



**UNITED NATIONS  
UNIVERSITY**  
**UNU-EHS**  
Institute for Environment  
and Human Security



Building Disaster Risk  
Resilience in the Pacific  
through Finance,  
Adaptation and Insurance



## PROJECT DOCUMENT

**Project Title:** Leaving No One Behind in the Digital Era - *Pacific Insurance and Climate Adaptation Programme*

**Project Number:**

**Implementing Partner:** UNCDF

**Start Date:** Sept 2020

**End Date:** June 2025

**PAC Meeting date:** 30<sup>th</sup> July 2020

**Inception Phase:** Sept 2020 to Sept 2022

### **Brief Description**

*Briefly describe the overall development challenge and the expected results of the project.*

The Pacific Small Islands Developing States (PSIDS) are highly vulnerable to natural hazards. However, they have limited capacity to effectively manage the risks and overcome the significant economic losses after a disaster. Presently, there are limited ex-ante financial instruments (government reserve funds and contingent credit) available in most Pacific countries and the ex-post financial instruments deployed are usually reallocated from government budgets, acquired through external and internal borrowing or the result of donor assistance and international humanitarian aid.

While many PSIDS have developed national and sub-national Disaster Risk Management (DRM) plans, no country has an integrated Climate Disaster Risk Financing (CDRF) strategy to better manage economic losses after a disaster. Although there is awareness on CDRF learnings available globally, the capacity to access and accelerate its usage in the Pacific context remains a challenge among PSIDS to progress towards blue/green economy.

With several innovative ex-ante CDRF tools and instruments emerging in the global markets, there is opportunity to introduce, test and scale market-based CDRF instruments like parametric insurance targeting the vulnerable and low-income populations in PSIDS. This is proven with some of the learnings and findings produced from the PFIP projects on micro-insurance.

The United Nations Capital Development Fund (UNCDF), through a joint programme with the United Nations Development Programme (UNDP), the United Nations University Institute for Environment and Human Security (UNU-EHS), and in close collaboration with key stakeholders from the government, public, private sector and other development partners, aims to address the challenge through the workstreams envisaged in the Pacific Insurance and Climate Adaptation Programme. The Programme is aligned to the United Nations Pacific Strategy, UNCDF global strategies and the respective country national development plans. The Programme will specifically target women, youth and MSME segments to work across agriculture, fisheries, and tourism sectors.

The overall program objective is to improve the financial preparedness of **“Pacific households, communities, small businesses, organisations and governments towards climate change and natural hazards”** through a combination of stakeholder engagement, co-creation of solutions, awareness and capacity building, innovative financing options and digital linkages – with a robust interface to the 2030 Sustainable Development Goals.

Contributing Outcome (UNDAF/CPD, RPD or GPD):

**United Nations Pacific Strategy**

**Outcome 1:** Climate Change, Disaster Resilience, and Environmental Protection

**Outcome 3:** Sustainable and Inclusive Economic Empowerment

UNCDF Strategic Framework Outcomes:

**Outcome 1:** Enhanced inclusive financial markets and local development finance systems that benefit poor and vulnerable population

**Outcome 2:** Unlock public and private finance for the poor  
Contributing SDG Targets:

1.2, 1.4, 5.1, 5.5, 5.A, 5.B, 8.10, 13.1, 13.2, 13.3, 13(a)(b), 17.3, 17.4, 17.6, 17.7, 17.8, 17.14, 17.15, 17.16 and 17.17

Indicative Output(s) with gender marker:




GEN2. Significant contributions to gender equality.

**Total resources required:**  
**Inception Phase**

US\$7,502,371.62

|  |              |
|--|--------------|
| UNCDF                                  |              |
| UNDP                                   | \$50,000     |
| MFAT, NZ                               | \$4,000,000  |
| DFAT, Australia                        |              |
| India-UN South-South Fund <sup>1</sup> | \$850,000    |
| SIDA (Sweden) <sup>2</sup>             | \$43,500     |
| Government:                            |              |
| Unfunded:                              | 2,558,871.62 |

Agreed by (signatures):

| UNCDF  | UNDP   | UNU  |
|--|--|--|
|  |  |  |
| Print Name: Judith Karl  | Print Name: Kevin Petrini  | Print Name: Shen Xiaomeng  |
| Date: 21-Aug-2020  | Date: 10-Sep-2020  | Date: 27 August 2020   |

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<sup>1</sup> Through the India-UN Development Partnership Fund administered by UNOSSC as parallel funding. A separate Pro Doc covering that project is submitted.

