPLEMENT SUSTAINABLE FOREST MANAGEMENT FRAMEWORKS

Such a framework will enable the Ministry to strengthen its policy, legislative, and regulatory processes to create an enabling environment that

promotes sustainable forest management. This is consistent with Fiji's long-run goal of decarbonizing the economy by 2050. See Box 20 for the top three immediate investment priorities.

### Box 20: Priorities to “Develop and implement sustainable forest management practices”

**Top Priority:** *Expand Tree-Planting Campaign to encourage voluntary tree and/or mangrove planting activities, which are to be conducted as part of the school curriculum, community stewardship efforts, and corporate social responsibility initiatives.*

The campaign to plant 30 million trees in 15 years, including 4 million trees by 2022, could achieve this. This is being administrated by the Ministry of Forestry and it will store carbon and increase the adaptive capacity of Fiji's forestry ecosystems. The “Reforestation of Degraded Forest Areas” project reforests and afforests degraded forests. The project needs additional funding. A concept note is on the GCF mitigation shortlist and can be found in Annex II.

The European Union's “Pacific Pollinators for Forest and Landscape Restoration” establishes measures to manage sustainable forests and landscapes, with a focus on establishing vibrant populations of native pollinators to benefit local communities. It conducts pollinator research, develops pollinator-informed Forest Landscape Restoration plans, promotes community-based forest planting for sustainable livelihoods, and shares results and lessons learned. It is being implemented but could be scaled with additional resources.

**Second Priority:** *Strengthen forest resource management framework in support of legislative and policy imperatives, and to create sustainable assets with appropriate controls, by focusing on forest management, watersheds, coastal areas, and soil/land conservation.*

The current target is to develop and operationalize a Forest Monitoring System by 2025. It is being developed by the Ministry of Forests with the support from a REDD+ grant. Additional funding is needed to maintain and expand use of this data centre, including by building capacity to use better technology (such as drones), to accurately capture forest information, and to monitor forest activities more effectively. Additionally, the GCF mitigation shortlist has a project to develop and expand Climate Resilient Forests, Communities, and Value Chains in Fiji (see concept note in Annex II).

**Third Priority:** *Enhance implementation and adoption of Sustainable Forest Management practices (maintaining and enhancing multiple forest values through human interventions).*

The target is to decrease emissions from logging in natural forests by 1% annually. One path is to replicate and scale the UNCCICD's National *Action Against Desertification* project, which was completed in 2020 and was active in 64 villages across 5 islands. It restored 965 hectares, planted 1 million seedlings of 64 tree species, established 12 school gardens, trained 450 households on backyard gardening, employed 280 individuals, and trained 1,579 women on alternative livelihood activities such as bee keeping, vanilla farming and nursery management. Given its success, it should be continued, replicated, or scaled to reach more villages.



**GOAL TWO: IMPROVE SERVICE DELIVERY AND THE SOCIO-ECONOMIC IMPACTS OF FORESTS**

This will enhance the capacity of the Ministry of Forestry to sustainably improve service delivery and technical capacity among its stakeholders. The

top three investment priorities, as identified during consultations, are discussed in Box 21.

**Box 21: Priorities to “Expand capacity building to improve service delivery and the socio-economic impact of forests.”**

**Top Priority:** *Strengthen enforcement of planning, environmental, legislative, and institutional frameworks, most notably the Environment Management Act and the Environment Impact Assessment process.*

It is vital that Fiji’s environmental laws are rigorously enforced to ensure all activities promote the sustainable use of Fiji’s forest resources. No projects are under development to support this.

**Second Priority:** *Enhance knowledge development through Education, Research, and Training for the Ministry of Forestry.*

This will enable the Ministry to build climate-related knowledge about maintaining Fiji’s forests. By sharing this knowledge and working with private companies, civil society organisations, multilateral partners, bilateral donors, and non-governmental organisations, the Ministry will build up effective programmes that help forest communities enhance their technical and resource management capacity. Two targets were recommended:

1. Upgrade and expand existing research facilities to specialize in sustainable forest management practices.
2. Develop at least 2 new training programmes and modules by 2025. This can be done with USP, FNU, or other research institutions in Fiji. No projects are under development to support this.

**Third Priority:** *Support and expand the domestic non-timber product industry.*

Non-timber products such as bamboo, sandalwood, “dilo,” candlenut and other minor forest products can be turned into high-quality, valued products in the overseas market. These are short rotation crops that support the livelihoods of rural communities, so delivering significant socio-economic benefits to Fijians. If they are cultivated and scaled, these crops would also help build a sustainable forest sector by reducing the economic incentives for forests to be logged and deforested.

GOAL THREE: DEVELOP FINANCING  
MECHANISMS TO CAPTURE SOCIO-ECONOMIC  
IMPACTS OF FORESTS

This will make it economically viable to manage Fiji's forests as a sustainable resource to be protected, not as an extractive resource to be chopped down and exported. See Box 22 for the top three investments.

**Box 22: Priorities to implement “Develop financing mechanism and promote stewardship of the forests to capture socio-economic impact of forests and promote the conservation and preservation of forest.”**

**Top Priority:** *Implement a national programme to reduce the negative impacts of logging, of existing and future inland and seabed mining to improve the monitoring and management of rivers and watersheds.*

Financial incentives are needed to reward environmentally sustainable practices in the logging and mining industries. Since logging and mining are key exports for Fiji, the timely implementation of these incentives will ensure these critical sectors also preserve Fiji's forests. It has two targets, but no active projects:

1. Introduce financial incentives to protect forests, particularly for the logging industry. This could be a benefit sharing mechanism, a nationwide carbon trading scheme, or a forest trust fund.
2. Establish 1000 hectares of urban forests to protect Fiji's watersheds.

**Second Priority:** *Foster awareness and social responsibility about how sustainable forest management intersects with climate change mitigation*

*and adaptation, gender equality, and other social equality issues.*

This develops programmes to conduct awareness and outreach to the local communities about how forest management practices will support climate action. It also ensures that gender equality is central to efforts to preserve and protect Fiji's forests. The consultations did not identify any projects under development to support this.

**Third Priority:** *Identify and map climate-vulnerable flora and fauna and their habitats, including data about the need to control invasive species and to create a national monitoring system to support climate-vulnerable species.*

To protect climate-vulnerable species, efforts should be taken to identify their current habitats and to establish plans, monitoring systems, and partnerships with local communities to protect them. These efforts will strengthen the resilience of forests. No projects are under development to support this.

GENDER AND SOCIAL INCLUSION

Key Points

- ◆ Fiji’s most effective path to climate adaptation is to empower women and other marginalized groups, as they are on the front lines of climate change and play critical roles in many coastal communities.
- ◆ While Fiji’s plans and policies are unequivocal that its climate response needs to be more gender responsive, there is insufficient relevant data available to identify action or finance gaps.
- ◆ Initial priorities are to integrate gender considerations into climate-related projects and policies and to build the capacity of women to manage and work on climate-related projects.

Projected Climate Vulnerabilities

Women, children, and other marginalized groups are on the front lines of climate change—they bear the brunt of devastation and are positioned to lead widespread adaptation efforts. Existing research shows that as climate impacts intensify, women are more likely to have an increased burden of unpaid care work, to be the victims of violent or emotionally abusive relationships, and to lose access to health care. Women often play essential leadership roles in Fiji’s communities, and so could be transformative agents of change. It is imperative that gender and other socially inclusive approaches are mainstreamed into all government-backed projects and operations. This mainstreaming needs to ensure all government-funded projects and operations collect sex and age disaggregated data, consider gender impacts, and to include socially inclusive capacity building programs.

Recent Climate Finance Trends

Very little data is available to shed light on how climate finance is, or is not, supporting, and promoting socially inclusive adaptation and climate action. Additional research needs to be done in this area to better understand the relationship among climate finance, gender, and social inclusion.

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Key Stakeholders

The Ministry of Women Children and Poverty Alleviation is the main government agency overseeing gender work in Fiji. The Ministry’s work cuts across all the socioeconomic groups and supports projects to provide income support, empower women, and improve service delivery to marginalized groups. . Additionally, the Australian Department of Foreign Affairs and Trade, European Union, Fiji Women’s Crisis Centre, Fiji Women’s Rights Movement, Pacific Women, United Nations Populations Fund, and the United Nations Women are also very active in this space.

Climate Finance Priorities

Box 23 lays out the five gender-related priorities for climate adaptation. These priorities were identified in the NAP and narrowed in the NCFS consultations.

### Box 23: Priorities to “Integrate gender into climate change

**Top Priority:** *Every project outlined and implemented must integrate the relevant gender, socially inclusive and human rights-based approaches into all stages of project design, implementation, monitoring, and evaluation.*

This will enhance the quality of project proposals submitted to international climate funds and will ensure that women and other vulnerable groups do indeed become empowered agents of transformational adaptation.

**Second Priority:** *Support national and sub-national Governments with institutional capacity assessments and resources for awareness training on gender and disabilities to support the mainstreaming process.*

It is vitally important that the government's ongoing mainstreaming push incorporate gender considerations. The Ministry of Women, Children, and Poverty Alleviation's "Gender Transformative Institutional Capacity Development program" is piloting a gender-based budgeting system and is establishing new institutional structures and coordination mechanisms to ensure that gender considerations are represented in all policies, programs, budgets, and reports of the Fijian Government. If this pilot and the climate budget tagging pilot are both successful, the two systems will need to be integrated so Fiji's budget process becomes climate and gender responsive.

**Third Priority:** *Develop and implement institutional arrangements, such as socially inclusive and gender-sensitive policies that are responsive to the needs of low-income and otherwise disadvantaged groups and include these groups in the decision-making processes.*

Once developed, gender-sensitive policies will help identify ways to track and report on gender-based indicators, will bolster efforts to collect gender-related data on climate interventions, and will strengthen the gender and climate impact of projects and plans. As part of its GCF accreditation, MOE is developing a draft Gender Equity and Social Inclusion Policy (GESI).

**Fourth Priority:** *Develop and practice participatory and gender responsive budgeting.*

Incorporating gender considerations into the planning and budgeting processes will improve the transparency, accountability, monitoring, and evaluation of gender considerations in public expenditures. It will also help ensure a more equitable resource allocation for women and children.

**Fifth Priority:** *Require that all projects to collect and report sex- and age-disaggregated data.*

This fills data gaps about how climate finance helps women and other marginalized groups, improves policy decisions, and ensures resources support the most gender-responsive projects.

## HOUSING

### Housing Key Points

- ◆ The most significant financing gaps are for climate resilient building standards and for detailed data about how localized climate impacts will affect Fiji's housing developments.
- ◆ Stakeholders called for retrofitting infrastructure and services, formalizing land titles, and retrofitting informally built settlements to be more climate resilient.
- ◆ The CFS shows a gap of FJ\$5.8 million between the estimated climate finance needs and the identified average annual spending from 2016 to 2019. The pandemic led to additional cuts of FJ\$3.82 million.

### Projected Climate Vulnerabilities and Impacts

According to the 2017 Census, 24% of Fiji's urban population lives in informal settlements that face insecure living conditions. Improving the resilience of informal settlements requires:

1. Upgrading local infrastructure (i.e., drainage, portable water, and sanitation) to improve access to basic services and the health of the local environment.
2. Formalizing land titles to improve tenure security.
3. Retrofitting existing houses to improve the resilience and safety of the houses.

These settlements pose a climate vulnerability hotspot, as they are frequently damaged during extreme weather events. For example, TC Winston destroyed 7.5 percent of the total housing stock and caused major damage to another 6.3 percent of houses (Global Facility for Disaster Reduction and Recovery 2016). The CVA, NDP, and NAP all identify increasing both the availability of quality housing and the resilience of existing units as top development priorities.

### Key Stakeholders

The Ministry of Housing and Community Development, Housing Authority of Fiji, Public Rental Board, the Ministry of Lands and Mineral Resources and the iTaukei Land Trust Board implements these priorities. The Ministry of Housing creates policies, funding assistance, and regulates Fiji's housing system. The Housing Authority of Fiji develops

**24% of Fiji's urban population lives in informal settlements that face insecure living conditions. These settlements pose a climate vulnerability hotspot, as they are frequently damaged during extreme weather events.**

affordable land and housing packages to help low- and middle-income earners finance mortgages. The iTaukei Land Trust Board oversees and administers iTaukei land on behalf of its indigenous owners. The Public Rental Board provides social housing to low-income earners, while the Ministry of Lands and Mineral Resources administers state land and oversees government leases for residential development. The CFS found that the following external partners have recently or are currently supporting projects to build the climate resilience of Fiji's housing stock:

- ◆ Adaptation Fund
- ◆ Australian Department of Foreign Affairs and Trade
- ◆ Government of India
- ◆ Institute for Environment and Human Security
- ◆ International Finance Corporation
- ◆ Munich Climate Insurance Initiative
- ◆ New Zealand Ministry of Foreign Affairs
- ◆ RISE (consortium of partners), which includes the New Zealand Government and Monash University<sup>vi</sup>
- ◆ United Nations Capital Development Fund
- ◆ United Nations Development Programme
- ◆ United Nations Habitat

### Recent Climate Finance Trends

Despite challenges with the data, the CFS estimated that roughly FJ\$11.39 million in public climate finance is needed to address climate impacts (see Table 11). This covers only public investments that would create a more robust enabling environment for private sector investments into climate-resilient housing. Overall, the private sector is the main investor, so this FJ\$11.39 million estimate does not cover the true costs of adapting Fiji's housing sector.



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enabling environment for private sector investments into climate-resilient housing. Overall, the private sector is the main investor so this FJ\$11.39 million estimate does not cover the true costs of adapting Fiji's housing sector.

**Table 11 | Climate Finance Snapshot—Housing Sector**

GOVERNMENT POLICY OBJECTIVES	ANNUAL CLIMATE FINANCE NEEDS** (FJD PER YEAR)	ANNUAL BUDGET ALLOCATIONS* (FJD PER YEAR)	ANNUAL ACTUAL SPENDING* (FJD PER YEAR)
Provide affordable and safe housing to all, especially low-income earners	FJD 3,450,000	FJD 5,887,126	FJD 669,777
Upgrade informal settlements	FJD 7,740,000	FJD 20,737,626	FJD 4,924,854
Strengthen Govt-NGO partnerships in the provision of housing and land for the poor	FJD 200,000	FJD 3,539,310	FJD 0
<b>TOTAL: HOUSING SECTOR</b>	<b>FJD 11,390,000</b>	<b>FJD 30,164,062</b>	<b>FJD 5,594,631</b>

\* NOTE: The annual budget allocation provides an indication of the total possible amount of public climate finance that was available to the relevant activities and from all known funders. The availability of data on actual spending varies significantly by funder and could not be secured for every project that was implemented.

\*\* Note: Cost estimates for the housing sector are provided by the CVA. The CVA provides cost estimates for interventions that the public sector could take to strengthen the enabling environment so that the private sector expands its investments in climate resilient housing units. In a 2013 study on adaptation options for Lami Town (population 20,000) SPREP estimated that it would cost at least FJ\$18 million over 10 years or more than FJ\$24 million over 20 years to implement a series of interventions that would help Lami Town adapt to climate change, such as replanting mangroves and stream buffers, reducing inland logging and coral extraction, and building sea walls.

Source: Reproduced from the Fiji Climate Finance Snapshot, 2016 to 2019.

#### Box 24: Cuts to Domestic Climate Finance as a result of COVID-19—Housing Sector

**Top Priority:** *Regularization and Formalization of Informal Settlements (Informal Settlement Upgrade Programme).*

This long running government programme upgrades local infrastructure and formalizes land titles in existing informal settlements. The annual project allocation was reduced by FJ\$23,000 in the 2020–2021 budget and by FJ\$27,000 in the COVID-19 Response Budget.

**Second Priority:** *Lower Insurance Premiums for Homes.*

The Fijian Government, the Insurance Council of Fiji, the Fiji Institute of Engineers, and the World Bank are developing affordable cyclone insurance coverage for Fijian homeowners. The project was not funded in the 2020–2021 National Budget, a cut of FJ\$1 million from the 2019–2020 budget.

**Third Priority:** *Revitalizing Informal Settlements and Environment (RISE).*

Funded by the New Zealand Government and Monash University, among other partners, RISE uses nature-based solutions to improve informal settlements. The project allocation was reduced by FJ\$300,000 in the COVID-19 Response Budget.

**Fourth Priority:** *Koroipita Model Town.*

This provides cyclone-proof housing for low-income families. In the 2019–2020 fiscal year, a total of 21 new homes were completed for 105 Fijians. The budget was reduced by FJ\$1.01 million in the COVID-19 Response Budget and by FJ\$480,212 in the 2020–2021 National Budget.

The CFS estimated that at least FJ\$5.59 million was spent annually by the Fijian Government between 2016 and 2019, or roughly half of the identified needs. More than 87% went to upgrading informal settlements. The Adaptation Fund is supporting efforts to increase the resilience of informal urban settlements in Nadi, Sigatoka, Lami, and Lautoka by integrating climate considerations into town planning efforts. The pandemic-related fallout cut FJ\$3.82 million from climate-related housing projects (see Box 24).

### Climate Finance Priorities

The climate finance priorities for the housing sector come from the NAP, CVA, Ministry of Housing and Community Development's Strategic Plan, and the consultation process. There are two policies:

1. Ministry officials and town councils have the tools to use high-quality data, hazard maps, and risk assessments to guide decision-making; and
2. Climate-resilient and affordable housing is available to all Fijians, particularly low-income earners and other vulnerable or at-risk groups.

### GOAL ONE: PREPARE HAZARD MAPS AND BUILD GOVERNING CAPACITY

Given that more than 27% of Fijians live within 1 kilometre of the coasts, many coastal communities and houses are exposed to growing climate and disaster risks (Andrew 2019). Many inland communities are facing greater climate risks due to increased incidents of river flooding, changes in participation patterns, and more frequent droughts. The top three investment priorities are in Box 25.

#### Box 25: Priorities to “Prepare hazard maps and build governance capacity”

**Top Priority:** *Develop downscaled climate information and climate projections to inform the development of localized hazard maps.*

None of the currently available climate data is sufficiently granular to guide decisions about town planning and housing construction. There are two initiatives that, if scaled, could close this data gap:

1. CommonSensing project is gathering historical climate-related data for all communities and provides technical trainings to FMS, NDMO, the Department of Waterways, and the Ministries of Land, Agriculture and Sugar about how to use this data.
2. A partnership between the CCICD and the University of Yorkshire to pilot efforts to build climate-forecasts and models for the Coral Coast, Sigatoka, and Nadi. Additional funding is needed to collect and model more detailed data—such as the typography of local conditions in one metre increments—to inform site specific land use projects.

**Second Priority:** *Undertake vulnerability assessments for all communities and use these to develop disaster resilience plans for the most vulnerable ones.*

This would improve the government's understanding of the unique climate risks faced by all communities and how to prioritize investments to protect the most vulnerable communities. An interim target is to complete five hazard maps per year, starting with the flood-prone towns of Ba, Labasa, Lami, Navua, Pacific Harbor, Rakiraki, and Seaqaqa.

**Third Priority:** *Develop a national infrastructure asset management system, which first assesses the condition of infrastructure and public buildings and then prioritizes and provides guidance for their maintenance and upgrade.*

A network of asset management systems will show which infrastructure (often concentrated in urban areas) is vulnerable and provide guidance about how and when to replace or upgrade assets. An interim target is to provide funding and capacity building support to the Fiji Institution of Engineers and Masters' Builders Association so they can collaborate with the CIU to develop a national infrastructure asset management system that covers everything from houses and schools to hospitals and government buildings.

## GOAL TWO: PROVIDING CLIMATE-RESILIENT HOUSING FOR ALL

Roughly, 90% of all informal settlements are built using tin/iron and timber to varying standards of construction quality. Similarly, recent cyclones have

damaged or destroyed houses in villages, cities, and other population centres. The top three investment opportunities are in Box 26.

### Box 26: Priorities to “Provide affordable climate-resilient housing to all.”

**Top Priority:** *Scale up efforts to upgrade existing informal settlements to be climate resilient.*

Further funding is needed to upscale the government's existing Informal Settlement Upgrade Programme and to integrate the identified solutions into Fiji's housing and climate policy development.

The United Nations Capital Development Fund, the UN Development Program, the Munich Climate Insurance Initiative, and the Institute for Environment and Human Security are implementing the Pacific Insurance and Climate Adaptation Program, which pilots and scales market-based climate disaster risk financing instruments in Fiji. It targets the housing, agriculture, fisheries, and tourism sectors and focus on women, youth, MSMEs and migrants. The inception phase, from 2021 to 2022, will have an initial budget of US\$7.5 million. Additional support is needed to scale this product to cover additional sectors and countries.

**Second Priority:** *Plan and enable the supply of affordable serviced land close to employment nodes for households across all income brackets to meet the existing housing backlog and proactively provide for future urban growth.*

Land for climate resilient housing must be planned and developed in urban areas to accommodate the anticipated growth and continued urbanisation of the

Fijian population. Investment in land use analysis and planning, bulk infrastructure, service provision, and development coordination is essential. FDB has a “Fiji Climate Friendly House Loan Project” in its pipeline that would provide loans for climate-friendly houses, including those with include insulation, solar hot water, solar PV, LED lighting, water saving devices and ceiling fans. See concept note in Annex II.

**Third Priority:** *Develop and support programs and financing instruments to ensure the construction of cost effective, insurable, and context-relevant disaster resilient homes for rural and urban communities.*

With additional resources, two existing projects could be scaled:

1. A collaborative *Build Back Better* program among the Fijian government, Habitat for Humanity, and other development partners to improve the construction quality of villages and informal settlements destroyed or severely damaged by tropical cyclones
2. The Koropita Model, a planned community of 240 houses near Lautoka, is built to withstand category 4 cyclones with an onsite minimal waste system and solar power.

## HUMAN HEALTH

### Key Points

- ◆ From the stakeholder consultations, the top investment priorities for the sector are to:
  - a. Develop more comprehensive cost estimates for adaptation; and
  - b. Conduct additional research on how to better integrate climate considerations into the health sector, including how to identify and combat to new diseases like COVID-19.
- ◆ The CFS found that FJ\$11.3 million was allocated annually from 2016–2019 for activities related to climate and health. The available data does not provide sufficient cost estimates.
- ◆ The COVID-19 pandemic reduced the budget for relevant projects by FJ\$345,000.

### Projected Climate Vulnerabilities

Climate impacts will primarily exacerbate the underlying stresses in Fiji's already fragile healthcare system.

Fiji's current vulnerable groups, including women, the disabled, and elderly are likely to face worse health outcomes and to lose access to healthcare as climate impacts intensify. Additionally, more frequent and severe natural disasters will exacerbate vector- and water-borne diseases such as dengue fever and diarrhea. Higher temperatures are likely to increase non-communicable diseases, such as cardiovascular problems and respiratory diseases. Reduced crop productivity will threaten nutrition and food security. If unaddressed, each of these impacts will lead to worse health outcomes among women, children, the elderly, disabled, poor, and other vulnerable groups.

### Key Stakeholders

The Ministry of Health and Medical Services is the only Government ministry responsible for the Human Health sector. It oversees improvements to Fiji's overall healthcare system. External stakeholders

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identified in the CFS that are currently or have recently supported climate-related health projects include the:

- ◆ Australian Department of Foreign Affairs and Trade
- ◆ European Union
- ◆ Japan International Cooperation Agency
- ◆ Korea International Cooperation Agency
- ◆ Pacific Community
- ◆ United National Children's Fund
- ◆ United Nations Population Fund
- ◆ World Health Organisation

### Box 27: Cuts to Domestic Climate Finance as a result of COVID-19—Human Health Sector

**Top Priority:** *Environmental Planning Management and Development Control.*

This trains environment health officers to design and conduct Environment Health Impact Assessments. The project budget was reduced by FJ\$30,000 in the COVID-19 Response budget and was not funded in the 2020–2021 National Budget.

**Second Priority:** *National Food and Nutrition Security Programme.*

This ensures every Fijian has reliable, secure, and affordable access to safe, fresh, and nutritious food. A rise in non-communicable diseases (NCD) has been linked to a growing dependence on imported and processed food, so this project improves access to fresh, local, and nutritious food. The project budget was reduced by FJ\$175, 000 in the COVID-19 Response budget and was further reduced by FJ\$5,000 in the 2020–2021 National Budget.

**Third Priority:** *Control and Protection of Pollution and Waste Management.*

This provides technical and strategic advice on emerging health risks from man-made waste, disease outbreaks, climate impacts, and other pollutants. In recent years, this programme managed the leptospirosis, typhoid, and dengue outbreaks and subsequent clean-up campaigns. The COVID-19 Response Budget cut FJ\$50,000 from the project budget.

**Fourth Priority:** *Community Rehabilitation Assistance Programme.*

This develops and implements a climate change/ natural disaster mitigation and resilience framework specifically for vulnerable, marginalized, and disabled people. The project allocation was reduced by FJ\$85,000 in the COVID-19 Response budget.

### Recent Climate Finance Trends

The CFS found that fundamental questions about how best to adapt the sector and at what cost have yet to be answered. For example, it is not clear exactly which populations or communities face increased health risks due to climate change. In 2020, the Fijian Government cut FJ\$345,000 from four climate-related healthcare projects due to the fallout from COVID-19. These projects are in Box 27.

### Climate Finance Priorities

The priorities for the health sector come from the Ministry of Health's Strategic Plan, the NAP, the CVA and the NCFS consultations. The top three climate-related policies are to:

1. Improve patient health outcomes, with a focus on reducing communicable and non-communicable diseases, improving services delivery for vulnerable groups, and promoting wider collaboration among partners to create a more efficient and resilient health system.
2. Create health infrastructure that is climate-resilient, environmentally sustainable, and able to match service needs.
3. Promote healthy lifestyles to strengthen population-wide resilience to climate change.



## GOAL ONE: IMPROVE PATIENT OUTCOMES AND DELIVER A MORE EFFICIENT AND RESILIENT HEALTHCARE SYSTEM

This will prevent injuries and illnesses, improve public health preparedness, and reduce the risks of climate change impacts—including the catastrophic

impacts of future pandemics. The current pandemic is underscoring the urgent and essential need to invest in such a system. The key investments are in Box 28.

### Box 28: Priorities to “Improve patient outcomes and deliver a more efficient, resilient healthcare system.”

**Top Priority:** *Improve case detection and coordinated response mechanisms to reduce communicable disease morbidity and mortality and to improve the effective and efficient use of the available resources and information towards climate change interventions relating to health system.*

Cooperation among the Ministry of Health and Medical services, FMS, and other climate-related Ministries needs to be improved. Consultations identified a target to identify climate-vulnerable groups and improve access to health services for women, children, and other vulnerable groups.

The Australian Government is working with the Fijian Ministry of Health and Medical Services to improve health supply chain procurement and to improve the Ministry’s management and distribution systems, which will include a thorough survey of health supply-chain infrastructure.

**Second Priority:** *Strengthen and empower the Climate Change and Health Unit by increasing resources and personnel with clear mandates to implement the Climate Change Health and Strategic Action Plan in*

*cooperation with other relevant national, regional, and international plans, policies, agreements, and convention.*

This enhances cross- sectorial responses and improve preparedness for the associated climate risks. To facilitate this, the Climate Change and Health Unit needs help developing and piloting a web-based reporting system that covers climate sensitive diseases, emerging health concerns, and the adaptive capacity of affected communities. This reporting system is not yet under development.

**Third Priority:** *Improve diagnostic and treatment capacities to manage climate change and health risks to ensure that health care infrastructure at all levels can respond effectively to climate-sensitive diseases and conditions, including dengue, diarrhea, typhoid, and leptospirosis.*

This requires extensive upgrades to health facilities and equipment so they can respond to health risks and climate-induced diseases. This would allow rural and maritime communities to retain health services during natural disasters.

SHORTLIST OF PROJECTS FOR THE GREEN CLIMATE FUND				MINISTRY OF ECONOMY’S CCICD PROJECT PIPELINE				LIST OF PRIORITY INTERVENTIONS		
Agriculture	Blue Economy	Climate Policy and Governance	Climate-Induced Relocation	Disaster Risk Management	Electricity	Forestry	Gender and Social Inclusion	Housing	Human Health	Transport
										Water and Sanitation

**GOAL TWO: ENSURE HEALTH INFRASTRUCTURE IS CLIMATE-RESILIENT AND ENVIRONMENTALLY FRIENDLY TO MATCH SERVICE NEEDS**

Given Fiji's extreme climate vulnerabilities, resilient infrastructure will reduce the costs of rebuilding and will ensure healthcare is available during such crises.

Stakeholders identified two priorities (see Box 29) to implement this.

**Box 29: Priorities to “Ensure health infrastructure is maintained to match service needs.”**

**Top Priority:** *Retrofit the existing health infrastructure and install innovative structures, energy, and water supplies; distribute medicines and equipment efficiently to guarantee safety; enable lifesaving support by applying relevant legislation, policies, and standards; and ensure such legislation, policies and designs are used for new health facilities to mitigate exposure to climate change risks.*

The top priority is to ensure that existing and newly built health infrastructure has essential resources and that all climate risks are integrated into building designs. The Fijian Ministry of Health and Medical Services' national guidelines for Climate-Resilient and Environmentally Sustainable Healthcare Facilities (CRESHF) cover five components: water and sanitation, hygiene and healthcare waste, infrastructure and technology products, energy, and the health workforce. Stakeholders identified two targets:

1. Maintain infrastructure at all health facilities to the CRESHF resilient standard
2. Build capacity of the Ministry of Health and Medical Services to manage health infrastructure.

**Second Priority:** *Using the 'build back better' concept, repair and reconstruct the health infrastructure affected by recent disasters, namely Tropical Cyclone Winston and the 2017 landslides in Qamea.*

This would reconstruct the health facilities damaged by recent floods, landslides, and cyclones so they can withstand more severe storms. The programme ensures vital health facilities remain standing during disasters and allows the government to avoid the repeated costs of rebuilding after every storm. Sixteen health facilities were damaged by recent storms and three have yet to be rebuilt. Once these health facilities are rebuilt, stakeholders recommended two additional targets:

1. Ensure all health facilities in rural and maritime communities have the technical capacity and resources to meet minimum standards for health emergencies and disaster preparedness
2. Upgrade all health facilities not affected by recent disaster events. A concept note to upgrade five healthcare facilities to meet the CRESHF standards is on the CCICD's shortlist of adaptation projects (see Annex II).

**GOAL THREE: STRENGTHENING POPULATION-WIDE RESILIENCE TO THE CLIMATE CRISIS BY PROMOTING HEALTHY AND ADAPTIVE LIFESTYLES**

The final policy goal is to strengthen the sector’s capacity to serve the Fijian communities that are already experiencing climate impacts, especially

those in low-lying and coastal areas. Undertaking protective measures, such as providing adequate health services in rural and maritime islands, will provide health protection to climate vulnerable communities and help them adapt. The two investment priorities are in Box 30.

**Box 30: Priorities to “Strengthen population-wide resilience to the climate crisis.”**

**Top Priority:** *Enhance the resilience of the National Health System by promoting training capacities in the field of disaster medicine and by developing the capacity of health workers—including environmental health officers, laboratory technicians, doctors, nurses, pharmacists, and other practitioners—to understand the intersection of human health, climate change adaptation, and disaster risk reduction.*

This will improve the workers' understanding and assessments of climate impacts, ability to implement adaptation projects, and capacity to make climate-informed decisions. As an interim target, stakeholders recommended strengthening the First Emergency Medical Assistance team so they can deploy a range of medical, emergency, and outreach services when they respond to outbreaks and diseases.

**Second Priority:** *Identify and prioritize adaptation needs and the associated health risks of the communities and populations that are most vulnerable*

*to climate change and by developing proposals and plans for adaptation strategies to address identified gaps.*

This would provide a detailed answer to the question of which communities in Fiji are most vulnerable to health and climate impacts and how best to protect them. Fiji’s rural and maritime communities are already grappling with climate impacts, so should be prioritized.

KOICA’s *Strengthening Health Adaptation Project: Responding to Climate Change in Fiji* strengthens communities’ response capacities for climate resilience and environmental health. It builds capacity and facilitates collaboration among community health workers, public health committees and other community- based organizations to address climate-related health risks in communities.

## TRANSPORT

### Key Points

- ◆ The stakeholder consultations identified two priorities:
  1. Upgrade public transportation infrastructure
  2. Assess how new decarbonization technologies can be deployed.
- ◆ Annual public climate finance spending for land, maritime, and air transport from 2016 to 2019 was FJ\$383 million, well below the FJ\$2.26 billion in identified needs. Public climate finance spending to decarbonize marine transport was FJ\$17 million per year less than needed.
- ◆ The COVID-19 pandemic created an additional gap of FJ\$49.45 million for climate-related projects.

### Projected Climate Vulnerabilities

For Fiji to meet its climate commitments, it must build a resilient, low-emission transport sector by land, air, and sea. Fiji's conditional NDC target is to reduce 137,000 tCO<sub>2</sub> per year from the sector. The CVA describes transportation sector as the sector with “the largest investment needs for building the country's resilience”. Given that more than 27% of Fijians live within 1 kilometre of the coasts, many coastal communities and houses are exposed to growing climate and disaster risks (Andrew 2019).

### Key Stakeholders

The Department of Transport, Fiji Roads Authority, and the Land Transport Authority administer a sustainable transport network in Fiji. The Department of Transport oversees the entire transport network and coordinates actions to meet Fiji's climate goals. Fiji Roads Authority plans, develops, and maintains road infrastructure spanning 7,600km of roads, 1,200 bridges, 9,000 streetlights, and 47 jetties. The Land Transport Authority of Fiji provides a safe, economical, and sustainable land transport system in Fiji. The CFS identified the following stakeholders who are active in the sector:

- ◆ Asian Development Bank
- ◆ People's Republic of China
- ◆ Japan International Cooperation Agency
- ◆ World Bank

### Recent Climate Finance Trends

The CVA estimates that FJ\$4.3 billion is needed over the next 10 years to improve the resilience of Fiji's transport infrastructure. The CFS found that FJ\$320 million, or 83% of all annual investments since 2016, went to restoring, upgrading, and strengthening Fiji's rural road network. The CFS found limited efforts—such as policies, regulations, or existing infrastructure projects—to reduce emissions from Fiji's vehicle and vessel fleets (see Table 12).

Although the private sector will be the primary investor to reduce road emissions, the public sector needs to set the policies and incentives to decarbonize all transport. Additionally, the public sector will need to decarbonize the maritime industry by investing an average of FJ\$12 million annually in a “proof of concept” for low-carbon marine vessels. Fiji is a founding partner of the *Pacific Blue Carbon Shipping Partnership* and knows that additional support will be required to bring the goal of this partnership—a decarbonized shipping fleet in the Pacific by 2030—to fruition.

The coronavirus pandemic created an additional gap of FJ\$49.45 million for climate-related transport. The NCFS consultations prioritized the affected projects (see Box 31).

Table 12 | Climate Finance Snapshot—Transportation Sector

TRANSPORT SUBSECTOR	GOVERNMENT POLICY OBJECTIVES	ANNUAL CLIMATE FINANCE NEEDS** (FJD PER YEAR)	ANNUAL BUDGET ALLOCATIONS* (FJD PER YEAR)	ANNUAL ACTUAL SPENDING* (FJD PER YEAR)
Land Transport	Further development of full road network to international standards with a greater emphasis on maintenance, rehabilitation, and upgrading	FJD 468,160,000	FJD 517,944,143	FJD 320,060,438
	Expansion of the rural road network	FJD 30,000	FJD 75,598,358	FJD 29,198,964
	Ensure safe, efficient (including reducing traffic congestion) and affordable transportation services	FJD 643,000	FJD 31,348,410	FJD 28,113,966
	Ensure environmentally sustainable transportation for all Fijians based on the principles of the Green Growth Framework	FJD 1,694,219,683	FJD 435,889	FJD 263,656
Maritime Transport	Development of the domestic shipping industry.	FJD 6,845,708	FJD 6,208,012	FJD 3,060,279
	Increase shipping services to uneconomical routes.	FJD 297,429	FJD 2,762,081	FJD 2,071,595
	Development of maritime infrastructure.	FJD 15,691,544	FJD 1,853,455	FJD 665,863
	Ensure safe, efficient, affordable, environmentally sound and sustainable inter-island transportation services.	FJD 795,621	FJD 0	FJD 0
Air Transport	Promote sustainable development through application of world environmental best practices in all ports.	FJD 72,594,441	FJD 0	FJD 0
<b>TOTAL: TRANSPORTATION</b>		<b>FJD 2,259,307,426</b>	<b>FJD 636,150,348</b>	<b>FJD 383,434,761</b>

\* NOTE: The annual budget allocation provides an indication of the total possible amount of public climate finance that was available to the relevant activities and from all known funders. The availability of data on actual spending varies significantly by funder and could not be secured for every project that was implemented.

\*\* Note: Cost estimates for the transport sector are provided by the LEDS, NDCR, and CVA. These estimates cover investments that are the responsibility of the public sector, such as upgrading and rehabilitating roads, bridges and jetties. These also include cost estimates for actions that are the responsibility of the private sector, such as upgrading the vehicle and shipping fleets to low-emissions transport options.

Source: Reproduced from the Fiji Climate Finance Snapshot, 2016 to 2019.



### Box 31: Cuts to Domestic Climate Finance as a result of COVID-19—Transport Sector

**Top Priority:** *New Capital—Congestion (Road Corridor Improvement, Greater Suva Transportation Study, Transportation Strategies).*

The project involves the feasibility study and detailed design of stages 1 and 2 of the Labasa bypass, which will help ease congestion in and reduce travel time. The project will incorporate climate resilient aspects and, where appropriate, underground electricity lines. The budget was reduced by FJ\$4.75 million in the 2020–2021 National Budget.

**Second Priority:** *New Capital—Community Development Programme.*

The programme involves a range of capital investments to improve the safety, accessibility, and transport options for Fiji's rural communities. It covers the construction of footpaths to improve community access and the installation of new solar streetlights,

new jetty facilities, upgraded bus shelters, and new traffic signals. All newly installed lights are with LED streetlights, as these are more energy efficient. The project budget was reduced by nearly FJ\$26 million due to the pandemic.

**Third Priority:** *Renewal—Roads and Services.*

This upgrades rural roads and footpaths to be more climate resilient, improve user safety, and expand usage. FJ\$6 million in the pandemic-related budgets.

**Fourth Priority:** *Renewal—Bridges.*

This replaces and upgrades bridges and crossings throughout Fiji. These efforts will improve user safety and ensure transport infrastructure is climate resilient. The project budget was reduced by FJ\$13.32 million in the COVID-19 Response Budget.

### Climate Finance Priorities

Fiji's climate finance priorities for the transport sector come from the NAP, NDC Investment Plans, LEDS, CVA, and strategic plan from the Ministry of Infrastructure, Transport, Disaster Management and Meteorological Services. These priorities were further refined through the consultation process, which identified the following climate-related policy priorities:

1. Improve accessibility and connectivity for environmentally sustainable road transport.
2. Develop and deliver safe, sustainable, reliable, and affordable shipping services and marine transportation options.
3. Build and deliver consistent, efficient, and high-quality international and domestic air service.

### GOAL ONE: IMPROVE ACCESSIBILITY AND CONNECTIVITY TO ENVIRONMENTALLY SUSTAINABLE ROAD TRANSPORT

Fiji's growing population and increasing tourism demand are increasing demand for Fiji's road transport infrastructure and putting additional pressure on the sector to grow in an environmentally sustainable manner. Thus, Fiji must expand its decarbonized road transport options and integrate climate impacts into new and rehabilitated infrastructure. See Box 32 for the top climate-related investments Box 32: Priorities to "Improve accessibility and connectivity to environmentally sustainable road transport."

**Box 32: Priorities to “Improve accessibility and connectivity to environmentally sustainable road transport.”**

**Top Priority:** *Promote institutional strengthening and capacity building for an integrated transport strategic planning framework, including by developing and enforcing certification standards to climate-proof transport infrastructure.*

An integrated transport strategic plan would ensure that the economic and environmental impacts of all modes of transport are factored into the design and implementation of new road projects. With tropical cyclones and floods becoming more frequent and intense, climate proofing infrastructure now will decrease the long-term costs of repeatedly rebuilding roads and bridges. The NDC Investment Plan has two relevant projects:

1. “Lautoka Zero Carbon Transport Challenge/Strategy,” will create a comprehensive strategy that combines low-carbon transport for Lautoka and with viable business models for private sector participation. The project requires US\$1 million (2020–2030) for capacity building and technical assistance.
2. “Bus Network Information Transport System,” will install GPS monitoring, central monitoring, standardized bus routes, and modern passenger information systems for all bus operators. The programme requires US\$8.9 million (2020–2030) for capacity building and technical assistance and US\$104.6 million (2020–2030) as an investment cost. The concept note is on the shortlist of CCICD mitigation projects and in Annex II.

In addition, FDB has a GCF concept note to decarbonize bus transport in Fiji. The project will develop an institutional and regulatory framework, implement an electric bus trial, and build the capacity

of electric bus operators. The concept note is on the GCF mitigation shortlist (see Annex II). Over time, it could be applied to maritime transport.

**Second Priority:** *Renew, upgrade, and strengthen road infrastructure, including bridges and water crossings, to ensure that current and future environmental and climate risks are incorporated into their design.*

Climate impacts, such as sea level rise and inland flooding regularly undermine Fiji’s efforts to provide secure and reliable access to road infrastructure, especially in rural areas, so more ambitious and data-driven efforts are required to make Fiji’s road infrastructure climate resilient.

**Third Priority:** *Develop waste management standards for the transport industry to ensure waste is either reused or disposed of in a manner that is harmful neither to human health nor the environment.*

The major waste challenge is the lithium batteries in the growing fleet of hybrid vehicles, which are very harmful to the environment unless properly disposed. At present, there are no policies developed or processes established to govern the proper disposal and reuse of lithium batteries.

This could be addressed by financing and implementing the NDC Investment Plan’s “End-of-life Vehicle programme,” which will increase the capacity of private sector scrap metal companies to handle the growing volume of second-hand and end of life vehicles. As a small island, Fiji also needs a way to break down, reuse, and dispose of retired vehicles. The concept note is on the CCICD shortlist of mitigation projects (see Annex II).

**GOAL TWO: DEVELOP AND DELIVER SUSTAINABLE, RELIABLE AND AFFORDABLE SHIPPING AND MARINE TRANSPORT OPTIONS**

The maritime shipping industry is an indispensable part of Fiji's economy, but it relies on highly polluting diesel fuel and is very emission intensive.

Decarbonizing shipping will contribute to a healthier ocean ecosystem and thus boost the livelihoods of the people living in nearby coastal communities. During consultations, stakeholders identified the top investment priorities, discussed in Box 33, to do this.

**Box 33: Priorities to “Develop and deliver sustainable, reliable and affordable shipping services and marine transportation options.”**

**Top Priority:** *Develop climate-resilient jetties, landings, and support infrastructure, as needed, on the outer islands.*

Fiji's outer islands are especially vulnerable to severe damage from sea level rise and tropical cyclones and this damage often cuts off transport options between the islands. Improving jetties and landings by integrating climate considerations will protect these communities and increase commercial activity by reducing the costs and risks of transport to the outer islands.

The single best way to build this resilience is to finalize and implement the “Pacific Blue Carbon Shipping Program (PBSP).” Fiji and the Republic of Marshall Islands coordinate the PBSP, which aims to accelerate the development of a 100% carbon-free maritime transport sector by 2050 and to reduce GHG emissions from shipping by 40% by 2030. The PBSP concept note is on the CCICD's shortlist of mitigation projects and in Annex II).

**Second Priority:** *Strengthen and upgrade existing ports so that they meet international standards and are resilient to climate and disaster events.*

Fiji's four major ports—Suva (54% of all trading), Lautoka (42%), Malau (3%) and Levuka (0.22 %)—produce significant GHG emissions and waste. They are also quite exposed to sea level rise and increased cyclone activity so achieving this intervention will create ports that exhibit more efficient water use, lower carbon emissions, less waste pollution, and less damage due to extreme events.

The NDC Investment Plan includes a “Green Ports Master Plan,” which would support efforts by Fiji Ports Corporation Limited (FPCL) to redevelop or expand the four main ports. This would ensure these ports adopt green port guidelines, use smart water metering, implement energy and environmental management systems, and become carbon neutral in their electricity use. The Asian Development is conducting a strategic review of how to relocate the Suva Port.

**Third Priority:** *Repair and upgrade navigation aids, lighthouses, and beacons to be climate resilient.*

This will improve navigation services for the both the maritime industry and for the coastal communities. The current target is to rehabilitate and upgrade 25 lighthouses by 2021.

**GOAL THREE: BUILDING AND DELIVERING SUSTAINABLE, EFFICIENT, AND HIGH-QUALITY INTERNATIONAL AND DOMESTIC AIR SERVICE**

Once Fiji Airways recovers from the significant financial losses induced by the pandemic, the top priorities are to upgrade all airports, airstrips,

and runways to be climate resilient and to reduce emissions from air services The top investment priorities are in Box 34.