<sup>2</sup> SIDA is providing a fully funded International Volunteer specialist.

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## Abbreviations

|          |  |
|----------|--|
| ADB      | Asian Development Bank   |
| CCRIF    | CCRIF SPC (formerly the Caribbean Catastrophe Risk Insurance Facility)   |
| CRAIC    | Climate Risk Adaptation and Insurance in the Caribbean                   |
| CROP     | Council of Regional Organisations in the Pacific                         |
| CDRF     | Climate Disaster Risk Finance/ Disaster Risk Financing                   |
| DRM      | Disaster Risk Management   |
| DRR      | Disaster Risk Reduction  |
| FAO      | Food and Agriculture Organisation  |
| FEMM     | Forum Economic Ministers Meeting   |
| GDP      | Gross Domestic Product   |
| IC       | Investment Committee   |
| IFAD     | The International Fund for Agricultural Development                      |
| IFC      | International Financial Corporation                                      |
| INDC     | Intended Nationally Determined Contributions                             |
| MCII     | Munich Climate Insurance Initiative                                      |
| MSME     | Micro, Small & Medium Enterprises  |
| NAP      | National Adaption Plan   |
| NAPA     | National Adaption Programme for Action                                   |
| NDP      | National Development Plan  |
| NGO      | Non-Governmental Organisation  |
| PCRAFI   | Pacific Catastrophe Risk Assessment and Financing Initiative             |
| PCRIC    | Pacific Catastrophe Risk Insurance Company                               |
| PDNA     | Post-Disaster Needs Assessment   |
| PFIP     | Pacific Financial Inclusion Programme                                    |
| PIC      | Pacific Island Countries   |
| PSIDS    | Pacific Small Island Developing States                                   |
| PIDF     | Pacific Islands Development Forum  |
| PIFS     | Pacific Islands Forum Secretariat  |
| PNG      | Papua New Guinea   |
| RESPAC   | Disaster Resilience for Pacific Small Island Developing States           |
| RMI      | Republic of Marshall Islands   |
| SDGs     | Sustainable Development Goals  |
| SIDS     | Small Islands Developing States  |
| SPC      | The Pacific Community  |
| SPREP    | Secretariat of the Pacific Regional Environment Programme                |
| SRPD     | Sub-Regional Program Document  |
| TC       | Tropical Cyclones  |
| UN       | United Nations   |
| UN Women | United Nations Entity for Gender Equality and the Empowerment of Women   |
| UNCDF    | United Nations Capital Development Fund                                  |
| UNDP     | United Nations Development Programme                                     |
| UNDRR    | United Nations Office for Disaster Risk Reduction                        |
| UNIM     | United Nations International Organisation for Migration                  |
| UNOCHA   | United Nations Office for the Coordination of Humanitarian Affairs       |
| UNOSSC   | United Nations Office for South-South Cooperation                        |
| UNPS     | United Nations Pacific Strategy  |
| UNU-EHS  | United Nations University's Institute for Environment and Human Security |
| USD      | United States Dollar   |
| USP      | University of the South Pacific  |
| UWI      | University of West Indies  |
| VAT      | Value Added Tax  |
| WFP      | World Food Programme   |

## I. DEVELOPMENT CHALLENGE

Pacific Small Island Developing States (PSIDS) are highly vulnerable to natural hazards, including earthquakes, volcanic eruptions, tsunamis, tropical cyclones, storm surges, drought, and other such events. These types of events often require significant budget reallocations, diverting funds from other important programmes in health, education, and economic development. The World Bank estimates that the average annual total direct losses caused by disasters in the South Pacific are about US\$284 million<sup>3</sup>.

Just as the South Pacific region was faced with the health and economic challenges of the global pandemic Covid-19 in Q1 2020, four countries in the region- Solomon Islands, Vanuatu, Fiji and Tonga were devastated by TC Harold in early April'20 that led to severe loss and damages running to millions of dollars. For these countries this is a double whammy and a stark reminder that notwithstanding the current threats and impacts of COVID-19, climate change remains the biggest threat facing humanity today<sup>4</sup>.

The challenges faced by most of the PSIDS are very similar in nature due to several shared characteristics: location, lack of resources, a narrow export base, vulnerability to economic shocks and slow or stagnant economic growth. The World Risk Index 2018 that measures risks for disasters and the resultant socio-economic vulnerabilities, ranks five PSIDS among the top 20 most at-risk countries in the world. PSIDS also have very small population sizes which are largely dispersed resulting in very low population densities. This contributes to the obstacles for businesses in reaching economies of scale, limiting their expansion throughout these countries. Refer to **Annex 4** for additional information.