**Box 34: Investment Priorities to “Build Reliable and Resilient Air Service.”**

**Top Priority:** *Review and upgrade airport and airstrip infrastructure so that it meets international standards, is more energy efficient, and is climate resilient.*

The NDC Investment Plan has three projects.

1. *Aircraft Re-Fleeting Programme* renews the domestic fleet by investing in higher performance aircraft, improved aerodynamic and engine efficiency, and more efficient in-flight mechanical and electric systems. As the technology becomes available, these upgrades would allow Fiji Airways to integrate zero-emissions technology into their domestic operations. The project costs US\$4.5 million (2020–2030) for capacity building and US\$276 million (2020–2030) as an investment.

2. *Sustainable Aviation Fuel Integration Initiative* would integrate biofuels—or other sustainable aviation fuels—into the domestic airline fuel mixture. This would deliver immediate emissions reductions for all flights that use SAF. The project requires US\$500,000 (2020–2030) for technical assistance and US\$6.6 million (2020–2030) as investment cost.

3. *Airport & Airfield Infrastructure Upgrade* upgrades all airstrips—either new or current—to meet international standards, improve the reliability and efficiency of domestic air services, and reduce per-passenger emissions. The project requires US\$3 million (2020–2030) for capacity building and US\$49.5 million (2020–2030) as investment cost.

## WATER AND SANITATION

### Key Points

- ◆ Consultations identified the following policy priorities:
  1. Address contaminated water and water-borne diseases and provide proper sanitation to informal settlements.
  2. Establish effective systems to manage water resources, namely protecting water catchment areas.
  3. Build resilient and efficient water and wastewater infrastructure.
- ◆ The available annual public climate finance of FJ\$173 million exceeded the annual identified funding needs of FJ\$162.65 million, though actual expenditures were FJ\$86.3 million from 2016 to 2019.
- ◆ The COVID-19 pandemic cut FJ\$15.45 million from several projects.

### Projected Climate Vulnerabilities

Climate impacts pose considerable risks to Fiji's water and sanitation sector, so bolstering resilience is a top priority. For example, sea-level rise could contaminate groundwater tables to such a degree that in-ground septic and sewer pumping systems will be overrun with salt water. Fiji's drinking water is largely supplied by significant and regular rainfall, but climate change is likely to alter the variability and predictability of precipitation patterns and undermine the reliability of Fiji's water supply. Meanwhile, Fiji's water distribution infrastructure is highly vulnerable to extreme climate events, such as cyclones and flooding.

If unaddressed, climate impacts could hinder Fiji's efforts to provide clean water to 85% of rural communities and to connect 40% of the population to the central sewerage system. Building the climate resilience of its water and sanitation infrastructure is integral to Fiji's continued economic development. If unaddressed, these climate impacts could severely hinder Fiji's efforts to reach its development goals to provide access to clean water in 85% of rural communities by 2021, up from 75% in 2017, and to connect 40% of the population to the central sewerage system by 2021, up from 25% in 2017.

Building up the climate resilience of its water and sanitation infrastructure is thus integral to Fiji's efforts to sustain its economic development.

### Key Stakeholders

The key stakeholders include the Water Authority of Fiji, Department of Water and Sewerage and the Ministries of Waterways and Environment, Health and Medical Services, Local Government, and Lands and Mineral Resources. The Department of Water and Sewerage creates the policies and regulatory frameworks. It also provides technical advice and monitors rural and urban water and sewerage projects. The Department monitors whether WAF's activities comply with the budget allocations. WAF provides clean water and sanitation services to all Fijians. The Ministry of Waterways and Environment manages Fiji's waterways and preserves its natural environment. The Ministry of Health and Medical Services strengthens sanitation measures. The Ministry of Local Government facilitates sustainable development in towns and cities. The Mineral Resources Department surveys and develops groundwater resources in communities where surface sources are inadequate, absent, or contaminated. The CFS identified the following external stakeholders who are active:

- ◆ Asian Development Bank
- ◆ European Investment Bank
- ◆ Green Climate Fund
- ◆ Global Environment Facility
- ◆ Japan International Cooperation Agency
- ◆ Kuwait Fund for Arab Economic Development
- ◆ New Zealand Ministry of Foreign Affairs and Trade
- ◆ Pacific Community
- ◆ Pacific Islands Forum Secretariat
- ◆ United Nations Children's Fund

### Recent Climate Finance Trends

The CFS found that FJ\$162.8 million was allocated annually to the sector. Of this, FJ\$72.1 million comes from a GCF project to improve the climate resilience of Suva's waste and wastewater management systems (see Table 13). Although the allocated public climate finance exceeded the estimate needs, actual expenditures accounted for only 53% of the estimated needs.



The Fijian Government's priority is to provide safe water and adequate sanitation to all Fijians. With COVID-19 related cuts in the 2020–2021 National

Budget, the sector lost FJ\$15.45 million. Box 35 discusses the top five priorities, which were identified during consultations.

**Table 13 | Climate Finance Snapshot—Water and Sanitation**

GOVERNMENT POLICY OBJECTIVES	ANNUAL CLIMATE FINANCE NEEDS** (FJD PER YEAR)	ANNUAL BUDGET ALLOCATIONS* (FJD PER YEAR)	ANNUAL ACTUAL SPENDING* (FJD PER YEAR)
Strengthen water policy planning and sustainable resource management	FJD 6,400,000	FJD 9,559,870	FJD 5,885,471
Expand access and work towards ensuring equity in the provision of water and sanitation services to all Fijians	FJD 156,150,000	FJD 162,853,918	FJD 80,313,583
Ensure long-term sustainability in the provision of freshwater resources and catchment security	FJD 100,000	FJD 771,687	FJD 171,797
<b>TOTAL: WATER AND SANITATION SECTOR</b>	<b>FJD 162,650,000</b>	<b>FJD 173,185,475</b>	<b>FJD 86,370,851</b>

\* NOTE: The annual budget allocation provides an indication of the total possible amount of public climate finance that was available to the relevant activities and from all known funders. The availability of data on actual spending varies significantly by funder and could not be secured for every project that was implemented.

\*\* Note: Cost estimates for the water and sanitation sector are provided by the CVA and the LEDS. The CVA estimates focus on interventions that are the responsibility of the public sector, such as improved resource management and river protection programs. The LEDS provides cost estimates to improve waste management and sanitation outcomes, which are also in the jurisdiction of the public sector.

Source: Reproduced from the Fiji Climate Finance Snapshot, 2016 to 2019.

### Box 35: Cuts to Domestic Climate Finance as a result of COVID-19—Water and Sanitation Sector

#### Top Priority: Construction of WASH facilities.

This program delivers water, sanitation, and hygiene assistance to all communities by improving coordination. During the COVID-19 pandemic, key WASH protocols controlled the disease, and the project installs more WASH-related facilities, including water taps and filtration systems. The project allocation was reduced by FJ\$200,000 in the COVID-19 Response budget.

#### Second Priority: Water Distribution System.

This expands infrastructure capacity, upgrades aging systems, and makes other adjustments to meet increased water demand. It replaces old, undersized, or leaky water mains and distribution systems and to provide adequate storage capacity. The budget was cut by FJ\$7.16 million in the COVID-19 Response budget and by FJ\$4.17 million in the 2020–2021 National Budget.

#### Third Priority: Compost Bin Pilot Project.

Implemented by the Ministry of Local Government, this distributes compost bins to underdeveloped areas. It includes education and training will Fijians begin composting. The project allocation was reduced by nearly FJ\$300,000 due to the pandemic.

#### Fourth Priority: Construction of Naboro Landfill—Stage 2.

This will provide additional space to dispose rubbish from the Central and Eastern Division. The budget was reduced by FJ\$3.32 million between the COVID-19 Response Budget and the 2020–2021 National Budget.

#### Fifth Priority: Purchase of Standardized Bins.

Implemented by the Ministry of Local Government, this provides funding to all municipal councils to purchase standardized waste bins and to improve waste management. The project was not funded in the 2020–2021 National Budget, down from FJ\$300,000 in the 2019–2020 budget.

## Climate Finance Priorities

These priorities come from the NAP, CVA, LEDS, NDC Investment Plan, NCFS consultations, and strategic plans for the Ministry of Waterways and Environment and the Ministry of Infrastructure and Meteorological Services. The top three climate-related policies are to:

1. Systematically manage waste and wastewater projects.
2. Increase access to water-related data and improve water conservation practices.
3. sustainably manage water resources, primarily by improving access to alternative water supplies and protecting existing water catchment areas.

## GOAL ONE: SYSTEMIC MANAGEMENT OF WASTE AND WASTEWATER PROJECTS

This strengthens the ability of ministries of relevant Fijian Ministries to optimize management of water and wastewater projects and it institutionalizes this knowledge. The top investment priorities, based on the consultations, are in Box 36.

## GOAL TWO: INCREASING ACCESS TO WATER-RELATED DATA AND INFORMATION TO IMPROVE AND EXPAND WATER CONSERVATION PRACTICES

Improved data on rainfall, water temperature, and precipitation patterns will improve efforts to plan for extreme climate events. Improving water conservation

### Box 36: Priorities to Implement “Systemic management of waste and wastewater projects.

**Top Priority:** Conduct a comprehensive assessment of how expected climate impacts will affect all of Fiji's water and sanitation network. The assessment will identify instances where infrastructure needs to be upgraded, replaced, or relocated.

To meet this, stakeholders supported a target to create and implement national WASH standards, including indicators and metrics on climate resilience. The consultations did not identify any projects that are currently supporting this target.

**Second Priority:** Upgrade, repair, relocate and build new water and sanitation infrastructure that can withstand predicted future climate risks. These new infrastructure developments are to be guided by the comprehensive assessment and must meet minimum climate standards.

These upgrades will reduce the Fijian government's costs of rebuilding infrastructure and ensure water services are maintained during disaster events. The Ministry of Rural and Maritime Development has a project to build climate-resilient sewage treatment plants for the roughly 30.5% of rural households (or more than 100,000 Fijians) with high-risk sanitation in Fiji. The NDC Investment Plan also has two relevant projects (both concept notes are on the CCICD shortlist of mitigation projects and in Annex II):

*Efficient Operation and Maintenance of Water Supply Systems.* This allows WAF to improve efficiency in water production, reduce water demand, and ensure Fiji's water distribution systems are efficiently operated and maintained. The project requires US\$1.4 million for technical assistance and US\$3.6 million for investments.

◆ *Efficient Operation and Maintenance of Wastewater Treatment Systems.* This will make energy related improvements in the 11 wastewater systems managed by WAF. This includes a mass balance study for the sewage systems, the identification of major wastewater sources, and an analysis to determine where sewage systems are susceptible to infiltration. The project requires US\$1.8 million for capacity building and technical assistance and US\$4.8 million in investments.

**Third Priority:** Develop, implement, and enforce building codes, a zoning scheme, and minimum standards for the construction and management of new water and sanitation infrastructure. Government agencies must be required and empowered with the authority to enforce safety and resilience standards.

This develops and enforces building codes, zoning schemes, and minimum climate-related standards for all water and sanitation infrastructure. Enforcement must apply to all stakeholders, particularly private sector developers.

practices will reduce water losses and emissions from water generating activities. Three interventions to reach this goal were identified during consultations and are discussed in Box 37.

**Box 37: Priorities to Implement “Increased access to water-related data and information to improve and expand water conservation practices.”**

**Top Priority:** *Build the capacity and responsibility of communities and empower them to manage risks to water and sanitation by adopting risk management concepts in all rural communities and by prioritizing the communities that are especially vulnerable to climate risks.*

This will require collaboration among local communities, the private sector, and government agencies. The interim target is to strengthen the rural and peri-urban water scheme monitoring mechanism, expand awareness campaigns, and provide technical assistance to communities.

A UN Habitat project is analysing the climate-related vulnerabilities of the sanitation systems in all informal settlements in Fiji and implementing incremental upgrades of the identified climate-resilient options. Potential partners for this include the Ministry of Housing and Community Development, WAF, and Ministry of Local Government. The project requires an estimated budget between US\$4 million to US\$8 million.

**Second Priority:** *Support community involvement in water resource management by raising awareness and strengthening the capacity of community-based organisation, non-governmental organisations, and government departments to disseminate information about climate-resilient water management to communities.*

This ensures all communities have accurate information about how best to adapt sustainable water management practices. The Ministry of Rural and Maritime Development is seeking assistance to purchase 10,000 litre water tanks for Fiji's rural communities.

The Wildlife Conservation Society is implementing the project “Watershed Interventions for Systems Health in Fiji.” Working across the five sub-catchments of the Bureta, Dama, Dawasamu, Waibula and Upper Navua rivers, the project promotes integrated upstream catchment management practices to reduce the spread of disease and improve downstream ecosystem conditions and to train health workers about effective water management techniques, how to improve the environment, and how to develop ecological interventions.

**Third Priority:** *Develop education and awareness programmes about the management and use of water resources so users become more efficient with their water use.*

This promotes a better understanding of water resources and enhance the ability of users to sustainably manage these resources. Developing education materials in different languages increases the accessibility of the information, strengthens community engagement, and empowers communities to manage their climate risks.

SHORTLIST OF PROJECTS FOR THE GREEN CLIMATE FUND				MINISTRY OF ECONOMY'S CCICD PROJECT PIPELINE				LIST OF PRIORITY INTERVENTIONS		
Agriculture	Blue Economy	Climate Policy and Governance	Climate-Induced Relocation	Disaster Risk Management	Electricity	Forestry	Gender and Social Inclusion	Housing	Human Health	Transport
										Water and Sanitation

**GOAL THREE: PROMOTE SUSTAINABLE  
MANAGEMENT OF WATER RESOURCES,  
INCLUDING IMPROVED ACCESS TO ALTERNATIVE  
WATER SUPPLIES**

This improves access to alternative water supplies, protects existing water catchment areas, and strengthens the policies and management processes that govern the sector. Consultations identified the top three priorities (see Box 38).

**Box 38: Priorities to “Promote sustainable management of water resources, including improved access to alternative water supplies.”**

**Top Priority:** *Promote the development and implementation of integrated water resource management plans (IWRM) in river basin catchment areas based on existing international best practices and by building upon national and traditional experiences, including efforts to protect freshwater aquifers and other protected areas from saltwater intrusion.*

During consultations, stakeholders identified two targets and one project:

1. Develop partnerships among the WAF, development partners, FNU, and USP to explore renewable energy- based desalination technologies and promote capacity building for water planners and economists.
2. Maintain and desilt dams, starting with 10 ongoing creek desilting projects.
3. *Formulation of Integrated Water Resource Management (IWRM) Plan* in the NDC Investment Plan. Implementing partners are the Department of Water and Sewerage, WAF, Mineral Resources Department, and Ministry of Waterways and Environment. This project is on hold due to the pandemic.

**Second Priority:** *Support the use of alternative sustainable water sources (including but not limited to rainwater harvesting and desalination).*

Alternative water sources can help protect the environment, support water resiliency by diversifying water supplies, and create greener urban landscapes,

especially during droughts. During consultations, no relevant targets or projects were identified.

**Third Priority:** *Employ water catchment management to protect Fiji’s sustainable freshwater resources from of the impacts of pollution contaminants, and/or other catchment security issues.*

During consultations, three interim targets and two investment-ready projects were identified:

1. Conduct feasibility studies for small rainwater structures to build out an irrigation network,
2. Complete maintenance upgrades, feasibility studies, and collect GIS data of the Naqarowaqa, Dreketi, Korokadi, and Droca irrigation schemes, and
3. Complete dredging and maintenance of Fiji’s eight main rivers and small tributaries.

Conservation International is looking to support the community monitoring of freshwater systems using Traffic Light Bio-indicators with communities in the Tuva Catchment, Nadroga/Navosa and in the Province of Ra.

Finally, the Ministry of Rural and Maritime Development needs funding to implement a Water Improvement Project that builds more secure and reliable water catchment systems in rural areas, depending on which water source is most suitable for the community.









# Monitoring and Evaluation Plan

The CCICD will monitor and evaluate the NCFS, using existing methodologies and processes tied to the NDP, NAP, and LEDS. However, implementation will fall to the line ministries in each sector. CCICD will track the relevant data on these efforts, but all relevant line ministries will handle data collection, as they are closest to project implementation. CCICD will work with all line ministries to ensure the NCFS guides all discussions with development partners about how best to support Fiji.

The CCICD has three initiatives to facilitate implementation:

1. The Climate Change Act clarifies the process by which donor agencies report on how their activities support the NCFS. All reports will be made public in the Fiji Climate Change Portal.
2. The CCICD and UNDP are implementing a climate finance budget tagging system to automatically track climate-related projects. Once launched, this provides ongoing data about whether climate finance investments are aligned with the NCFS.
3. The CCICD, Commonwealth Secretariat, UNDP, and the World Resources Institute are developing and launching a Project Development Unit, which will identify, develop, and secure funding for the projects discussed in the NCFS.

# Stakeholder Profile

The government institutions consulted were the Office of the Prime Minister, Energy Fiji Limited, the Reserve Bank of Fiji, the Water Authority of Fiji, the Department of Transport, Fiji Roads Authority and the Ministries of Agriculture, Economy, Fisheries, Forestry, Health and Medical Services, Housing and Community Development, Infrastructure and Meteorological Services, Lands and Mineral Resources, Local Government, Rural and Maritime Development and Disaster Management, Sugar Industry, Waterways and Environment, and Women, Children and Poverty Alleviation.

The bilateral, regional, and multilateral development partners consulted include the Asian Development Bank, Australian Department of Foreign Affairs and Trade, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), European Union, Japan International Cooperation Agency, Korea International Cooperation Agency, New Zealand Department of Foreign Affairs and Trade, Pacific Community, Pacific Islands Forum Secretariat, United States Agency for International Development, and World Bank Group.

The offices in the United Nations system that participated in the consultations were the International Fund for Agriculture Development, International Organisation for Migration, United Nations Development Programme, United Nations Office of Coordination and Humanitarian Affairs, United Nations Office for Disaster Risk Reduction and United Nations Population Fund.

The local civil society organisations that participated include Conservation International, the Fiji Women's Rights Movement, International Union for Conservation of Nature, World Wildlife Fund, and the Wildlife Conservation Society.







# Annex I: List of Climate Projects in Fiji's National Budget

SECTOR	PROGRAMME	2020-2021 BUDGET	COVID-19 RESPONSE	2019-2020 BUDGET
<b>Agriculture</b>	Food Security Programme	\$200,000.00	\$196,070.00	\$800,000.00
	Watershed Management	\$40,000.00	\$150,000.00	\$1,500,000.00
	FDB Subsidy–Interest on Agricultural Loans	\$2,000,000.00	\$2,000,000.00	\$2,500,000.00
	Farm Mechanization	\$500,000.00	\$900,000.00	\$900,000.00
	Cane Access Roads	\$1,000,000.00	\$2,000,000.00	\$3,000,000.00
	Farm Access Roads	\$800,000.00	\$870,000.00	\$800,000.00
	<b>TOTAL</b>	<b>\$4,540,000.00</b>	<b>\$6,116,070.00</b>	<b>\$9,500,000.00</b>
<b>Blue Economy</b>	Coastal Erosion protection works	\$1,727,550.00	\$2,245,000.00	\$5,000,000.00
	Construction of Ice Plants	\$50,000.00	\$569,831.00	\$569,831.00
	Assistance to Commercial Aqua-culture farmer	\$250,000.00	\$250,000.00	\$500,000.00
	Ongoing construction of Multi-species hatchery	\$417,766.00	\$300,000.00	\$533,769.00
	<b>TOTAL</b>	<b>\$2,445,316.00</b>	<b>\$3,364,831.00</b>	<b>\$6,603,600.00</b>
<b>Disaster Risk Management</b>	Drainage and Flood Protection	\$880,000.00	\$1,200,000.00	\$3,000,000.00
	Water Emergency Response Contingency	\$1,700,000.00	\$2,000,000.00	\$2,000,000.00
	Ongoing Rehabilitation and Construction of Schools	\$20,000,000.00	\$30,000,000.00	\$35,000,000.00
	Maintenance of Drainage–Municipal Councils	\$–	\$2,260,000.00	\$2,260,000.00
	Upgrade and Maintenance of Evacuation Centres	\$–	\$–	\$1,802,686.00
	<b>TOTAL</b>	<b>\$22,580,000.00</b>	<b>\$35,460,000.00</b>	<b>\$44,062,686.00</b>
<b>Electricity</b>	Solar Home Systems Programme	\$–	\$2,000,000.00	\$5,405,081.00
	Energy Efficiency and Energy Conservation Programme	\$50,000.00	\$50,000.00	\$150,000.00
	Monitoring and Maintenance of Wind/Hydro/Solar/Biogas Stations	\$30,000.00	\$55,000.00	\$60,000.00
	Upgrade of Bio-fuel Mills	\$–	\$–	\$350,000.00
	Investigation for Development of Geothermal Power	\$–	\$335,795.00	\$250,000.00
	<b>TOTAL</b>	<b>\$80,000.00</b>	<b>\$2,440,795.00</b>	<b>\$6,215,081.00</b>

## Annex I: List of Climate Projects in Fiji's National Budget, continued

SECTOR	PROGRAMME	2020-2021 BUDGET	COVID-19 RESPONSE	2019-2020 BUDGET
Forestry	Reducing Emissions from Deforestation and Forest Degradation	\$454,903.00	\$454,903.00	\$490,700.00
	Upgrade of Forest parks	\$87,000.00	\$87,394.00	\$200,000.00
	Reforestation of Degraded Forest Areas	\$2,000,000.00	\$1,050,000.00	\$1,050,000.00
	<b>TOTAL</b>	<b>\$2,541,903.00</b>	<b>\$1,592,297.00</b>	<b>\$1,740,700.00</b>
Housing	Regularization and Formalization of Informal Settlements	\$2,000,000.00	\$2,023,000.00	\$2,050,000.00
	Lower Insurance Premiums for Homes	\$—	\$—	\$1,000,000.00
	Revitalizing Informal Settlements and Environment	\$170,000.00	\$—	\$300,000.00
	Koroipita Model Town	\$500,000.00	\$980,212.00	\$2,000,000.00
	New Town Development	\$360,000.00	\$874,394.00	\$1,500,000.00
	<b>TOTAL</b>	<b>\$3,030,000.00</b>	<b>\$3,877,606.00</b>	<b>\$6,850,000.00</b>
Human Health	Environmental Planning Management and Development Control	\$20,000.00	\$20,000.00	\$50,000.00
	National Food and Nutrition Security Programme	\$20,000.00	\$25,000.00	\$200,000.00
	Control and Protection of Pollution and Waste Management	\$—	\$—	\$50,000.00
	Community Rehabilitation Assistance Programme	\$5,000.00	\$5,000.00	\$90,000.00
	<b>TOTAL</b>	<b>\$45,000.00</b>	<b>\$50,000.00</b>	<b>\$390,000.00</b>
Transport	New Capital: Congestion	\$20,037,096.00	\$24,789,526.00	\$26,425,776.00
	New Capital: Community Development Programme	\$7,634,159.98	\$24,527,767.00	\$33,510,860.00
	Renewal: Roads and Services	\$30,000,000.00	\$33,171,022.00	\$36,060,930.00
	New Capital: Tourism	—	—	—
	Renewal: Bridges	\$51,249,716.70	\$49,053,633.00	\$62,374,125.00
	<b>TOTAL</b>	<b>\$108,920,972.68</b>	<b>\$131,541,948.00</b>	<b>\$158,371,691.00</b>



## Annex I: List of Climate Projects in Fiji's National Budget, continued

SECTOR	PROGRAMME	2020-2021 BUDGET	COVID-19 RESPONSE	2019-2020 BUDGET
Water and Sanitation	Construction of WASH facilities	\$—	\$—	\$200,000.00
	Water Distribution System	\$4,818,000.00	\$8,985,297.00	\$16,142,000.00
	Compost Bin Pilot Project	\$—	\$277,685.00	\$300,000.00
	Construction of Naboro Landfill, Stage	\$1,839,000.00	\$4,000,000.00	\$5,164,775.00
	Purchase of Standardized Bins	\$—	\$—	\$300,000.00
	<b>TOTAL</b>	<b>\$6,657,000.00</b>	<b>\$13,262,982.00</b>	<b>\$22,106,775.00</b>

# Annex II: Concept Notes for Shortlisted Projects

## NATIONAL ADAPTATION PROJECTS FOR THE GREEN CLIMATE FUND

<b>1. CLIMATE RESILIENT HOMES</b>		
<b>Sub-Sector</b>	Housing	
<b>Description</b>	This reduces the cost of new home construction and installs solar in low-cost housing flats (Public Rental Board Flats). FDB could be the conduit to expand lending to commercial banks for new/upgraded climate-resilient housing	
<b>Key Implementation Milestones</b>	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"> <li>◆ Survey current housing infrastructure to determine investment.</li> <li>◆ Provide support to develop climate resilient, low-cost housing in urban and rural environments</li> </ul>	<b>Investment Needs</b> <ul style="list-style-type: none"> <li>◆ Newly built and upgraded houses in urban and rural areas that are climate resilient.</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ Providing climate resilient homes in urban and rural areas</li> <li>◆ Improved reliability of houses</li> <li>◆ Energy efficient homes</li> </ul>	
<b>SDG Linkages</b>	Supports SDGs 9 (Industry, innovation, and infrastructure), 11 (Sustainable cities and communities), and 13 (Climate action)	
<b>Investment Needs (US\$)</b>	Total Project Cost: US\$10 million	
<b>Implementing and Supporting Entities</b>	<b>Implementing Entities</b> Ministry of Housing and Community Development, Fiji Development Bank <b>Potential Supporting Entities</b> Housing Authority of Fiji, iTaukei Land Trust Board, Public Rental Board, USAID, private sector	
<b>General timeline</b>	Estimated Start Date is 2023	
<b>Policy Link</b>	Supports the targets and objectives in the 5 Year & 20-Year National Development Plan and National Adaptation Plan.	
<b>Information and MRV Needs</b>	<ul style="list-style-type: none"> <li>◆ Constructions per year that comply with the climate resilient standards</li> <li>◆ Number of existing houses retrofitted, and new houses built per year</li> </ul>	

## Annex II, continued: Concept Notes for Shortlisted Projects

### NATIONAL ADAPTATION PROJECTS FOR THE GREEN CLIMATE FUND, CONTINUED

2. WWF CORAL REEF RESILIENCE PROGRAM		
<b>Sub-Sector</b>	Blue economy	
<b>Description</b>	<p>Beginning in Fiji, the Coral Reefs Resilience Program will support 7 countries to ensure the continued productivity of reef and connected coastal ecosystems by addressing climate-related threats and stresses from land-based pollution. FDB is the accredited entity, the CCICD is the NDC, and the ministries of Fisheries, Waterways and Environment, and local government will be executing entities. The project has four components.</p> <p><b>Component 1—Partnerships for Coral Reef Resilience:</b> Leverage global partnerships that support government, coastal communities and other partners to a) expand and improve Marine Protected Areas and LMMAs, b) increased capacity of community resources users and organisations, c) improved formal and informal marine land use plans, d) coral reef conservation integrated into national climate policies and regulations and e) improve policy enforcement from government agencies.</p> <p><b>Component 2—Blue and Green Economy Development:</b> Invest in country projects to a) strengthen legal frameworks to support and incentivise investments in sustainable business areas, b) create favourable enabling environments to operationalise blue and green business models, c) develop multi-country pipelines in coordination with country-level investments, d) form linkages with blended finance opportunities, and e) increase effectiveness of marine and land based production systems connected to coral reefs.</p> <p><b>Component 3—Learning, Sharing and Advocacy Networks:</b> Improve data collection, management and sharing across countries to facilitate science-based decision-making and to share lessons learned and best practices.</p> <p><b>Component 4—Global Management:</b> Seven country projects developed with quality control and oversight, coordinated with regional or global strategies, and supported by global partnerships.</p>	
<b>Implementation Milestones</b>	<b>Policy/Technical Assistance</b> Capacity building to execute complex climate projects across multiple agencies	<b>Investment Needs</b> WWF, as the lead organization, is liaising with multiple development and investment partners
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ Ecosystem-based adaptation</li> <li>◆ Integrated land and marine use planning</li> <li>◆ Developing new sustainable markets and livelihoods communities</li> <li>◆ Direct benefits to approximately 360,000 individuals (40% of Fiji's population) in target sites</li> </ul>	
<b>SDG Linkages</b>	Supports SDGs 1 (No poverty), 2 (Zero hunger), 3 (Good health and well-being), 8 (Decent work and economic growth), 11 (Sustainable cities and communities), 13 (Climate action), 14 (Life below Water), 15 (Life on land).	
<b>Investment Needs (US\$)</b>	US\$65 million	
<b>Implementing and Supporting Entities</b>	<b>Implementing Entities:</b> WWF Pacific, FDB, MOE <b>Potential Implementing Entities:</b> Multiple stakeholders across fisheries, agriculture, forestry, tourism, infrastructure, health, and education	
<b>General timeline</b>	<b>Project timeline:</b> Start in 2024 and end in 2030 <b>Immediate next steps:</b> Submit a GCF Project Preparation Facility Proposal	
<b>Policy/Plan Link</b>	This aligns with the targets and objectives the NDP, NAP, CVA, NDC, and Climate Change Bill	

## Annex II, continued: Concept Notes for Shortlisted Projects

### REGIONAL ADAPTATION PROJECTS FOR THE GREEN CLIMATE FUND

1. ADAPTING TUNA-DEPENDENT PACIFIC ISLAND COMMUNITIES AND ECONOMIES TO CLIMATE CHANGE		
<b>Sub-Sector</b>	Blue Economy	
<b>Description</b>	<p>These 14 Pacific Island are extraordinarily dependent on coral reef fish for food security and on tuna for economic development. The vital socio-economic benefits derived from these natural resources are at severe risk from climate change. Ocean warming and acidification are degrading the coral reefs that have traditionally provided most of the fish for coastal communities and climate-driven redistribution of tuna from the EEZs of nine Pacific Island countries to high-seas areas will reduce government revenues significantly.</p> <p>The programme is of regional significance because tuna are migratory fish species shared by Pacific Island countries. Therefore, reliable information is needed about how climate change will affect tuna behaviour, particularly their migration patterns between EEZ and in international waters. Adaptation to food security concerns need to be tailored to the local context, which this program does.</p> <p>Given the extensive social and economic dependence of Pacific Island countries on tuna, this programme is designed to be both regional and national in scope. The programme is of regional significance because tuna are migratory fish species shared by Pacific Island countries. Therefore, reliable information is needed on how tuna resources will respond to climate change and move across national jurisdictions, and from EEZs to high-sea areas (international waters). It is also relevant at the national level because adaptations to increase access to tuna for food security need to be customised for each country, due to varying food security contexts, and the wide differences in population size and location of Pacific Island nations</p>	
<b>Implementation Milestones</b>	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"> <li>Identifying responses of tuna resources to climate change at higher resolutions</li> <li>Integrate information on tuna connectivity, tuna stock structures and meso-scale oceanography</li> <li>Improved assessment of the effects of climate change on the food webs that support tuna</li> <li>Incorporating ocean forcing</li> </ul>	<b>Investment Needs</b> <ul style="list-style-type: none"> <li>Component A: Adaptations to harness tuna for food security as coral reefs are degraded by climate change—US\$35.35 million</li> <li>Component B: Adaptations to reduce risks to Pacific Island economies from climate-driven tuna—US\$80.75 million</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>Improve the food security of four million people and stabilize the economies of nine countries</li> <li>Enable Pacific Island countries to maintain their traditionally high levels of fish consumption under a changing climate.</li> <li>Improve resilience of ecosystems and ecosystem services</li> </ul>	
<b>SDG Linkages</b>	Supports SDGs 2 (Zero hunger), 13 (Climate action), 14 (Life below water)	
<b>Investment Needs (US\$)</b>	Estimated capital investment: US\$171.65 million	
<b>Implementing and Supporting Entities</b>	<b>Implementing Entities</b> Conservation International <b>Potential Supporting Entities</b> SPC, FFA, SPREP, Pacific FAO, Cook Islands (Climate Change, Cook Islands Division of the Office of the Prime Minister); Federated States of Micronesia (Department of Finance and Administration); Fiji (Ministry of Economy), Kiribati (Ministry of Finance and Economic Development); Marshall Islands (Office of Environmental Planning and Policy Coordination); Nauru (Department of Foreign Affairs and Trade); Niue (Ministry of Finance); Palau (Office of the President); Papua New Guinea (Climate Change and Development Authority); Samoa (Ministry of Finance); Solomon Islands (Ministry of Environment, Climate Change, Disaster Management and Meteorology); Tonga (Ministry for Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications); Tuvalu (Government of Tuvalu); Vanuatu (Ministry of Climate Change, Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management)	

## Annex II, continued: Concept Notes for Shortlisted Projects

### REGIONAL ADAPTATION PROJECTS FOR THE GREEN CLIMATE FUND, CONTINUED

1. ADAPTING TUNA-DEPENDENT PACIFIC ISLAND COMMUNITIES AND ECONOMIES TO CLIMATE CHANGE, CONTINUED		
General timeline	Project lifespan: 7 years Immediate next steps: finalize the concept note and full funding proposal	
Policy Link	The programme supports the <i>Framework for Resilient Development in the Pacific: An Integrated Approach to Address Climate Change and Disaster Risk Management</i> . It also supports the <i>Western and Central Pacific Fisheries Commission Resolution on Aspirations of Small Island Developing States and Territories</i> and the <i>Regional Roadmap for Sustainable Pacific Fisheries</i> .	
Information and MRV Needs	<ul style="list-style-type: none"><li>◆ Data on sea surface temperatures and ocean current velocities</li><li>◆ Models predicting the responses of tuna species to ocean warming</li></ul>	
2. ENHANCING RESILIENCE OF AGRICULTURE AND FOOD SECURITY IN THE PACIFIC ISLAND COUNTRIES BY MANAGING CLIMATE-INDUCED THREATS FROM INVASIVE AQUATIC SPECIES, ANIMAL PESTS AND TRANSBOUNDARY PLANTS		
Sub-Sector	Agriculture	
Countries	Fiji, Samoa, and Solomon Islands	
Description	Climate impacts will exacerbate the agriculture sector's exposure to invasive aquatic species, transboundary plants, and animal pests and will undermine food insecurity, malnutrition, and sustainable development outcomes in Fiji, Samoa, and the Solomon Islands. This introduces climate-adapted farming systems and value chains that are more resilient to biosecurity threats, strengthens national and regional early warning systems, and enhances the national and regional enabling environment to prepare countries for the increased incidences of agricultural pests and diseases.	
Implementation Milestones	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"><li>◆ Promote climate resilient and climate-adapted agriculture production systems and value chains that are resilient to biosecurity threats</li><li>◆ Strengthen and improve coordination between regional and national support mechanisms critical to biosecurity resilience</li><li>◆ Support regional coordination and cooperation mechanisms to create more effective risk assessments, to prevent, monitor, and control plant and animal pests and aquatic species, and to mobilize governments, the private sector and other stakeholders to sustain actions</li></ul>	<b>Investment Needs</b> <ul style="list-style-type: none"><li>◆ Climate-adapted farming systems and value chains are more resilient to biosecurity threats: US\$14,487,211</li><li>◆ Strengthened national and regional early warning and transboundary risk management and associated operational capacities: US\$11,714,755</li><li>◆ Strengthened national / regional enabling environment: US\$15,497,000</li></ul>
Outcomes	<ul style="list-style-type: none"><li>◆ Empower and strengthen capacity of Pacific Island Countries to combat climate-induced invasive species</li><li>◆ Climate-adapted agriculture production systems and value chains that are resilient to biosecurity threats</li><li>◆ Strengthened national and regional early warning systems and transboundary biosecurity risk management capacity</li><li>◆ Strengthened national and regional enabling environment to fight against climate-induced biosecurity threats</li></ul>	
SDG Linkages	Supports SDGs 2 (Zero Hunger), 3 (Good health and well-being), 13 (Climate Action), 15 (Life on Land)	
Investment Needs (US\$)	Estimated capital investment needed: US\$41.7 million	



## Annex II, continued: Concept Notes for Shortlisted Projects

### REGIONAL ADAPTATION PROJECTS FOR THE GREEN CLIMATE FUND, CONTINUED

#### 2. ENHANCING RESILIENCE OF AGRICULTURE AND FOOD SECURITY IN THE PACIFIC ISLAND COUNTRIES BY MANAGING CLIMATE-INDUCED THREATS FROM INVASIVE AQUATIC SPECIES, ANIMAL PESTS AND TRANSBOUNDARY PLANTS, CONTINUED

<b>Implementing and Supporting Entities</b>	<b>Implementing Entities:</b> SPC <b>Potential Implementing Entities:</b> Ministry of Economy (Fiji), Ministry of Finance (Samoa), Ministry of Environment, Climate Change, Disaster Management, and Meteorology (Solomon Islands)
<b>General timeline</b>	<b>Project lifespan:</b> 5 years <b>Immediate next steps:</b> get GCF approval for the concept note and prepare the funding proposal
<b>Policy Link</b>	Supports the targets and objectives of the National Climate Change Policy, the National Agriculture Policy, the Livestock Sector Strategy, the Fiji NDC implementation Roadmap, the NDP, and the NAP.
<b>Information and MRV Needs</b>	<ul style="list-style-type: none"> <li>◆ Expected total number of direct and indirect beneficiaries (male and female);</li> <li>◆ Expected reduction in vulnerability by enhancing adaptive capacity and resilience, focusing on the most vulnerable groups;</li> <li>◆ Change in frequency of pests and diseases incursions.</li> <li>◆ Change in distribution of pests and diseases</li> </ul>

#### 3. CLIMATE INFORMATION AND EARLY WARNING SYSTEMS, ONE PACIFIC PROGRAMME

<b>Sub-Sector</b>	Disaster Risk Management	
<b>Countries</b>	Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Republic of the Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu	
<b>Description</b>	This One Pacific Programme is designed to make a concerted effort across 14 Pacific SIDS to gather and apply the critical hydrological and meteorological information commensurate with the perceived urgency to provide early warnings of the multiple hazards associated with climate change and to undertake effective, science-based responses over the next decade.	
<b>Implementation Milestones</b>	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"> <li>◆ Hazard mapping and vulnerability assessments</li> <li>◆ Multi-hazard monitoring, prediction and projection services</li> <li>◆ Communication systems and last-mile information</li> <li>◆ Utilization of upgraded disaster risk reduction and management plans and early warnings</li> </ul>	<b>Investment Needs</b> <ul style="list-style-type: none"> <li>◆ Indicative GCF request: US\$106 million</li> <li>◆ Bilateral and development partner funding</li> <li>◆ Based on ongoing projects such as CLiMSa which the One Pacific Programme upscales from and potential investment from the private sector (e.g., on communications infrastructure)</li> </ul>

## Annex II, continued: Concept Notes for Shortlisted Projects

### REGIONAL ADAPTATION PROJECTS FOR THE GREEN CLIMATE FUND, CONTINUED

3. STRENGTHENED WEATHER AND CLIMATE SERVICES FOR RESILIENT DEVELOPMENT FOR PACIFIC ISLANDS, CONTINUED		
Outcomes	<ul style="list-style-type: none"><li>◆ Climate-related risks are well known, mapped and disseminated in all Pacific Island countries</li><li>◆ Climate related hazards are routinely monitored, analyzed, modeled and forecasted in a timely manner</li><li>◆ Vulnerable communities and sectors receive timely warnings of climate-related events and are ready to respond and avoid adverse impacts</li></ul>	
SDG Linkages	Supports SDGs 9 (Industry, innovation, and infrastructure) and 13 (Climate action)	
Investment Needs (US\$)	Estimated capital investment needed: US\$189 million	
Implementing and Supporting Entities	Implementing Entities: SPREP Potential Supporting Entities: NMHSA, APEC Climate Centre	
General timeline	Project lifespan: 25 years Immediate next steps: approve the concept note and prepare the funding proposal	
Policy / Plan Link	Address the five priority areas and eleven priority key outcomes (PKO) in the Pacific Islands Meteorological Strategy 2017–2026 and fulfil the commitments made by the Meteorological and Hydrological Ministers and the 2015 Nuku'alofa Ministerial Declaration on Sustainable Weather and Climate Services for a Resilient Pacific. It will also achieve the Pacific Meteorological Council (PMC) meeting outcomes, the 2017 Honiara Ministerial Statement for Sustainable Weather, Climate, Oceans and Water Services for a Resilient Pacific, and the Pacific Roadmap for Strengthened Climate Services and the Framework for Resilient Development in the Pacific (FRDP)	
Information and MRV Needs	<ul style="list-style-type: none"><li>◆ Performance Report</li><li>◆ Semi-annual reporting</li><li>◆ Mid-term and final term evaluation</li></ul>	
4. SUPPORTING RESILIENT ISLAND COMMUNITIES IN TUVALU, THE SOLOMON ISLANDS, FIJI AND VANUATU THROUGH THE LOCAL CLIMATE ADAPTIVE LIVING		
Sub-Sector	Climate Policy and Governance	
Countries	Tuvalu, Solomon Islands, Fiji, Vanuatu	
Description	The LoCAL Pacific facility will strengthen the capacity of communities and local governments to access and use adaptation finance, establish a performance-based climate finance transfer mechanism and use targeted capacity development to improve how climate funds are channelled and programmed at the local level. SPC will manage the project, while SPC and UNCDF will implement it in partnership the Governments of Tuvalu, the Solomon Islands, Vanuatu and Fiji. It aims to expand to include 37 subnational governments within 5 years.	
Implementation Milestones	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"><li>◆ Expand access to and use of localised climate risk analysis to inform local adaptation planning</li><li>◆ Financial management for grants and project management</li><li>◆ Identify and support income adaptation projects that could be co-financed by the private sector</li></ul>	<b>Investment Needs</b> <ul style="list-style-type: none"><li>◆ Climate adaptation is mainstreamed into local governments' planning and budgeting systems—US\$8,387,452</li><li>◆ Adaptation interventions implemented—US\$36,074,655</li></ul>

## Annex II, continued: Concept Notes for Shortlisted Projects

### REGIONAL ADAPTATION PROJECTS FOR THE GREEN CLIMATE FUND, CONTINUED

4. SUPPORTING RESILIENT ISLAND COMMUNITIES IN TUVALU, THE SOLOMON ISLANDS, FIJI AND VANUATU THROUGH THE LOCAL CLIMATE ADAPTIVE LIVING , CONTINUED	
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ Strengthen the climate resilience of communities and the local economies in the Pacific SIDS of Tuvalu, the Solomon Islands, Fiji, and Vanuatu</li> <li>◆ Increase local governments' capacity to access climate finance to implement locally led adaptation investments in Fiji, the Solomon Islands, Tuvalu, and Vanuatu</li> <li>◆ Establish and institutionalise a standard and internationally recognised country mechanism for performance-based climate resilience grants in Fiji, the Solomon Islands, Tuvalu, and Vanuatu</li> </ul>
<b>SDG Linkages</b>	SDG 13 (Climate Action)
<b>Investment Needs (US\$)</b>	Estimated capital investment needed US\$48.55 million
<b>Implementing and Supporting Entities</b>	<p><b>Implementing Entities:</b> SPC</p> <p><b>Potential Supporting Entities:</b> Ministry of Environment, Climate Change, Disaster Management and Meteorology (Solomon Islands), Ministry of Economy (Fiji), Ministry of Climate Change, Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management (Vanuatu), Government of Tuvalu (Tuvalu)</p>
<b>General timeline</b>	<p><b>Project lifespan:</b> 6 years</p> <p><b>Immediate next steps:</b> get GCF approval for the concept note and begin preparing the funding proposal</p>
<b>Policy / Plan Link</b>	The LoCAL program is aligned with Fiji's NDP, NAP, NCCP, NAP, and NDC provide a more detailed articulation of Fiji's approach to reducing present and future risks and recognise that local governments will be instrumental to effective adaptation.
<b>Information and MRV Needs</b>	<ul style="list-style-type: none"> <li>◆ Deploy the Assessing Climate Change Adaptation Framework (ACCAF) to monitor and evaluate adaptation results at the local level</li> <li>◆ Peer learning and knowledge sharing through national and international for a</li> <li>◆ Project audits</li> <li>◆ Monitoring and evaluation process</li> </ul>

## Annex II, continued: Concept Notes for Shortlisted Projects

## NATIONAL MITIGATION PROJECTS FOR THE GREEN CLIMATE FUND

1. CLIMATE RESILIENT FORESTS, COMMUNITIES AND VALUE CHAINS IN FIJI	
<b>Sub-Sector</b>	Mitigation -- Forestry and land use
<b>Description</b>	<p>The project objective is to restore the productive capacity and ecosystem quality of Fiji's forests, sequester greenhouse gases, and improve the resilience of indigenous landowning communities and forest leaseholders. Combined private sector and community-based afforestation and reforestation will enhance carbon sequestration, while forest restoration in logged-over landscapes and enrichment planting in and around conserved forests will reduce emissions from degraded forests.</p> <p>The project is designed to assist in implementation of the Emissions Reduction programme prepared under the Forest Carbon Partnership Facility (FCPF) Carbon Fund. It covers about 1 million hectares of forests across Viti Levu, Vanua Levu, and Taveuni and benefit roughly 734,307 people.</p>
<b>Implementation Milestones</b>	<p><b>Policy/Technical Assistance</b></p> <ul style="list-style-type: none"> <li>◆ Strengthened enabling conditions for integrated landscape management and GHG emissions reduction</li> <li>◆ Integrated land use management enhancing forest permanence, quality and productivity</li> <li>◆ Program Management and Emissions Monitoring</li> </ul> <p><b>Investment Needs</b></p> <ul style="list-style-type: none"> <li>◆ Total project amount: US\$48,612,000 (TBC)</li> <li>◆ GCF funding requested: US\$31,477,000 (TBC)</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ Strengthen existing frameworks, rationalise resource allocation and set up community-based monitoring systems aligned to the Ministry of Forestry and the Ministry of iTaukei Affairs processes.</li> <li>◆ Implement cost-efficient practices to afforest and reforest 30,000 hectares of grasslands and open shrublands by 2031 to produce tangible climate mitigation and adaptation benefits to at least 77,000 people</li> <li>◆ By 2031, restore 5,000 hectares of logged-over production forests and conduct enrichment planting of 5,000 hectares of protect areas to avoid further deforestation and degradation.</li> </ul>
<b>SDG Linkages</b>	Supports SDGs 1 (No Poverty), 5 (Gender equality), 6 (Clean water and sanitation), 11 (Sustainable cities and communities), 12 (Responsible consumption and production), 13 (Climate action), 15 (Life on land)
<b>Investment Needs (US\$)</b>	<b>Total Project Cost:</b> US\$44.56 million
<b>Implementing and Supporting Entities</b>	<p><b>Implementing Entities:</b> Food and Agriculture Organization; Ministry of Forests.</p> <p><b>Potential Implementing Entities:</b> Conservation International, Climate Change and International Climate Division</p>
<b>General timeline</b>	<b>Project timeline:</b> Once the concept note is submitted to the GCF, roughly 18 months of project preparation facility support is needed to development and secure financing for the entire project. Once financed, implementation will take 10 years
<b>Policy/Plan Link</b>	Supports the targets in the NDP, CVA, LEDS, and the emissions reduction program under the forest partnership facility, which is available here: <a href="https://www.forestcarbonpartnership.org/system/files/documents/ER-PIN%20Presentation%20Fiji.pdf">https://www.forestcarbonpartnership.org/system/files/documents/ER-PIN%20Presentation%20Fiji.pdf</a>
<b>Information and MRV Needs</b>	<ul style="list-style-type: none"> <li>◆ No. of trees planted</li> <li>◆ % of GHG reduced</li> </ul>

## Annex II, continued: Concept Notes for Shortlisted Projects

### NATIONAL MITIGATION PROJECTS FOR THE GREEN CLIMATE FUND, CONTINUED

2. PROMOTING ELECTRIC BUS TRANSPORT IN FIJI		
<b>Sub-Sector</b>	Transport	
<b>Description</b>	<p>This comes from the NDC Investment Plan and has a long-term goal to promote decarbonisation of the public bus fleet in Fiji. The project has three components:</p> <p><b>Component 1: Set up institutional architecture and regulatory environment to decarbonize buses.</b> This creates a Fiji-based bus-leasing or on-selling holding company with a mandate to acquire, lease, and maintain low-emission buses. The company could also establish and run a centralised battery recycling scheme. Management of the company will need to be determined. FDB could serve this role, or a committee of private companies and relevant government representatives could run the company. The facility will be set up based on an initial grant or private equity injection but should become profitable and financially self-sustaining as electric bus use grows.</p> <p>It is critical that the institutional architecture created under this project can dispose of and manage the retired or scrapped vehicles with internal combustion engines. A starting point is to operationalise the World Bank/Asian Development Bank memo titled 'National Bus Replacement and Scrapping Financial Mechanisms in Fiji.'</p> <p><b>Component 2: Implement an electric bus project on multiple passenger routes using dedicated renewable energy.</b> A trial operation will be carried out on multiple routes with approximately 10–20 electric buses for 3 years. The buses will be leased based on the whole-of-life operating cost of a diesel bus and repairs will be provided from the supplier or appropriate entity. The routes will include urban, congested, and rural routes. The bus operational performance, cost and serviceability will be closely monitored and used to develop an accurate picture of the operational and cost requirements.</p> <p><b>Component 3: Develop capacity in electric bus operation and maintenance to upscale electric bus fleet.</b> Electric buses are new to Fiji, so a training center will be developed for the bus companies involved in the pilot. The training will be a pre-requisite for bus companies to begin working with the leasing company. A local research facility will monitor the performance and deliver directed research to improve the operation and cost effectiveness of the electric buses. The training and research teams will disseminate key lessons on fleet decarbonisation to other Pacific countries.</p>	
<b>Implementation Milestones</b>	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"> <li>◆ Pre-feasibility study</li> <li>◆ Set-up institutional architecture and regulatory environment for uptake of bus decarbonisation.</li> <li>◆ Implement an electric bus trial on multiple passenger routes using autonomous dedicated renewable energy.</li> <li>◆ Develop capacity in electric bus operation and maintenance for upscaling electric bus fleet</li> </ul>	<b>Key Implementation Milestones</b> <ul style="list-style-type: none"> <li>◆ Finance new electric bus, charging stations, tracking systems, bus stop upgrades, and terminal renovations.)</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ Increase in the use of low-carbon transport</li> <li>◆ Reduce emissions from land transport</li> </ul>	
<b>SDG Linkages</b>	Supports SDGs 1 (No poverty), 4 (Quality education), 5 (Gender equality), 8 (Decent work and economic growth), 9 (Industry, innovation, and infrastructure), 10 (Reduced inequalities), 11 (Sustainable cities and communities), 12 (Responsible consumption and production), 13 (Climate action), 17 (Partnerships for the goals)	
<b>Investment Needs (US\$)</b>	<p><b>Estimated capital investment needed:</b> US\$9.7 million</p> <p><b>Estimated development costs:</b> US\$1.5 million</p> <p><b>Capacity building and technical assistance:</b> US\$3 million</p>	

## Annex II, continued: Concept Notes for Shortlisted Projects

## NATIONAL MITIGATION PROJECTS FOR THE GREEN CLIMATE FUND, CONTINUED

2. PROMOTING ELECTRIC BUS TRANSPORT IN FIJI, CONTINUED		
Implementing and Supporting Entities	Implementing Entities: MOE, MCTTT, LTA. Potential Supporting Entities: GCF, MOE, GGGI, FDB, University of South Pacific (USP), private sector bus companies	
General timeline	Project timeline: 15 years (ideally 2024 to 2039). Immediate steps (next 12 months): prepare pre-feasibility studies, complete concept note, and prepare a full funding proposal.	
Policy/Plan Link	Supports the NDC, NAP, LEDS, NDC Implementation Roadmap, NDC Investment Plan, and MOIT Strategic Development Plan.	
Information and MRV Needs	<ul style="list-style-type: none"><li>◆ Expected tonnes of carbon dioxide equivalent (tCO<sub>2</sub> eq) to be reduced or avoided.</li><li>◆ A theory of change for scaling up the scope and impact of the intended project/programme without equally increasing the total costs of implementation.</li></ul>	
3. SOLAR ENERGY FOR OFF-GRID HOTELS		
Sub-Sector	Energy	
Description	<p>This establishes a financial mechanism between the Fijian Government and solar providers to help off-grid micro, small, and medium companies access solar energy. FDB will seek GCF support for this project and a concept note is being development. Subsequent research—namely financial modeling, beneficiary needs, environmental risks, and gender assets—need to be completed.</p> <p>There are more than 80 off-grid hotels in Fiji the depend on expensive diesel generators. There is no number currently available for the other SMEs that are off-grid but conservatively 50–100 off-grid SMEs would be targeted. Fuel consumption represents an important share of off-grid SMEs expenditures. Most of them do not use solar energy, although a combination of diesel and solar energy is better economically and environmentally.</p>	
Implementation Milestones	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"><li>◆ Determine the market size for solar technology for micro and small off-grid businesses starting with hotels (review existing GGGI Market Study 2019) and agro-processing with potential expansion across other industries in Fiji.</li><li>◆ Training needs and low-cost information and marketing campaign</li></ul>	<b>Key Implementation Milestones</b> <ul style="list-style-type: none"><li>◆ Mechanism to improve financial viability/ investment attractiveness.</li><li>◆ Investment for solar panels, technical training, and capacity building</li></ul>
Outcomes	<ul style="list-style-type: none"><li>◆ Increase access to affordable energy.</li><li>◆ Reduce CO<sub>2</sub> emission and reduce national fuel consumption, by displacing the use of diesel.</li><li>◆ Reduce the cost for off-grid micro companies and improve their business prospects.</li><li>◆ Improve business sustainability, resiliency, and competitiveness in rural and remote areas</li></ul>	
SDG Linkages	Supports SDGs 7 (Affordable and clean energy), 9 (Industry, innovation, and infrastructure), 11 (Sustainable cities and communities), 12 (Responsible consumption and production), 13 (Climate action), 17 (Partnerships for the goals).	
Investment Needs (US\$)	USD\$10 million	
Implementing and Supporting Entities	Implementing Entities: Department of Energy, Hotels, EFL Potential Supporting Entities: GCF, GGGI, private sector	



## Annex II, continued: Concept Notes for Shortlisted Projects

### NATIONAL MITIGATION PROJECTS FOR THE GREEN CLIMATE FUND, CONTINUED

3. SOLAR ENERGY FOR OFF-GRID HOTELS, CONTINUED	
<b>General timeline</b>	<p><b>Project lifespan:</b> 20 years, once a concept note and full funding proposal are developed and financed.</p> <p><b>Immediate steps:</b> Develop concept note and funding proposal</p>
<b>Policy/Plan Link</b>	Supports the targets in Fiji's NDP, Climate Change Act, NDC, MOIT Strategic Plan, LEDS, and NDC Implementation Roadmap
<b>Information and MRV Needs</b>	<ul style="list-style-type: none"> <li>◆ Expected tonnes of carbon dioxide equivalent (tCO<sub>2</sub> eq) to be reduced or avoided.</li> <li>◆ A theory of change for scaling up the scope and impact of the intended project/programme without equally increasing the total costs of implementation.</li> </ul>

## Annex II, continued: Concept Notes for Shortlisted Projects

## REGIONAL MITIGATION PROJECTS FOR THE GREEN CLIMATE FUND

1. KOMAI HALTEC–TYPHOON-RESISTANT WIND POWER FACILITY INSTALLATION IN SIDS AND THE PHILIPPINES		
<b>Sub-Sector</b>	Energy	
<b>Countries</b>	Cook Islands, Fiji, Palau, the Philippines, Samoa, Tonga	
<b>Description</b>	<p>This will support feasibility studies for wind power projects and provide loan financing to trigger private investment. The goal is to install 300kW of wind energy facilities (using a typhoon resistant model) in the SIDS and Philippines. In phase 1 of this programme, technical assistance, including feasibility studies will be undertaken. In phase 2, wind power facilities will be implemented with loan funding from the GCF and Deutsche Bank AG. These will connect to mini and/or isolated electricity grids.</p> <p>This programme will also establish a holding company with equity from Komaihaltec and other investors. The holding company will provide loans to Special Purpose Vehicles to develop, own and operate wind power projects. The wind projects will be implemented based on power purchase agreements or leasing agreements.</p>	
<b>Implementation Milestones</b>	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"> <li>◆ Develop wind power projects</li> <li>◆ Feasibility studies and due diligence for wind investments</li> <li>◆ Technical expertise for wind power</li> </ul>	<b>Key Implementation Milestones</b> <ul style="list-style-type: none"> <li>◆ Mobilize private sectors expertise and finance</li> <li>◆ Loans to support wind facilities</li> </ul>
<b>Outcomes</b>	Contribute to diversifying island countries' renewable energy options by providing financing options for wind power generation projects	
<b>SDG Linkages</b>	Supports SDGs 7 (Affordable and clean energy), 9 (Industry, innovation, and infrastructure), 11 (Sustainable cities and communities), 12 (Responsible consumption and production), 13 (Climate action), and 17 (Partnership for the goals).	
<b>Investment Needs (US\$)</b>	Estimated capital investment needed: US\$201 million	
<b>Implementing and Supporting Entities</b>	<b>Implementing Entities:</b> Deutsche Bank Aktiengesellschaft <b>Potential Supporting Entities:</b> CCICD of the Office of the Prime Minister (Cook Islands), Ministry of Economy (Fiji), Office of the President (Palau), Climate Change Commission (Philippines), Ministry of Finance (Samoa), Ministry for Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (Tonga)	
<b>General timeline</b>	<b>Project lifespan:</b> 7 years <b>Immediate next steps:</b> Receive GCF approval for the concept note, identify feasible wind projects, and conduct feasibility studies.	
<b>Policy Link</b>	The NDCs from the Philippines, Cook Islands, Fiji, Palau, Samoa, and Tonga call for more wind power.	
<b>Information and MRV Needs</b>	<ul style="list-style-type: none"> <li>◆ % of carbon dioxide reduced</li> <li>◆ Number of trainees from relevant organizations/communities and their evaluation reports</li> <li>◆ Commissioning reports of the demonstration projects</li> </ul>	

## Annex II, continued: Concept Notes for Shortlisted Projects

### PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

#### Adaptation Priority Projects

1. CLIMATE CHANGE RELOCATION		
<b>Sub-Sector</b>	Human Settlements	
<b>Description</b>	<p>In some cases, climate impacts will surpass the surpass viable adaptation options available to some Fijian communities. In response, the Fijian Government developed a comprehensive policy package, including with the Planned Relocation and Displacement Guidelines and Climate Relocation of Communities Trust Fund. The Trust Fund is expected to attract bilateral and multilateral financing.</p> <p>At present, 3% of Fiji's Environmental and Climate Adaptation Levy is placed into the Trust Fund annually. The CCICD has identified 15 communities that need to be relocated, but first need to have techno-economic studies and social baselines assessments completed. The CROC needs a significant inflow of new resources to fund these studies and successfully relocate climate-vulnerable communities.</p>	
<b>Implementation Milestones</b>	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"> <li>◆ Complete consultations with relevant line ministries</li> <li>◆ Complete and launch relocation Standard Operating Procedures</li> <li>◆ Complete and launch Comprehensive Risk, Vulnerability, and Assessment Framework</li> <li>◆ Finalise work plan</li> </ul>	<b>Investment Needs</b> Securing additional funding to relocate at least 25 communities
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ Relocate climate-vulnerable communities to safer, less exposed areas.</li> <li>◆ Secure additional funds to relocate the selected 15 communities.</li> <li>◆ A Comprehensive Risk and Vulnerability Assessment Framework informs the Fijian Government about the economic, social, and cultural aspects of planned relocation.</li> <li>◆ Robust methodology and tool to provide a transparent relocation process for all stakeholder</li> </ul>	
<b>SDG Linkages</b>	Supports SDGs 2 (Zero hunger), 3 (Good health and well-being), 6 (Clean water and sanitation), 11 (Sustainable cities and communities), 13 (Climate action), 15 (life on land), 17 (Partnerships for the goals)	
<b>Investment Needs (US\$)</b>	Investment needs will be based upon the scope of each village project. Estimated Total cost will be >\$1 million per community.	
<b>Implementing and Supporting Entities</b>	<p><b>Implementing Entities:</b> Ministry of Economy, Ministry of Rural Maritime Disaster Management, Ministry of iTaukei Affairs, iTaukei Affairs Board, Ministry of Lands and Mineral Resources, GIZ Global Programme on Human Mobility in the Context of Climate Change, New Zealand High Commission and Office of the Prime Minister</p> <p><b>Potential Implementing Entities:</b> Ministry of Infrastructure and Meteorological Services, Ministry of Housing and Community Development, Ministry of Local Government, Ministry of Women, Children &amp; Poverty Alleviation, Ministry of Defense, National Security and Policing, Ministry of Health &amp; Medical Services, WAF, Fiji Roads Authority, Energy Fiji Limited, Ministry of Fisheries, Ministry of Agriculture, Ministry of Communications and Ministry of Education, Heritage and Arts</p>	
<b>General timeline</b>	<p><b>Project timeline:</b> To begin once the SOP and CRAVF are finalized, which should be by the middle of 2022.</p> <p><b>Immediate next steps:</b> Secure technical assistance and capacity building support and prioritize the communities to be relocated.</p>	
<b>Policy/Plan Link</b>	<ul style="list-style-type: none"> <li>◆ Fiji's NDP, NCCP, and NAP call for relocating vulnerable communities</li> <li>◆ The project is also consistent with Fiji's Planned Relocation and Displacement Guidelines.</li> </ul>	
<b>Information and MRV Needs</b>	Develop a Monitoring and Evaluation Framework for the Planned Relocation and Displacement Guidelines.	

## Annex II, continued: Concept Notes for Shortlisted Projects

## PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

## Adaptation Priority Projects

2. IMPROVING INFRASTRUCTURE, TECHNOLOGY, AND PRODUCTS OF 5 HEALTH CARE FACILITIES AS PART OF BUILDING CLIMATE RESILIENT AND ENVIRONMENTALLY SUSTAINABLE HEALTHCARE FACILITIES IN FIJI (CRESHCF)		
<b>Sub-Sector</b>	Health	
<b>Description</b>	<p>Fiji's Ministry of Health and Medical Services has more than 1,000 clinics, hospitals, staff quarters, and currently operates 214 healthcare facilities. This aims to ensure that at least five healthcare facilities can remain fully functional during and after climate-induced extreme weather events.</p> <p>CRESHCF has four focal areas: infrastructure, technology, and products, waste and energy, WASH, and health workforce. This focuses on improving infrastructure, technology, and products in five healthcare facilities.</p>	
<b>Implementation Milestones</b>	<p><b>Policy/Technical Assistance</b></p> <p>INFRASTRUCTURE</p> <ul style="list-style-type: none"> <li>◆ Ensure maximum HCFs have light and ventilation systems</li> <li>◆ Convert all existing timber HCF structures to concrete structures that can withstand category 5 cyclones.</li> <li>◆ Ensure the MoHMS, MOIT, and MoE can comply with green procurement guidelines.</li> </ul> <p>TECHNOLOGY</p> <ul style="list-style-type: none"> <li>◆ Equip all HCFs with satellite phones.</li> <li>◆ Install GPS technologies in all government vehicles</li> <li>◆ Convert CRESHCF guidelines into electric apps and install them on government phones</li> </ul> <p>PRODUCTS</p> <ul style="list-style-type: none"> <li>◆ Inventory system installed for all HCF.</li> <li>◆ Standardize HCF inventory for disaster response</li> <li>◆ Procurement process to also have a green component.</li> <li>◆ Implement reduce, reuse, and recycle policies and programs</li> </ul>	<p><b>Investment Needs</b></p> <p>To be determined during the initial assessment of hospital needs</p>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ Build five climate resilient and environmentally sustainable health care facilities Prevent mortalities and morbidities from climate impacts.</li> <li>◆ Enhance the safety and well-being of the health workers and the patients</li> </ul>	
<b>SDG Linkages</b>	Supports SDGs 3 (Good health and well-being), 9 (Industry, innovation, and infrastructure), and 13 (Climate action)	
<b>Investment Needs (US\$)</b>	Total Project Cost: US\$500,000	
<b>Implementing and Supporting Entities</b>	<p><b>Implementing Entities:</b> Ministry of Economy, Ministry of Health and Medical Services</p> <p><b>Potential Implementing Entities:</b> Ministry of Infrastructure and Meteorological Services, Ministry of Rural and Maritime Development and Disaster Management, World Health Organization</p>	
<b>General timeline</b>	<p><b>Project timeline:</b> 5 years.</p> <p><b>Immediate next steps:</b> Conduct a desktop review of all HCF compared to the CRESHCF framework, finalize a climate checklist for all HCFs, and select five HCF for this project based on their climate vulnerabilities.</p>	
<b>Policy/Plan Link</b>	Supports the targets in Fiji's National Climate Change Plan, NAP, NDP, and Climate Change and Health Strategic Action Plan (2016 to 2022).	

## Annex II, continued: Concept Notes for Shortlisted Projects

### PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

#### Adaptation Priority Projects

3. EFFICIENT OPERATION AND MAINTENANCE OF WASTEWATER TREATMENT SYSTEMS		
<b>Sub-Sector</b>	Power	
<b>Description</b>	<p>The Water Authority Fiji discharges 40 million litres per day of treated wastewater but experiences storm water infiltration of 83 percent. WAF maintenance is reactive and inefficient. This upgrades 11 wastewater plants in Viti Levu and Vanua Levu and provides technical assistance for a water and mass balance study of the wastewater system, identifies major wastewater sources, and determines the amount and location of major infiltrations into the system. A detailed energy and maintenance audit will be conducted of the wastewater system, and a prioritised investment list will be developed for energy efficiency improvements. Direct investment opportunities are to replace inefficient pumps and control devices and to modify the system to rationalise pumping pressure, reduce pressure drops, and improve energy efficiency in the treatment processes.</p> <p>This initiative will be led by DOE and WAF, with support from PWWA, SPC, FNU and private companies.</p>	
<b>Implementation Milestones</b>	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"> <li>◆ Conduct water and mass balance, energy audit and maintenance studies for the wastewater system in Viti Levu and Vanua Levu</li> <li>◆ Review and implement the National Liquid Waste Management Strategy and Action Plan</li> <li>◆ Set up and operate a financing facilities.</li> </ul>	<b>Investment Needs</b> <ul style="list-style-type: none"> <li>◆ Retrofit and refurbish existing wastewater facilities</li> <li>◆ Enhance new wastewater infrastructure to improve energy efficiency.</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ Reduce energy consumed (kWh/m<sup>3</sup>) by the wastewater treatment system</li> <li>◆ Increased life of assets</li> <li>◆ Reduced cost of energy, maintenance, and wastewater treatment operations</li> <li>◆ Significant reduction in peak demand in the wastewater treatment system</li> <li>◆ WAF avoids, reduces, or delays investments for adding new wastewater treatment infrastructure</li> </ul>	
<b>SDG Linkages</b>	Supports SDGs 3 (Good health and well-being), 6 (Clean water and sanitation), 7 (Affordable and clean energy), 9 (Industry, innovation, and infrastructure), 11 (Sustainable cities and communities), 12 (Responsible consumption and production), 13 (Climate action), 14 (Life below water), 17 (Partnership for the goals)	
<b>Investment Needs (US\$)</b>	<p><b>Estimated capital investment needed:</b> US\$4.8 million</p> <p><b>Estimated development costs:</b> US\$172,000</p> <p><b>Enabling, Capacity Building and Technical Assistance:</b> US\$1.6 million</p>	
<b>Implementing and Supporting Entities</b>	<p><b>Implementing Entities:</b> DOE, WAF</p> <p><b>Potential Supporting Entities:</b> FNU, PWWA, SPC, private sector companies</p>	
<b>General timeline</b>	<p><b>Project timeline:</b> The “technical assistance and capacity building” will run from 2022 to 2029. The financing component will run from 2024 to 2029.</p> <p><b>Immediate next steps:</b> Secure support for technical assistance and capacity building, conduct the necessary scoping studies with WAF, DOE, and other stakeholders, and engage supporting agencies to identify financing options.</p>	
<b>Policy/Plan Link</b>	Helps achieve the goals in Fiji's NDC, NDC Implementation Roadmap, Draft National Energy Plan, Technology Needs Assessment, National Climate Change Policy, MOIT Strategic Development Plan, NDC, and LEDS.	
<b>Information and MRV Needs</b>	<ul style="list-style-type: none"> <li>◆ Reduce wastewater loading per unit of GDP and per unit coverage of WAF</li> <li>◆ Reduction in energy intensity of WAF, kWh/m<sup>3</sup> of wastewater treated</li> <li>◆ Reduction in % infiltration into the WAF system</li> </ul>	

## Annex II, continued: Concept Notes for Shortlisted Projects

## PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

## Mitigation Priority Projects

4. EFFICIENT OPERATION AND MAINTENANCE OF WATER SUPPLY SYSTEMS		
<b>Sub-Sector</b>	Power	
<b>Description</b>	<p>The WAF harvests, treats, and reticulates water for supply to its customer, manages 3 desalination plants, and supplies 131,870,000 m<sup>3</sup> of treated water. Yet, there are significant inefficiencies: technical losses are 32.5 percent (mostly leakage) and inefficient pumps account for 40 percent of the pumps in the system. WAF lacks the capacity to maintain and operate the system more efficiently, but this program aims to combat that.</p> <p>Led by DOE and WAF, with support from PWWC, SPC, FNU, and the private sector, this includes technical assistance for mass balance studies, energy and maintenance audits, feasibility studies, infrastructure improvements, and steps to strengthen and sustain institutional knowledge. It will also identify investment opportunities to retrofit and refurbish the system, enhance new water distribution infrastructure, and improve energy efficiency in desalination plants. The investments will be made in the major water supply and distribution systems under in Viti Levu and Vanua Levu.</p>	
<b>Implementation Milestones</b>	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"> <li>◆ Conduct water balance, energy audit and maintenance audit studies for the water system in Viti Levu and Vanua Levu</li> <li>◆ Develop guidelines for public utilities on the proper design, installation, and efficient operation and maintenance of the water systems</li> <li>◆ Launch awareness raising campaign about efficient water use and management</li> <li>◆ Set up and operate a financing facility</li> </ul>	<b>Investment Needs</b> <p>Retrofits and refurbishments of existing systems, and enhancements for new water distribution infrastructure, to improve energy efficiency.</p>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ Reduce energy consumption (kWh/m<sup>3</sup>) of the water supply system</li> <li>◆ Increased life of water assets</li> <li>◆ Reduced energy, maintenance, and water treatment cost (US\$/m<sup>3</sup>)</li> <li>◆ Significant reduction in peak demand in the water supply system</li> <li>◆ WAF avoids, reduces, or delays investments for new water pumping and treatment capacity</li> </ul>	
<b>SDG Linkages</b>	Supports SDGs 3 (Good health and well-being), 6 (Clean water and sanitation), 7 (Affordable and clean energy), 9 (Industry, innovation, and infrastructure), 11 (Sustainable cities and communities), 12 (Responsible consumption and production), 13 (Climate action), 17 (Partnership for the goals)	
<b>Investment Needs (US\$)</b>	<p><b>Estimated capital investment needed:</b> US\$3.6 million</p> <p><b>Estimated development costs:</b> US\$170,000</p> <p><b>Enabling, Capacity Building and Technical Assistance:</b> US\$1.3 million</p>	
<b>Implementing and Supporting Entities</b>	<p><b>Implementing Entities:</b> DOE, WAF</p> <p><b>Potential Supporting Entities:</b> FNU, PWWA, SPC, private sector companies</p>	
<b>General timeline</b>	<p><b>Project timeline:</b> The technical assistance and capacity building programme will run from 2024 to 2031. Financing will run from 2026 to 2031.</p> <p><b>Immediate next steps:</b> secure support for the technical assistance and capacity building package and initiate discussions with WAF, DOE, and other stakeholders to conduct the necessary studies.</p>	
<b>Policy/Plan Link</b>	Supports the targets in Fiji's NDC, National Energy Strategic Action Plan, Technology Needs Assessment, National Climate Change Act, NDP, and LEDS.	
<b>Information and MRV Needs</b>	<ul style="list-style-type: none"> <li>◆ Reduced energy intensity of WAF, kWh/m<sup>3</sup> of treated water supplied</li> <li>◆ Reduced leakage in the WAF system</li> <li>◆ Reduced infiltration into the WAF system</li> <li>◆ Reduced potable water demand</li> <li>◆ Percent of total water demand supplied through rainwater harvesting</li> </ul>	



## Annex II, continued: Concept Notes for Shortlisted Projects

### PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

#### Adaptation Priority Projects

5. REHABILITATE SCHOOLS AND PUBLIC BUILDINGS DAMAGED BY TC WINSTON GITA, KENI, HAROLD, AND YASA		
<b>Sub-Sector</b>	Disaster Risk Reduction	
<b>Description</b>	The Ministry of Economy's Construction Implementation Unit ('CIU') oversees rehabilitation of the 173 schools and 33 public buildings that were severely damaged during TC Winston, Keni, Gita, Harold, and Yasa. The buildings will be upgraded to withstand wind speeds of at least 45m/s to 75m/s. The Ministry of Economy is seeking funding partners to help the CIU.	
<b>Implementation Milestones</b>	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"> <li>◆ Rehabilitate all schools and public buildings to withstand at least category 4 cyclones</li> <li>◆ Ensure evacuation centers have generators and water tanks.</li> </ul>	<b>Investment Needs</b> Rebuild the schools damaged by TCs Winston, Gita, Keni, Harold, and Yasa
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ More schools comply with the National Building Codes and ensure that there is gender equality and social inclusion</li> <li>◆ Upgrade all schools and public buildings to at least a category 4 standard</li> </ul>	
<b>SDG Linkages</b>	Supports SDGs 4 (Quality education), 5 (Gender equality), 9 (Industry, innovation, and infrastructure), and 13 (Climate action).	
<b>Investment Needs (US\$)</b>	<b>Estimated capital investment needed for the physical implementation:</b> <ul style="list-style-type: none"> <li>◆ TC Keni Schools: FJ\$30,547,816.17</li> <li>◆ TC Keni Public Buildings: FJ\$14,293,954.80</li> <li>◆ TC Gita: FJ\$27,176,253.75</li> <li>◆ TC Harold: FJ\$59,512,783.53</li> <li>◆ TC Yasa Schools: FJ\$39,019,339.91</li> <li>◆ TC Yasa Public Buildings: FJ\$3,685,447.36</li> </ul>	
<b>Implementing and Supporting Entities</b>	<b>Implementing Entities:</b> Ministry of Economy <b>Potential Supporting Entities:</b> Engineering Firms, Contractors and Ministry of Education, Heritage and Arts	
<b>General timeline</b>	Project commenced in 2019 but more funding is needed to upgrade all damaged buildings and schools to meet a climate-resilient standard. It is expected to complete in 2025 when all schools meeting climate-resilient standards.	
<b>Policy/Plan Link</b>	Supports Fiji's NDP and Building Code.	
<b>Information and MRV Needs</b>	<ul style="list-style-type: none"> <li>◆ Reduce wastewater loading per unit of GDP and per unit coverage of WAF</li> <li>◆ Reduction in energy intensity of WAF, kWh/m<sup>3</sup> of wastewater treated</li> <li>◆ Reduction in % infiltration into the WAF system</li> </ul>	

## Annex II, continued: Concept Notes for Shortlisted Projects

### PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

#### Mitigation Priority Projects

1. BUS NETWORK INFORMATION TRANSPORT SYSTEM		
<b>Sub-Sector</b>	Land	
<b>Description</b>	Install available information technology systems, including GPS monitoring and digital Passenger Information System (PIS) displays at bus stands, shelters, and terminal for all bus operators in Fiji's urban, peri-urban, and rural areas.	
<b>Implementation Milestones</b>	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"> <li>◆ Complete feasibility studies and financing support applications.</li> <li>◆ Driver and technician training programmes.</li> <li>◆ A mechanism for public-private partnerships to implement ITS upgrades</li> </ul>	<b>Investment Needs</b> <p>Financing bus-based tracking systems, bus stop upgrades, and terminal renovations.</p>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ A strengthened public transport system that offers improved land transport services to non-motorists and vulnerable populations (including children, elderly, and disabled persons).</li> <li>◆ GHG emission reductions from efficiency gains.</li> <li>◆ Reduced waiting times and increased efficiency for bus users.</li> <li>◆ Establish integrated bus stop/terminal network that provides public announcement of real-time scheduling on each route</li> </ul>	
<b>SDG Linkages</b>	Support SDGs 1 (No poverty), 4 (Quality education), 5 (Gender equality), 9 (Reduced inequalities), 10 (Reduced inequalities), 11 (Sustainable cities and communities), 12 (Responsible consumption and production), 13 (Climate action), 17 (Partnerships for the goals).	
<b>Investment Needs (US\$)</b>	<b>Estimated capital investment needed:</b> >US\$104.6 million <sup>viii</sup> <b>Estimated development costs:</b> ~US\$1,046,000 <sup>ix</sup> <b>Enabling, Capacity Building and Technical Assistance:</b> ~US\$7.9 million*	
<b>Implementing and Supporting Entities</b>	<b>Implementing Entities:</b> MCTTT, MIMS, LTA, FRA, FBOA Potential Supporting <b>Potential Supporting Entities:</b> MOE, EFL, Municipal Councils, Ministry of Information (Dept. of Information Technology & Computing Services), Vodafone/private sector	
<b>General timeline</b>	<b>Project timeline:</b> 3 years. <b>Immediate next steps:</b> Secure a technical assistance and capacity building program and engage potential supporting entities about initial financing.	
<b>Policy/Plan Link</b>	Supports the targets and objectives in Fiji's NDP, LEDS, and NDC Implementation Roadmap.	
<b>Information and MRV Needs</b>	<ul style="list-style-type: none"> <li>◆ Mileage and operational records (fuel consumption, hours in service per day, days per month in and out of operation, maintenance schedule, etc.) of designated buses in the transit network.</li> <li>◆ Occupancy of transit vehicles per route, day, and km to track utilization of transit service.</li> <li>◆ Average bus speed along each route to determine behaviour of the bus fleet.</li> <li>◆ Revenue from bus operations</li> </ul>	

## Annex II, continued: Concept Notes for Shortlisted Projects

### PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

#### Mitigation Priority Projects

2. CAPACITY BUILDING IN THE ASSESSMENT, DESIGN, AND CONSTRUCTION OF LOW ENERGY/CARBON BUILDINGS		
<b>Sub-Sector</b>	Buildings	
<b>Description</b>	<p>This provides technical assistance to MIMS to develop guidelines for low carbon building design and construction, an energy efficient building code, and a voluntary green building rating system, and a certification system for building energy assessors. Training programmes will be conducted for architects and engineers. The curriculum at FNU and USP will be expanded to include modules on designing low-carbon and energy efficiency buildings. This project will also provide financial incentives to install energy efficiency measures in up to 150 government buildings and 17,024 households.</p> <p>DOE will lead this and SPC, USP, and other stakeholders will support. Investments in retrofits and new government buildings are based on the annual budgeting process of the Fijian Government. Thus, feasibility, finance, and implementation of this project is a multi-year process involving multiple government projects. Investment decision for households need to be supported on a case-by-case basis.</p>	
<b>Implementation Milestones</b>	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"> <li>◆ Develop a mandatory energy efficiency building code (EEBC) and a voluntary green building rating system.</li> <li>◆ Develop a certification programme for building energy assessors.</li> <li>◆ Energy efficiency guidelines developed for different building typologies</li> </ul>	<b>Investment Needs</b> <p>Retrofit and build up to 150 government buildings and 17,024 householders with energy efficiency considerations.</p>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ GHG mitigation and lower carbon intensity of the economy</li> <li>◆ Reduction in the specific energy consumption of buildings (kWh/m<sup>2</sup>/year)</li> <li>◆ An increasing number of buildings adhere to the proposed energy efficiency building code</li> <li>◆ An increasing number of buildings gets labelled through the proposed voluntary green building rating system</li> <li>◆ Capacity developed of key institutions and stakeholders</li> <li>◆ A minimum number of professionals certified for conducting building energy assessments</li> </ul>	
<b>SDG Linkages</b>	Supports SDGs 7 (Affordable and clean energy), 9 (Industry, innovation, and infrastructure), 11 (Sustainable cities and communities), 12 (Responsible consumption and production), 13 (Climate action), 17 (Partnerships for the goals)	
<b>Investment Needs (US\$)</b>	<p><b>Estimated capital investment needed:</b> US\$179 million</p> <p><b>Estimated development costs:</b> US\$268,000</p> <p><b>Enabling, Capacity Building and Technical Assistance:</b> US\$1.1 million</p>	
<b>Implementing and Supporting Entities</b>	<p><b>Implementing Entities:</b> DOE</p> <p><b>Potential Implementing Supporting Entities:</b> SPC, USP</p>	
<b>General timeline</b>	<p><b>Project timeline:</b> The technical assistance and capacity building programme will be from 2022 to 2030. Direct financing will be from 2024 to 2030.</p> <p><b>Immediate next steps:</b> Secure a technical assistance and capacity building program and engage potential supporting entities about initial financing.</p>	

## Annex II, continued: Concept Notes for Shortlisted Projects

### PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

#### Mitigation Priority Projects

2. CAPACITY BUILDING IN THE ASSESSMENT, DESIGN, AND CONSTRUCTION OF LOW ENERGY/CARBON BUILDINGS, CONTINUED		
Policy/Plan Link	Supports the targets and objectives in Fiji's NDC, NDP, LEDS, National Energy Policy, Technology Needs Assessment for Mitigation, National Climate Change Policy, and MOIT Strategic Development Plan.	
Information and MRV Needs	<ul style="list-style-type: none"><li>◆ Percent of new constructions per year that comply with the energy efficiency building code</li><li>◆ Number of existing and new buildings per year that apply for a green building rating</li><li>◆ Number of existing and new buildings per year that obtain a higher building rating</li><li>◆ Specific energy consumption of different types of buildings (kWh/m2)</li><li>◆ Total number of certified building energy assessors in the country</li><li>◆ Number of trainees attending the training programmes</li></ul>	
3. END-OF-LIFE VEHICLE PROGRAMME		
Sub-Sector	Land Transport	
Description	<p>Fiji's vehicle market relies on used vehicles imported from other countries that reach the end of the lives in Fiji. At least 100,000 vehicles were deregistered and no longer functioning. Yet, there is currently no national mechanism to collect, breakdown, reuse, and/or export scrapped vehicles.</p> <p>There are scrap metal traders and lead acid battery collectors, but they cannot process hybrid vehicles and lithium-ion batteries. This program would create public-private partnerships, service contracts, and licensing arrangements to create a national mechanism to collect, breakdown, reuse, and dispose of scrapped vehicles.</p>	
Implementation Milestones	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"><li>◆ Logistics and supply chain management to remove derelict vehicles.</li><li>◆ Training and support to establish processing, recycling, packing, and shipping of derelict vehicles and associated parts</li></ul>	<b>Investment Needs</b> <p>Establish facilities to process at least 100,000 legacy vehicles and up to 7,000 per year.</p>
Outcomes	<ul style="list-style-type: none"><li>◆ Remove or recover waste materials for salvage and/or export.</li><li>◆ Opportunity to sequester carbon through restored vegetation</li></ul>	
SDG Linkages	Supports SDGs 3 (Good health and well-being), 6 (Clean water and sanitation), 8 (Decent work and economic growth), 9 (Industry, innovation, and infrastructure), 10 (Reduce inequalities), 11 (Sustainable cities and communities), 13 (Climate action), 15 (Life on land), 17 (Partnerships for the goals)	
Investment Needs (US\$)	<b>Estimated capital investment needed:</b> >US\$5,000,000 <sup>xi</sup> <b>Estimated development costs:</b> >US\$150,000 <sup>xii</sup> <b>Enabling, Capacity Building and Technical Assistance:</b> >US\$300,000 <sup>xiii</sup>	
Implementing and Supporting Entities	<b>Implementing Entities:</b> MIMS, MCTTT, LTA <b>Potential Implementing Supporting Entities:</b> MOE, FCCC, MOE, private sector, SPREP, and UNEP	
General timeline	<p><b>Project timeline:</b> Ideal would be for the project to begin in 2022, but once started, the goal would be for it to run indefinitely.</p> <p><b>Immediate next steps:</b> Secure technical assistance and capacity building support, develop supportive policies and regulations, conduct feasibility studies, and engage relevant stakeholders.</p>	

## Annex II, continued: Concept Notes for Shortlisted Projects

### PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

#### Mitigation Priority Projects

3. END-OF-LIFE VEHICLE PROGRAMME, CONTINUED		
Policy/Plan Link	Fiji's LEDS, NDP, and NDC Implementation Roadmap all call for a national vehicle scrapping mechanism.	
Information and MRV Needs	<ul style="list-style-type: none"><li>◆ Initial assessment of how many dead and/or deregistered vehicles are in Fiji.</li><li>◆ Statistics on personnel engaged in the vehicle recovery industry.</li><li>◆ Tonnage collected, tonnage stored, and tonnage exported to determine flow of materials scrapped.</li><li>◆ Bills of lading and export permits for each shipment will need to be collected and maintained.</li><li>◆ Revenue of metal sold to scrap markets</li></ul>	
4. FIJI RURAL ELECTRIFICATION FUND		
Sub-Sector	Energy	
Description	<p>The Fijian Government established the FREF in 2017 to provide affordable, reliable, and renewable electricity to rural Fijians. Communities electrified through FREF pay an affordable monthly tariff payment into the trust fund. The goal for FREF is to electrify approximately 300 rural communities over the next 10 years.</p> <p>FREF is actively working with the Fijian Government's Drua Incubator to offer microinsurance solutions c to the FREF communities. The strategic idea is to use digital payment systems to encourage payments for monthly electricity tariff and for micro-insurance premiums. FREF is actively seeking funding partners to electrify more rural Fijian communities as soon as possible.</p>	
Implementation Milestones	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"><li>◆ Completing pre and post feasibility studies on the selected communities.</li><li>◆ Capacity building of communities in handling of solar systems</li><li>◆ Developing a robust financial model for FREF to entice PPPs</li></ul>	<b>Investment Needs</b> <p>Investment needed for financing renewable energy solutions in rural communities through Phases 2 to 5 of the FREF's rural electrification plan.</p>
Outcomes	<ul style="list-style-type: none"><li>◆ Provide electricity to rural communities and households in Fiji.</li><li>◆ Reduce greenhouse gas emissions from Fiji's power sector.</li><li>◆ Create a self-sufficient "Special Purpose Vehicle" that can help supplement the Fijian Government's rural electrification targets</li></ul>	
SDG Linkages	Supports SDGs 7 (Affordable and clean energy), 9 (Industry, innovation, and infrastructure), 11 (Sustainable cities and communities), 12 (Responsible consumption and production), 13 (Climate action), 17 (Partnerships for the goals)	
Investment Needs (US\$)	While eight sites were earmarked for Phase 2, funding limitations mean only five communities will be supported. We are actively seeking additional funding support for the remaining three communities. According to preliminary financing models, FREF requires up to FJ\$14 million to electrify 20 rural communities over the next 3 years.	
Implementing and Supporting Entities	<b>Implementing Entities:</b> FREF, MoE, DoE, FLMMMA, FBoS, GGGI <b>Potential Implementing Supporting Entities:</b> Private sectors, EF	
General timeline	<p><b>Project timeline:</b> The project started in 2017 and phase one finished in 2019, with the first community electrified. Phase 2, from 2021 to 2024, has a goal to electrify five communities. Phase 3 (2025 to 2030) aims to electrify another 10 communities. Phase 4 ((2030 onwards) will electrify the remaining 250 communities.</p> <p><b>Immediate next steps:</b> Electrify five communities under Phase 2 using an open tender process and a remote payment system.</p>	



## Annex II, continued: Concept Notes for Shortlisted Projects

### PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

#### Mitigation Priority Projects

4. FIJI RURAL ELECTRIFICATION FUND, CONTINUED	
<b>Policy/Plan Link</b>	Supports the targets and objectives in Fiji's NDC, NAP, NCCP, LEDS, NDC Implementation Roadmap, National Energy Policy, and MOIT Strategic Development Plan.
<b>Information and MRV Needs</b>	<ul style="list-style-type: none"> <li>◆ Emissions reduced</li> <li>◆ Number of trainees from relevant organizations/communities and their evaluation reports</li> <li>◆ Reports of the demonstration projects</li> <li>◆ Pre and post socio-economic data that measures FREF implementation</li> </ul>
5. NATIONAL MARITIME ACTION PLAN	
<b>Sub-Sector</b>	Maritime Transport
<b>Description</b>	<p>A coordinated national level action plan for decarbonising maritime transport that includes two components:</p> <ol style="list-style-type: none"> <li>1. Identify opportunities through the Fiji Ports Corporation Limited to incentivise decarbonisation of international shipping. Several ports already offer preferential fees<sup>xiv</sup> and initiatives<sup>xv</sup> for more energy efficient ships but these could be expanded.</li> <li>2. Identify a coordinated programme of actions to decarbonize domestic shipping, including by reducing emissions 40% by 2030 and 100% by 2050.</li> </ol> <p>The action plan could include a range of financing mechanisms, from establishing a tax holiday to creating a loan and/or grant facility. Loan facilities could be through regional initiatives, such as the Pacific Blue Shipping Partnership, which includes a US\$250 million revolving loan and grant modalities or established at national level.<sup>xvi</sup></p>
<b>Implementation Milestones</b>	<p><b>Policy/Technical Assistance</b></p> <ul style="list-style-type: none"> <li>◆ Complete a baseline report on GHG emissions from maritime transport</li> <li>◆ National action plan adopted and lodged with IMO</li> <li>◆ National policies and regulations amended</li> <li>◆ Staff employed and qualified to drive implementation</li> <li>◆ Monitor and report on national action plan</li> <li>◆ Revolving loan facility established</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ Coordinated plan of mandatory and voluntary domestic and international actions to decarbonize marine transport</li> <li>◆ Fits with agenda of IMO and the Pacific Blue Shipping Partnership</li> <li>◆ Improves overall data on Fiji's domestic maritime GHG emissions</li> <li>◆ Establishes a revolving loan facility to support decarbonization actions</li> </ul>
<b>SDG Linkages</b>	Supports SDGs 1 (No poverty), 7 (Affordable and clean energy), 8 (Decent work and economic growth), 12 (Responsible consumption and production, 13 (Climate action), 14 (Life below water), 17 (Partnerships for the goals)
<b>Investment Needs (US\$)</b>	<p><b>Estimated capital investment needed:</b> To be determined</p> <p><b>Estimated development costs:</b> US\$2,000</p> <p><b>Capacity building and technical assistance needs:</b> US\$547,500</p>

## Annex II, continued: Concept Notes for Shortlisted Projects

### PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

#### Mitigation Priority Projects

5. NATIONAL MARITIME ACTION PLAN, CONTINUED		
Implementing and Supporting Entities	<p><b>Implementing Entities:</b> TPU (lead for national maritime policy, interface with IMO, oversight, and coordination), MCTTT (lead ministry), MSAF (vessel safety, operations and management regulations and enforcement), FPCL (port infrastructure and port fees for international and national vessels), FRCS (incentives for domestic ships to improve energy efficiency), RBF/FDB (administration of revolving concessional loan facilities)</p> <p><b>Supporting Entities:</b> Vessel Owners/Operators (including GSS) and industry associations, FMA, Shoreside maritime industries, USP MCST—technical support and access to academic networks), IMO (technical assistance and guidance, technical cooperation and GMN MTCC support), USP MCST (technical support and academic network), SPC MTCC (technical support).</p>	
General timeline	<p><b>Project timeline:</b> 2020 to 2030, including 1–2 years needed to secure financing for the National Action Plan and 2–3 years needed to establish the loan or grant facilities.</p> <p><b>Immediate next steps:</b> Secure technical assistance and capacity building to conduct the national vessel fuel use survey and to develop a full concept note.</p>	
Policy Link	Consistent with the objectives and targets in Fiji's NDP, LEDS, NDC Implementation Roadmap, Climate Change Policy, Maritime Transport Policy, and IMO's Initial Strategy for GHG Emission Reduction from Ships.	
Information and MRV Needs	<ul style="list-style-type: none"><li>◆ Domestic fleet fuel use and emissions<sup>xvii</sup>—links to IAS use and enhancement</li><li>◆ Outboard motor ownership and use, fuel use from registered vessels</li><li>◆ Passenger/cargo volumes transported and route data</li><li>◆ Options catalogue for operational and technological means to reduce GHG emissions from domestic fleet</li><li>◆ Options catalogue of financing modalities needed</li></ul>	
6. PACIFIC BLUE CARBON SHIPPING PROGRAM		
Sub-Sector	Transport	
Description	The Pacific Blue Shipping Partnership (PBSP) is led by Fiji, the Marshall Islands, Solomon Islands, Tuvalu, and Vanuatu to decarbonize their respective shipping sectors by 2050.	
Implementation Milestones	<p><b>Policy/Technical Assistance</b></p> <ul style="list-style-type: none"><li>◆ Survey current and existing maritime infrastructure to determine investment needs.</li><li>◆ Technical support and capacity building to handle revamped port systems and renewable energy powered shipping vessels.</li><li>◆ Eventual phase out of fossil fuel powered vessels.</li></ul>	<p><b>Investment Needs</b></p> <ul style="list-style-type: none"><li>◆ Upgrade current ports and fleets to be climate resilient.</li><li>◆ Complementary investments in a revolving Finance Facility for Business and Entrepreneurship and a Research, Innovation and Capacity Hub</li></ul>
Outcomes	<ul style="list-style-type: none"><li>◆ Carbon friendly domestic shipping services.</li><li>◆ GHG reductions.</li><li>◆ Efficient and effective shipping services with significant savings on fuel expenditure.</li><li>◆ Upgraded ports and related facilities, which would be safer for incoming vessels and be climate change resilient</li></ul>	
SDG Linkages	Supports SDGs 8 (Decent work and economic growth), 9 (Industry, innovation, and infrastructure), 12 (Responsible consumption and production), 13 (Climate action), 14 (Life below water), and 17 (Partnerships for the goals)	
Investment Needs (US\$)	Estimated capital investment needed for implementation: >US\$500 million	

## Annex II, continued: Concept Notes for Shortlisted Projects

## PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

## Mitigation Priority Projects

6. PACIFIC BLUE CARBON SHIPPING PROGRAM, CONTINUED		
Implementing and Supporting Entities	Implementing Entities: MCTTT, MOE, Fiji Ports Authority, MSAF Supporting Entities: Tourism industry, USP, SPREP	
General timeline	<b>Project timeline:</b> Time to develop and secure financing is at least 12 years. This covers consultations, surveys, scoping studies, procuring new vessels, and upgrading ports and relevant infrastructure. The work has been stalled by the pandemic. <b>Immediate next steps:</b> Create a steering committee, identify development partners, conduct feasibility studies, and identify potential investment needs.	
Policy Link	Supports the targets and objectives in Fiji's NDP and LEDS.	
Information and MRV Needs	<ul style="list-style-type: none"><li>◆ Carbon offset data.</li><li>◆ Progress of port constructions and development reports.</li><li>◆ Synchronise new market opportunities with relevant academic courses and qualifications to meet new technical needs.</li></ul>	
7. PROMOTION OF LITHIUM-ION BATTERIES FOR RENEWABLE ENERGY STORAGE		
Sub-Sector	Electricity	
Description	<p>Most off-grid renewable energy projects use lead acid batteries, with only newer systems using lithium-ion batteries. This includes technical assistance to develop suitable policies and regulations, establish financing schemes to promote lithium-ion batteries, and create a program about how to safely dispose of lithium-ion batteries. On-grid storage capacity is expected to be 162 MWh and will be managed by EFL. Off-grid storage capacity is expected to be 25 MWh and will be managed by DOE, the private sector, and local communities.</p> <p>Lithium-ion batteries are more efficient, have a higher depth of discharge, and last longer than traditional lead acid batteries. An organic uptake of Lithium-ion batteries needs supportive policies and capacity building for service providers, vehicle operators, and maintenance personnel.</p> <p>Led by MIMS/DOE and EFL, with support from PPA, PCREEE-SPC, MOE, FNU, USP and private sector companies. The investment and financing decisions for on-grid battery storage infrastructure will follow the business planning and budgeting processes of EFL and the IPPs. Off-grid battery investment will be taken by public and private sector investors. This program includes fiscal incentives and awareness raising about the benefits and feasibility of Lithium-ion batteries.</p>	
Implementation Milestones	<b>Policy/Technical Assistance</b> <ul style="list-style-type: none"><li>◆ Conduct market assessment for Li Ion batteries</li><li>◆ Set up financing facility to support private investments</li><li>◆ Provide technical advisory support for Lithium-ion batteries</li></ul>	<b>Investment Needs</b> Install Lithium-ion batteries to replace lead acid batteries
Outcomes	<ul style="list-style-type: none"><li>◆ Increase in Lithium-ion storage capacity</li><li>◆ New and improved policies, regulations, financing, and fiscal measures to deploy Li Ion batteries</li><li>◆ Develop capacity of key institutions and stakeholders to design, install, operate, and maintain Lithium-ion batteries.</li><li>◆ Improved profitability for EFL</li><li>◆ Reduced air pollution due to reduced supply and use of petroleum products.</li><li>◆ Improved reliability of the power grid</li></ul>	

## Annex II, continued: Concept Notes for Shortlisted Projects

### PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

#### Mitigation Priority Projects

7. PROMOTION OF LITHIUM-ION BATTERIES FOR RENEWABLE ENERGY STORAGE, CONTINUED		
SDG Linkages	Supports SDGs 7 (Affordable and clean energy), 9 (Industry, innovation, and infrastructure), 11 (Sustainable cities and communities), 12 (Responsible consumption and production), 13 (Climate action), 17 (Partnerships for the goals)	
Investment Needs (US\$)	Estimated capital investment needed: US\$184 million Estimated development costs: US\$172,000 Enabling, Capacity Building and Technical Assistance: US\$990,000	
Implementing and Supporting Entities	Implementing Entities: MCTTT, MOE, Fiji Ports Authority, MSAF Supporting Entities: Tourism industry, USP, SPREP	
General Timeline	Project timeline: Technical assistance and capacity building will happen from 2022 to 2030. The financing facility would operate during 2025 to 2030.	
Policy/Plan Link	Supports the targets and objectives in Fiji's NDC, NDP, LEDS, National Energy Policy, Technology Needs Assessment, National Climate Change Policy, MOIT Strategic Development Plan, and NDC Implementation Roadmap	
Information and MRV Needs	<ul style="list-style-type: none"><li>◆ Percent of Li Ion storage capacity out of total storage capacity</li><li>◆ Number of trainees from relevant organizations and their evaluation reports</li><li>◆ Reports commissioned for the demonstration projects</li></ul>	
8. REFOREST DEGRADED FOREST AREAS		
Sub-Sector	Ministry of Forestry	
Description	This enhances carbon stock, connects forest corridors, restores coastal wetlands, and bolsters food security. Through this initiative, the Ministry will partner with government agencies, civil society organizations, schools, youth groups and local communities to rehabilitate degraded areas. This started in 2015 (see below) and is expanding to meet the government's goal plant 30 million trees in 15 years.	
	Output of the Project from 5 previous years	
	Financial Year	Area Target (Ha)
	2015	150
	2016	500
	2017-2018	500
	2018-2019	800
	2019-2020	1,000
Implementation Milestones	Policy/Technical Assistance <ul style="list-style-type: none"><li>◆ Develop reforestation and afforestation guidelines.</li><li>◆ Plant 30 million tress in 15 years</li></ul>	Investment Needs <ul style="list-style-type: none"><li>Establish a sustainable financing mechanism to:<ul style="list-style-type: none"><li>◆ Maintain newly established plantations</li><li>◆ Support seedling production, including from community-based nurseries</li><li>◆ Establish new tree plantations</li></ul></li></ul>

## Annex II, continued: Concept Notes for Shortlisted Projects

## PROJECT PIPELINE FOR THE FIJIAN MINISTRY OF ECONOMY'S CLIMATE CHANGE AND INTERNATIONAL COOPERATION DIVISION

## Mitigation Priority Projects

8. REFOREST DEGRADED FOREST AREAS, CONTINUED	
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>◆ Restore Fiji's forest cover</li> <li>◆ Enhance and protect forest biodiversity and special management zones</li> <li>◆ Reforest and afforest degraded areas</li> <li>◆ Afforestation of area such as grassland etc.</li> <li>◆ Plant 30 million trees in 15 years from 2020 to 2035</li> </ul>
<b>Investment Needs (US\$)</b>	<b>Total Project Cost:</b> US\$3.015 million
<b>Implementing and Supporting Entities</b>	<b>Implementing Entities:</b> Ministry of Forests, iTaukei communities and other forest-owning communities, logging companies, FNU, USP, and development partners.
<b>General timeline</b>	<p><b>Project timeline:</b> The project started in 2020 and will conclude in 2045.</p> <p><b>Immediate next steps:</b> Acquire land and establish plantations, produce seedlings, engage technical extension officers through Fiji, and begin fire mitigation</p>
<b>Policy/Plan Link</b>	This supports the targets and objectives in Fiji's NDP, the Ministry of Forestry's 13-year Strategic Development Plan, and the Ministry's Annual Costed Operational Plan.
<b>Information and MRV Needs</b>	<p>Track data and build documentation of:</p> <ul style="list-style-type: none"> <li>◆ Newly established plantations</li> <li>◆ Survival assessments of plantations</li> <li>◆ Growth rate and silviculture information</li> <li>◆ Emission reduction program sites</li> </ul>



## Annex III: List of Priority Interventions

### AGRICULTURE

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Improving institutional, technical, and scientific capacity</b>	Strengthen research collaboration with farmers, communities, and national research institutions—supported (but not led) by regional and international institutions—to create a community of practice and to support knowledge networks, which facilitate innovative and climate adaptive farming practices.	The IFAD has a GCF project to: <i>Build resilience of smallholder farming communities, landscapes and institutions to contend with climate change</i> . The project would train 150 MOA staff on climate smart agriculture practices and sustainable resource management techniques
	Develop and deploy policies, risk financing instruments, and training services that incorporate climate change adaptation principles	Develop and implement a consolidated framework for Climate Change Resilient Agriculture
		Institutionalise the <i>Drua Incubator</i> , which is a new sub-unit dedicated to piloting and developing innovative financing products such as parametric micro-insurance.
		Facilitate medium and long-term credit resources, lower interest rates and potentially include a 'climate smart agriculture' risk sharing facility to unlock financial instruments for Micro, Small and Medium Enterprises (MSME)
<b>Increasing access to resilient crop varieties, livestock breeds, and social safety net or market products that mitigate climate risks for farmers</b>	Improve biosecurity efforts to enhance protection and actions against invasive species, pests, and diseases that will become more frequent as climate impacts intensify.	Implement the transboundary invasive species project, which is on the GCF Shortlist for Regional Adaptation Projects
		Build two diagnostic labs for disease sampling and diagnostics operating in the Western and Northern divisions
	Promote and integrate climate-smart agriculture (CSA) practices into farmer trainings, extension services, and policies (while being responsive to the needs of disadvantaged groups and tailoring them to subsistence, semi-commercial, and commercial farmers) and adopt nature-based and urban solutions where possible	500 farms to be supported with quality breeding stock and nutritional plans based on climate smart agricultural practices
		250 hectares of land to adopt and utilize climate-resilient agricultural techniques
	Increase adoption of sustainable soil and land management techniques to address soil erosion, desertification, increased soil salination and to improve soil fertility, nutrient management, arability, and soil restoration and by revising and enacting the Soil Conservation Improvement Bill	The Fiji Sugar Corporation has a project idea called <i>Green Manure</i> , which aims to improve soil health and carbon sequestered. Currently, trials have been conducted by SRIF at various cane-growing sectors around Fiji and have been found to be very successful. Fiji Sugar Corporation is looking for partners to help this work.
	Encourage the diversification of agricultural produce for subsistence consumption, encourage market sales (especially in the sugarcane belt, coastal and interior areas, and marginal land), and expand access to financial literacy programmes and services for farmers.	Ensure 200 hectares of pulses (nutritionally dense seeds) are planted
		Establish 3 new climate-resilient crop varieties in the non-sugar sector
		Release two animal breeds to farmers
		Implement a taro leaf blight-resistant breeding programme
		Expand the use of enteric fermentation in livestock

Annex III, continued: List of Priority Interventions

AGRICULTURE, CONTINUED

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
Increasing awareness and adoption by farmers for sustainable resource management and climate-smart agriculture	Strengthen Fiji's disaster preparedness efforts in the agriculture sector first by encouraging agronomy practices, climate-based crop planning, and the protection, breeding, and cultivation of traditional and improved seed varieties, cultivars, and livestock breeds; and second, by advancing research and nurseries; and third, by enhancing the resilience of crop and livestock breeding infrastructure, supply systems, seed, and food storage facilities.	500 farmers to be trained in climate-smart agriculture practices
		25% increase in the number of farmers adopting organic production with secure market access
	Assess farm community and sectoral attitudes to climate adaptation actions in agriculture to develop appropriate and inclusive education and awareness programmes, extension services, farmer field schools, and institutionalized peer group systems that stimulate the take-up of agriculture aligned with adaptation actions	20% increase in the number of farmers using climate adaptation programmes.
	Work with diverse and inclusive stakeholders to ensure farmers (including disadvantaged groups) have inclusive access to hazard maps and climate information services, through a range of information communication technology to support inclusive participatory scenario planning at the local	No targets or projects under development identified during consultations for the climate finance strategy

## Annex III, continued: List of Priority Interventions

### BLUE ECONOMY

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Rehabilitate and conserve Fiji's oceans and coastal ecosystems, including but not limited to coral reefs, mangroves, sea grass and infrastructure</b>	Strengthening and enforcement of planning and environmental legislative and institutional frameworks	At least 30% of offshore areas managed as part of a national marine protected area network
		Establish a government wide database to inform management of coral reefs, sea grass, and mangroves.
	Prioritize, assess, monitor, and delineate critical areas for the protection and sustainable management of ecosystems-based ecosystem services, cultural importance, biodiversity, food security, water security, access and benefit sharing, and their importance to adaptation and disaster risk reduction.	International Union for Conservation of Nature is in process of setting up a Regional Nature-based Solutions (NbS) Hub based in Fiji to provide capacity, technical and other support for nature-based solution practitioners
		Upgrade the Makogai Mariculture Research Center with the Ministry of Fisheries. The upgrade will allow the centre to produce resilient seeds for marine species and help Fiji address issues around food security, increase coastal fisheries production, promote coastal conservation, and build its adaptive capacity
	Implement ecosystem-based approaches to adapt, protect, maintain, and restore degraded habitats and to prioritize restoration of critical watersheds, riparian, and coastal zones, with active community, NGO, and private sector engagement	From the NDC Investment Plan—the <i>Savusavu Blue Town</i> project. See shortlist of GCF Regional Adaptation projects (and Annex II).
<b>Ensure Fiji's coastal fisheries can continue to provide food and nutrition security and local employment to coastal communities throughout the islands.</b>	Support the restoration, enhancement, and conservation of coastal ecosystems such as mangroves, sea grasses and coral reefs, in collaboration with the Ministries of Forestry and Fisheries, local communities and actors, community fishery reserves, and other partners	The FDB is looking to support the Coral Reef Resilience Program, an international initiative by WWF that aims to deliver adaptation solutions to sustain the world's most resilient reefs. See shortlist of GCF Regional Adaptation projects (and Annex II).
		Prepare divisional coastal management plans by 2021 and then implement them, particularly to conserve seagrass meadows, which have a tremendous capacity to sequester more carbon emissions.
	Intensify collaboration with development partners (land and marine) to strengthen community-based fisheries management, to develop integrated sustainable resource management plans, and to implement ongoing fisheries programmes	It is a priority to scale the One Million Coral Planting Initiative
	Upgrade existing database to capture data on the status of inshore/coastal and offshore marine resources (including regeneration and harvesting levels) and implement processes to ensure this database informs planning processes and guides decision-making.	The identified interim target is for 100% of inshore traditional fishing grounds to become effectively managed within locally managed marine areas.  The Ministry of Fisheries is collaborating with conservation partners and relevant government agencies to establish community based marine protected areas and formulate appropriate management plan.
		Develop a coastal fisheries database, based on data collected and coordinated by a Blue Economy Working Group, by 2022. The creation of this database is not currently underway.

# Annex III, continued: List of Priority Interventions

## BLUE ECONOMY, CONTINUED

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
Support the growth and sustained economic contributions of the fisheries sector, including offshore fisheries and large- and small-scale inshore fisheries production	Promote sustainable fisheries and non-extractive cultured fisheries management by developing and implementing management tools that include the establishment and better management of inshore and deep-water marine protected and locally managed areas	To reach 100% compliance among commercial fishing operations with the Standard Operating Procedures and Environment Management Acts
		Conservation International has a Green Climate Fund concept note aimed at <i>Adapting Pacific Island Tuna Fisheries to Climate Change</i> . The project looks to secure tuna stocks in eight Pacific Island countries, including Fiji, to protect coastal communities and support economic development. The project funding is estimated to be US\$148 million dollars for a period of 7 years. More details can be found here or on the GCF website.
	Strengthening of community-based fisheries management	At least 30% of offshore areas managed as part of a national marine protected area network
	Create a sustainable market environment for non-tuna species and for two new cultured species	An interim target should be to have Fijian farmers sustainably produce and supply 1000MT of Tilapia, 1000 MT of shrimps, and two new species of cultured products for both the local and export markets.

## Annex III, continued: List of Priority Interventions

### CLIMATE POLICY AND GOVERNANCE

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Integrate climate adaptation into national and subnational planning and decision-making channels</b>	Deploy portfolio screening to ensure policies, programmes, and projects integrate adaptation and mitigation priorities	The MoE and UNDP are working to develop and implement a climate budget tagging system that will help lay the foundation for a project screening mechanism.
	Build capacity of national and sub-national Government representatives and other stakeholders to be able to mainstream costing tools—such as the NAP costing methodology tool, cost-benefit analysis tools, multi-criteria analysis approaches, and gender analysis tools—into decision-making processes regarding climate change adaptation and disaster risk reduction	No targets or projects under development identified during consultations for the climate finance strategy
	Strengthen the capacities of national level Government entities to enhance planning processes so that these processes not only incorporate the needs of particularly vulnerable groups through inclusive analysis and responsive decision-making systems but also ensure the effective delivery of climate-resilient development initiatives and compliance with the NAP Framework	Analytical tools that can help identify the most climate-vulnerable communities
	Ensure climate budget codes use standardized criteria to define climate relevant activities at the sub-national level in a way that also contributes towards gender, social and disability responsiveness, transparency, accountability, and the reduction of corruption	Relevant trainings for staffs of national and sub-national Governments
		Integrate climate budget tagging into national and sub-national budgeting, planning, and decision-making processes



## Annex III, continued: List of Priority Interventions

### CLIMATE INDUCED RELOCATION

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Operationalize, strengthen, and expand ongoing efforts to facilitate climate-induced relocation so that every Fijian community is safe from growing climate impacts.</b>	Scale up efforts to strengthen the coastal boundaries of urban centres and rural communities using hybrid or nature-based solutions to reduce climate risks and to slow the need to relocate communities and infrastructure	Projects that build climate-resilient seawalls, expand mangrove forests, seagrass coverage, and stabilize other ecosystems to shelter coastal communities from growing climate impacts and to sequester carbon need to be drastically expanded
	Establish proof of concept and operationalize the Fiji Relocation and Displaced People's Trust Fund	The MoE along with relevant Government agencies have identified 15 communities that need to be relocated. It welcomes additional support to operationalize and scale the Relocation Trust Fund. More details can be found in Annex II.
	Use vulnerability maps to identify and prioritize communities for relocation, guide subsequent relocation efforts, identify, and fulfill the capacity building needs of relocated communities, and incentivize and fund relocation efforts	Although the Fijian Government has developed the "Displacement Guidelines," and the "Planned Relocation Guidelines," these initiatives need to be strengthened and complimented by efforts to use data-driven vulnerability maps. Given limited data availability in Fiji, additional resources will need to be allocated to collecting and synthesizing the relevant data to build these maps.
	Strengthen the capacity of sub-national development planning processes to integrate climate-induced relocation issues and use targeted action, including relocation, to help protect individuals, communities, and other social groups that are vulnerable to climate change, disaster displacement, and migration.	No targets or projects under development identified during consultations for the climate finance strategy.

## Annex III, continued: List of Priority Interventions

### DISASTER RISK MANAGEMENT

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Ensure infrastructure meets cyclone-resilient standards, building codes, codes, and renewable energy targets</b>	Development of prioritization guidelines to plan asset maintenance and facility upgrades	The unit developed a monitoring and evaluation software called a "PMWeb Database" that manages the planning, building, and upgrades of public buildings and that captures building data including a building's measurements and required inventory.
	Ensure that every rural community and every rural school has at least one building resilient to a Category 4 cyclone	CIU and MOE need additional assistance to rehabilitate all 179 schools and 84 public buildings that have been damaged by cyclones since 2016.
	Review and update building standards for school and health buildings	Analytical tools that can help identify the most climate-vulnerable communities
		Maintain public buildings at a climate resilient (category 4) standard
<b>Improve disaster management preparation</b>	Develop user-friendly hazard assessments, maps and models that focus on site-specific risks across coastal, riverine, urban, and inland areas in Fiji and that cover all potential hazards (including sea level rise, storm surge, flooding, drought, salt intrusion, landslide, tsunamis etc.) and make these accessible to all to guide development planning at the national and sub-national level	Construct and upgrade buildings to a category five standard by 2022
		Build a GIS database of drainage infrastructure for the Northern, Central, and Western divisions
	Conduct flood management and forecasting activities for high-risk flood towns and priority river systems, such as Nadi River, Sigatoka River, Rewa River, and Labasa River	4 divisional vulnerability assessments and hazard maps completed every 3 years
		Coastal and flood protection projects in 58 sites that are currently prone to flooding
	Create flood risk and management action plans that operate at the catchment scale, involve either hybrid or nature-based solutions and payments for ecosystems services, and cover all human settlements	Provide drainage grants to 13 municipal councils in Suva, Lami, Nasinu, Nausori, Sigatoka, Lautoka, Nadi, Ba, Labasa, Savusavu, Levuka, Tavua, and Rakiraki to enhancing drainage systems.
		Infield drainage for 200 km of Fiji Sugar Corporation farming sites
		Create flood risk and management actions plans for flood-prone communities to ensure that they are equipped to mitigate flood risks

## Annex III, continued: List of Priority Interventions

### DISASTER RISK MANAGEMENT, CONTINUED

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Improve access to and use of hydrological, telemetry, and meteorological information</b>	Upgrade the existing infrastructure, resources, and technical capacity of Fiji Meteorological Services (FMS) so that FMS data can provide the basis for climate monitoring and projecting, user-friendly climate information services, GIS modelling of critical economic sectors, hazard and risk information, and early warning and prediction systems to key stakeholders	Ensuring that all black spots in major island observation areas have enhanced meteorological infrastructure
	Establish a standardized approach to collecting information on climate change interventions that would facilitate the monitoring and evaluation of outcomes relative to policy targets and that includes the use of data supply and reporting obligation agreements to ensure that the data needed to track adaptation are provided to a centralized database	Build and operationalize regional instruments and training programmes so that stakeholders are equipped to gather, analyse, and incorporate climate related data into their planning processes
	Enhance meteorological prediction systems for flooding and droughts and establish a multi-hazard early warning system	<p>Develop and deploy integrated, multi-hazard early warning systems</p> <p>Develop impact-based forecast and risk-based warnings and to install radar systems on the outer islands</p>

## Annex III, continued: List of Priority Interventions

### ELECTRICITY

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Universal access to affordable, reliable, and sustainable electricity</b>	Review the design and construction standards for new and existing electricity facilities so that they are climate change resilient, including a review of design, technical, and installation standards of solar home systems	No projects that would support these targets are currently under development.
	Create a long-term resilience strategy for the electricity sector underpinned by a climate risk model that identifies which power systems and network components are most vulnerable to climate change, that ensures cost-effectiveness of measures can be properly evaluated, that prioritizes measures delivering the greatest net benefits, and that is financeable using a variety of international and domestic sources from both the private and public sources	Conducting Feasibility studies per year until the entire country has been analysed
	Expansion of under-grounding distribution lines	Expand the undergrounding of distribution lines in Suva, Lautoka, Ba, Labasa and Savusavu
<b>Increase share of electricity from renewable energy generation</b>	Increase the resiliency of the power system by investigating more diversified and distributed generation options, including mini grids	Increase power capacity from additional renewable energy generation in Northwest Viti Levu and to expand distributed generation in Vanua Levu
		Complete 10 Fiji Renewable Energy Fund (FREF) projects by 2025
	Diversify renewable energy generation to improve its resilience, including increasing generation from new hydro and solar facilities, expanding rural mini-grids and solar home systems, and completing feasibility studies for new biomass power plants	Install 10 mini hydro systems
	Implement a research, data collection and investment identification programme to accelerate the addition of renewable energy generation	Fiji's NDC Investment Plan will serve as this framework by listing priority projects and financing plans that, and if implemented, can achieve Fiji's NDC targets. In addition, Fiji is developing a National Measurement, Reporting and Verification System that will include an NDC registry system to track Fiji's NDC targets and the support Fiji has received to implement these targets.

## Annex III, continued: List of Priority Interventions

### ELECTRICITY, CONTINUED

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Improve energy efficiency</b>	Investigate options to increase electricity sector resilience by ascertaining the benefits of energy efficiency and other demand side management options	<p>The NDC Investment Plans outline three projects:</p> <ul style="list-style-type: none"> <li>◆ <i>Capacity Building for Integrated Energy Planning and Energy Statistics in Fiji.</i></li> <li>◆ <i>Capacity Building in Energy Efficiency in Industry.</i></li> <li>◆ <i>Programme to Manage Peak Demand and Savings in Fiji.</i></li> </ul>
	Update the energy codes used for ventilation, appliances, cooling, and lighting and enforce the application of these in both the public and the private sectors	<p>The NDC Investment Plans outline two projects:</p> <ul style="list-style-type: none"> <li>◆ <i>Assessment, Design and Construction of Low Energy/Carbon Buildings</i></li> <li>◆ <i>Strengthening and Expanding the Minimum Energy Performance and Labelling Standards</i></li> </ul>



## Annex III, continued: List of Priority Interventions

### FORESTRY

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Develop and implement sustainable forest management frameworks</b>	Expand Tree-Planting Campaign to encourage voluntary tree and/or mangrove planting activities, which are to be conducted as part of the school curriculum, community stewardship efforts, and corporate social responsibility initiatives	One programme to achieve this is the campaign to plant 30 million trees in 15 years, including 4 million trees planted by 2022. This is being orchestrated by the Ministry of Forestry and it will store carbon and increase the adaptive capacity of Fiji's forestry ecosystems. It is not currently being funded.
		The "Reforestation of Degraded Forest Areas" Project implemented by the Ministry supports the reforestation and afforestation programmes implemented in degraded forest areas in Fiji. It The project needs additional funding to support the proper maintenance of the newly established forest plantations.
	Strengthen forest resource management framework in support of legislative and policy imperatives, and to create sustainable assets with appropriate controls, by focusing on forest management, watersheds, coastal areas, and soil/land conservation	Develop and operationalize a Forest Monitoring System by 2025
	Enhance implementation and adoption of Sustainable Forest Management practices (maintaining and enhancing multiple forest values through human interventions)	Decrease emissions from logging in natural forests (forest degradation) by 1% annually
<b>Improve service delivery and the socio-economic impacts of forests</b>	Strengthen enforcement of planning, environmental, legislative, and institutional frameworks, most notably the Environment Management Act and the Environment Impact Assessment process	The consultations did not identify any projects under development that would support this priority.
	Enhance knowledge development through Education, Research, and Training for the Ministry of Forestry	Upgrade and expand existing research facilities to specialize in sustainable forest management practices
		At least 2 new training programmes and modules developed by 2025
	Support and expand the domestic non-timber product industry	Promote efforts to establish and scale projects to cultivate high-quality production of bamboo, sandalwood, "dilo," candlenut and other minor forest products
<b>Develop financing mechanisms to capture socio-economic impacts of forests.</b>	Implement a national programme to reduce the negative impacts of logging, of existing and future inland and seabed mining to improve the monitoring and management of rivers and watersheds	Introduce financial incentives to conserve and protect forests, particularly for the logging industry
		Establish 1000 hectares of urban forest to protect Fiji's watersheds
	Foster awareness and social responsibility about how sustainable forest management intersects with climate change mitigation & adaptation, gender equality, and other social equality issues	The consultations did not identify any projects under development that would support this
	Identify and map climate-vulnerable flora and fauna and their habitats, including data about the need to control invasive species and to create a national monitoring system to support climate-vulnerable species	

## Annex III, continued: List of Priority Interventions

### GENDER AND SOCIAL INCLUSION

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Integrate gender and social inclusion considerations into climate adaptation efforts</b>	Every project outlined and implemented must integrate the relevant gender, socially inclusive and human rights-based approaches into all stages of project design, implementation, monitoring, and evaluation	The consultations did not identify any projects under development that would support this priority.
	Support national and sub-national Governments with institutional capacity assessments and resources for awareness training on gender and disabilities to support the mainstreaming process	If the ongoing Gender Transformative Institutional Capacity Development program pilot and the climate budget tagging pilot are both successful, there will be a need to integrate these two budget systems
	Develop and implement institutional arrangements, such as socially inclusive and gender-sensitive policies that are responsive to the needs of low-income and otherwise disadvantaged groups and include these groups in the decision-making processes	Finalize and enact the Gender Equity and Social Inclusion Policy (GESI) 2021-2024.
	Develop and practice participatory and gender responsive budgeting	If successfully implemented, the Gender Transformative Institutional Capacity Development program would provide this.
	Require that all projects to collect and report sex- and age-disaggregated data	The consultations did not identify any projects under development that would support this priority.

## Annex III, continued: List of Priority Interventions

### HOUSING

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Prepare hazard mapping and build capacity of the ministry and town councils to guide decision making</b>	Develop downscaled climate information and climate projections to inform the development of localized hazard maps	Two ongoing initiatives need to be scaled to close this data gap: 1. The CommonSensing project 2. The CCICD and the University of Yorkshire partnership to build climate-forecasts and models for the Coral Coast, Sigatoka, and Nadi
	Undertake vulnerability assessments for all communities and use these to develop disaster resilience plans for the most vulnerable ones	Complete five hazard maps per year, starting with the flood-prone towns of Ba, Labasa, Lami, Navua, Pacific Harbor, Rakiraki, and Seaqaqa
	Develop a national infrastructure asset management system, which first assesses the condition of infrastructure and public buildings and then prioritizes and provides guidance for their maintenance and upgrade	Provide funding and capacity building support to the Fiji Institution of Engineers and Masters' Builders Association so they can collaborate with the CIU to develop a national infrastructure asset management system that covers everything from houses, schools, hospitals and government quarters
<b>Provide affordable climate-resilient housing to all</b>	Scale up efforts to upgrade existing informal settlements to be climate resilient	PICAP seeks to pilot and scale market-based climate disaster risk financing instruments in Fiji. PICAP will primarily target the housing, agriculture, fisheries, and tourism sectors and focus on women, youth, MSMEs and migrants. The inception phase, from 2021 to 2022, will have an initial budget of US\$7.5 million. If successful, additional support will be needed to scale this product to cover additional sectors and countries.
	Plan and enable the supply of affordable serviced land close to employment nodes for households across all income brackets to meet the existing housing backlog and proactively provide for future urban growth	FDB currently has a <i>Fiji Climate Friendly House Loan Project</i> in its pipeline that would provide loans for climate friendly (new or refurbished) houses, including those with energy, climate proofing, and water efficient designs principles.
	Develop and support programs and financing instruments to ensure the construction of cost effective, insurable, and context-relevant disaster resilient homes for rural and urban communities	At least double the size of the Koroipita Model Town

## Annex III, continued: List of Priority Interventions

### HUMAN HEALTH

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Improve patient health outcomes and deliver a more efficient, climate-resilient healthcare system</b>	Improve case detection and coordinated response mechanisms to reduce communicable disease morbidity and mortality and to improve the effective and efficient use of the available resources and information towards climate change interventions relating to health system	Identifying climate-vulnerable groups and improving access to health services for women, children, and other vulnerable groups
	Strengthen and empower the Climate Change and Health Unit by increasing resources and personnel with clear mandates to implement the Climate Change Health and Strategic Action Plan in cooperation with other relevant national, regional, and international plans, policies, agreements, and convention	Climate Change and Health Unit to develop and pilot a web-based reporting system that covers climate sensitive diseases, emerging health concerns, and current adaptive capacity of affected communities
	Improve diagnostic and treatment capacities to manage climate change and health risks to ensure that health care infrastructure at all levels can respond effectively to climate-sensitive diseases and conditions, including dengue, diarrhea, typhoid, and leptospirosis	The consultations did not identify any projects under development that would support this priority.
<b>Ensuring that health infrastructure is climate-resilient and environmentally friendly to match service needs</b>	Retrofit the existing health infrastructure and install innovative structures, energy, and water supplies; distribute medicines and equipment efficiently to guarantee safety; enable lifesaving support by applying relevant legislation, policies, and standards; and ensure such legislation, policies and designs are used for new health facilities to mitigate exposure to climate change risks	Maintain infrastructure at all health facilities on standards or endorsed plans
		Build the capacity of the Ministry of Health and Medical services to manage health infrastructure assets
	Using the 'build back better' concept, repair and reconstruct the health infrastructure affected by recent disasters, namely Tropical Cyclone Winston and the 2017 landslides in Qamea	Ensure all health facilities in rural and maritime communities have the technical capacity and resources to meet minimum standards for health emergency and disaster preparedness
		Upgrade the structural integrity of all health facilities not affected by Tropical Cyclone Winston or other recent disaster events

## Annex III, continued: List of Priority Interventions

### TRANSPORT

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Improve accessibility and connectivity to environmentally sustainable road transport</b>	Promote institutional strengthening and capacity building for an integrated transport strategic planning framework, including by developing and enforcing certification standards to climate-proof transport infrastructure	From the NDC Investment Plan: 1. <i>Lautoka Zero Carbon Transport Challenge / Strategy</i> 2. <i>Bus Network Information Transport System</i> (see Annex II)  From an FDB-GCF concept note: Finalize a concept note to decarbonization of public bus transport (see Annex II)
	Renew, upgrade, and strengthen road infrastructure, including bridges and water crossings, to ensure that current and future environmental and climate risks are incorporated into their design	The consultations did not identify any projects under development that would support this priority
	Develop waste management standards for the transport industry to ensure waste is either reused or disposed of in a manner that is harmful neither to human health nor the environment	The NDC Investment Plan recommends the <i>End of Vehicle Life Program</i> and the concept note is in Annex II.
<b>Develop and deliver safe, efficient, sustainable, reliable, and affordable shipping and marine transport options</b>	Develop climate-resilient jetties, landings, and support infrastructure, as needed, on the outer islands	From the NDC Investment Plan and Annex II: <i>The Pacific Blue Carbon Shipping Program (PBSP)</i> .
	Strengthen and upgrade existing ports so that they meet international standards and are resilient to climate and disaster events	<i>Green Ports Master Plan</i>
	Repair and upgrade navigation aids, lighthouses, and beacons to be climate resilient	Rehabilitate and upgrade 25 lighthouses by 2021
<b>Building and delivering sustainable, efficient, and high-quality international and domestic air service.</b>	Review and upgrade airport and airstrip infrastructure so that it meets international standards, is more energy efficient, and is climate resilient	From the NDC Investment Plans: 1) Aircraft Re-Fleeting Programme 2) Sustainable Aviation Fuel Integration Initiative 3) Airport & Airfield Infrastructure Upgrade



## Annex III, continued: List of Priority Interventions

### WATER AND SANITATION

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Systemic management of waste and wastewater projects</b>	Conduct a comprehensive assessment of how expected climate impacts will affect all of Fiji's water and sanitation network. The assessment will identify instances where infrastructure needs to be upgraded, replaced, or relocated	Create and implement national WASH standards, including indicators and metrics on climate resilience
	Upgrade, repair, relocate and build new water and sanitation infrastructure that can withstand predicted future climate risks.	From the NDC Investment Plan and in Annex II: 1) Efficient Operation and Maintenance of Water Supply Systems. 2) Efficient Operation and Maintenance of Wastewater Treatment Systems.
	Develop, implement, and enforce building codes, a zoning scheme, and minimum standards for the construction and management of new water and sanitation infrastructure. Government agencies must be required and empowered with the authority to enforce safety and resilience standards	The consultations did not identify any projects under development that would support this priority
<b>Increasing access to water-related data and information to improve and expand water conservation practices</b>	Build the capacity and responsibility of communities and empower them to manage risks to water and sanitation by adopting risk management concepts in all rural communities and by prioritizing the communities that are especially vulnerable to climate risks	Strengthen the rural and peri-urban water scheme monitoring mechanism, expand awareness campaigns, and provide technical assistance for communities
	Support community involvement in water resource management by raising awareness and strengthening the capacity of community-based organisation, non-governmental organisations, and government departments to disseminate information about climate-resilient water management to communities	The Ministry of Rural and Maritime Development is seeking assistance to purchase 10,000 litre water tanks as part of a rainwater harvesting project to be implemented in Fiji's rural communities.
	Develop education and awareness programmes about the management and use of water resources so users become more efficient with their water use	The consultations did not identify any projects under development that would support this priority

## Annex III, continued: List of Priority Interventions

### WATER AND SANITATION, CONTINUED

GOAL	PRIORITY INTERVENTIONS	PRIORITY TARGETS
<b>Effective allocation and sustainable management of water resources, including improved access to alternative water supplies</b>	Promote the development and implementation of integrated water resource management plans (IWRM) in river basin catchment areas based on existing international best practices and by building upon national and traditional experiences, including efforts to protect freshwater aquifers and other protected areas from saltwater intrusion	Develop partnerships among the WAF, development partners, the Fiji National University, and the University of the South Pacific to explore renewable energy-based desalination technologies and promote capacity building for water planners and water economists
		Complete maintenance and desilting of existing/completed dams, including completing 10 creek desilting projects
	Support the use of alternative sustainable water sources (including but not limited to rainwater harvesting and desalination)	Conduct feasibility studies for small rainwater structures to build out an irrigation network
	Employ sustainable water catchment management practices to protect Fiji's freshwater resources from the impacts of climate change, pollution contaminants, and other catchment security issues.	Complete maintenance upgrades, feasibility studies and collect GIS data of the Naqarowaqa, Dreketi, Korokadi, and Droca Irrigation Schemes
		Complete the dredging and maintenance of Fiji's eight main rivers and its small rivers and tributaries.

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# Endnotes

- i The 12 sectors are: agriculture, blue economy, climate policy and governance, climate-induced relocation, disaster risk management, electricity, forestry, gender and social inclusion, housing, human health, transport, water, and sanitation.
- ii See note 1.
- iii Travel-partner countries include Australia, New Zealand, United States of America, United Kingdom, the United Arab Emirates, Canada, Qatar, Germany, Spain, France, the Republic of Korea, Singapore, Switzerland, Japan and most Pacific Island countries and territories.
- iv Examples of the multilateral development banks are the Asian Development Bank and the World Bank Group. Bilateral development agencies include the Korea International Cooperation Agency, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and the Japan International Cooperation Agency. Regional organizations include the Pacific Community and the Secretariat of the Pacific Regional Environmental Program. International non-profits include Conservation International and the World Wildlife Fund. Examples of UN Agencies are the United Nations Development Program, United Nations Environment Program, the International Fund for Agriculture and Development, and the World Meteorological Organization.
- v <https://www.greenclimate.fund/document/ppf-adapting-tuna-dependent-pacific-island-communities-and-economies-climate-change>
- vi <https://www.fiji.gov.fj/Media-Centre/News/WORLD%E2%80%99S-FIRST-%E2%80%93EVER-RELOCATION-TRUST-FUND-FOR-PEOP>
- vii <https://www.rise-program.org/partners>
- viii As of the most recent FRA Corporate Plan (2016), FJ\$759,000 was budgeted for new bus stops and shelters, but in the corresponding Annual Report, only FJ\$41,096 in expenditures were reported for this. Given the absence of statistics on the total number of bus stops/shelters already constructed, an estimate of 2 km for travel in each direction may be assumed for “urban and peri-urban areas, supported by 1,707km of sealed roads, with ITS having emissions mitigation impacts in areas where congestion leads to efficiency loss. Assuming 6,828 bus stops/shelters (inclusive of terminals) would require ITS upgrades to provide passenger information systems (~US\$12,500 per unit for ten years’ operation), alongside an estimated 1,793 buses operating in 2020, reaching 2747 by 2030 will require GPS tracking systems to be installed (~US\$7,000 for GPS receiver, destination display, and odometer upgrades).
- ix Project development will entail design of technical specifications and service requires alongside administration of a tender process for arrangement of a long-term service contract over the 2020–2030 period, inclusive of structuring the terms of a PPP.
- x The tracking and fleet management response for well over a thousand buses will require technical training for a team of regulatory specialists. This will also involve significant regulatory revisions to accommodate the new operating state of the transit network. The GSTS budgeted for regulatory enhancements, along with a bus driver training scheme and network monitoring programme, as well as a Bus stop rationalization programme, all of which are necessary elements of upgrading the transit system with ITS.
- xi Site-specific costs for establishment of a vehicle scrapyards and processing facility will need to be scoped—warehouse, baler, loading equipment, etc.—inclusive of cutting equipment to dismantle vehicles on outer islands for easier transport back to Suva/Lautoka/Labasa.
- xii Establishing the financial mechanism to remove derelict vehicles will involve structuring of a penalty system to discourage abandoning vehicles and improper disposal. Designing a revenue model which tracks local costs/payments to global commodity prices for ferrous/non-ferrous metals will be required.
- xiii Training on disassembling vehicles and occupational health & safety for a range of new dismantling equipment and machinery will be necessary for personnel in the sector.
- xiv See IMO papers to Marine Environment Protection Committee in April 2020 for adoption which encourages development of National Action Plans as agreed by IMO ISWG GHG 6 in November 2019 <http://www.imo.org/en/MediaCentre/PressBriefings/Pages/26-ISWG-GHG.aspx>.

- xv FPCL and FSHIL have already undertaken energy audits and other planning in regards greening of the Fiji Ports focused on the Suva and Lautoka international seaports. Other initiatives identified include scoping of shore-side power for vessels to plug into whilst berthed or <https://www.greenport.com/news101/Projects-and-Initiatives/incentive-schemes-that-promote-green-shipping>
- xvi See for example <https://www.gov.uk/government/news/government-backs-cutting-edge-tech-to-drive-down-shipping-emissions> and <https://www.eeca.govt.nz/news-and-events/media-releases/marine-electrification-fund-recipients-announced/>
- xvii Fiji is participating in MTCC led fuel use data collection programme for domestic ships, but no information is publicly available to date <https://gmni.imo.org/pilot-project/example-pilot-project/>





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