The threats of mass displacement and forced migration resulting from climate change is also looming. Climate fuelled disasters were the number one driver of displacement within countries over the last decade, forcing more than 20 million people to leave their homes each year. PSIDS make up seven of the 10 countries facing the highest risk of internal displacement from extreme weather events.<sup>5</sup>

The frequency and severity of disasters in the South Pacific region are accelerating due to climate change<sup>6</sup>, resulting in economic and social progress being increasingly disrupted and development gains negated over the years. Despite the high exposure to natural hazards, most people in this region do not have any type of financial protection such as insurance. Penetration rates for insurance are low, averaging only about 12% in countries of interest<sup>7</sup>. None of the South Pacific governments currently has a strategy in place that outlines what financing options are available to them and how they can access them. Regarding the current climate and disaster risk financing (CDRF) tools available, most countries in the Pacific, including the larger ones such as PNG and Fiji, are not members of a regional risk pool, such as the one provided by the Pacific Catastrophe Risk Insurance Company (PCRIC)<sup>8</sup>, and thus do not have access to quick financial relief after disasters occur. Refer to **Annex 5** for information on current regional initiatives on climate-related insurance and the impact on governments.

Nonetheless, even with ongoing discussions between national governments and agencies such as the World Bank, the Asian Development Bank (ADB), and the International Finance Corporation (IFC) in the Pacific on a possible climate risk insurance product, there has been no solution that has been successfully offered and adopted by any Pacific state to date. What the Programme intends to do is relevant in addressing this persisting gap and provide a solution that will cater at the macro, meso and micro level. The aim is to develop sustainable

<sup>3</sup> World Bank (1 April, 2012). "Pacific Islands: Disaster Risk Reduction and Financing in the Pacific", <https://www.worldbank.org/en/results/2012/04/01/pacific-islands-disaster-risk-reduction-and-financing-in-the-pacific>

<sup>4</sup> Source: <https://www.forumsec.org/covid-19-and-climate-change-we-must-rise-to-both-crises/>

<sup>5</sup>Source: <https://www.news.com.au/technology/environment/climate-change/five-times-more-extreme-weather-disasters-reported-in-last-decade/news-story/6d75c6a9f87963e53c591ad71e91d3eb>

<sup>6</sup> IPCC (6 October, 2018). *Special Report: Global Warming of 1.5°C – Summary for Policymakers*, <https://www.ipcc.ch/sr15/chapter/spm/>

<sup>7</sup> Insurance penetration rates are estimated to be 12% in Fiji, 15% in Papua New Guinea, 21% in Samoa, 7% in Solomon Islands, 13% in Tonga, and 5% in Vanuatu. From: UNCDF "National Demand Side Surveys", <http://www.pfip.org/our-work/work-streams/market-information/national-demand-side-surveys/>

<sup>8</sup> Pacific Catastrophe Risk Insurance Company, <https://understandrisk.org/opportunity/ceo-pacific-catastrophe-risk-insurance-company/>

interventions, hence the focus would be on developing market-based meso and micro schemes. At the same time, there will be an option for the national and sub national governments to consider subscribing to a “macro to micro scheme” to cater for the vulnerable segments.

Disasters have a negative distributional effect on low income individuals and exacerbate the persistent hardships prevalent across societies. They underline the need for solutions not only at the macro level, but also for individuals, businesses, and communities. It is estimated that disasters cause 26 million people to become trapped in poverty every year<sup>9</sup>. Women are especially hard-hit during disasters as existing inequalities make them more vulnerable. Traditionally, women have fewer resources under their own control and have a limited place in decision-making systems<sup>10</sup>. Women's role in ensuring household food security, and the dependence of many on natural resources, makes women more likely to suffer loss of life and property in the face of disasters. In addition, women assume a greater share of responsibility for the care of their family which means that, in post disaster situations, women are often more vulnerable than men. Their care giving roles expand dramatically after a disaster and experience shows that their access to resources for recovery is constrained.

The Programme, from its conception has aligned itself to the **United Nations Pacific Strategy (UNPS)**<sup>11</sup> which includes key outcomes relating to climate change and disaster risk reduction (DRR), which resonate with the overarching objectives of the Programme. The Programme contributes to Outcome 1 in the UNPS (“By 2022, people and ecosystems in the Pacific are more resilient to the impacts of climate change, climate variability, and disasters; and environmental protection is strengthened”). It also contributes to Outcome 3 (“By 2022, people in the Pacific in particular youth, women, and vulnerable groups, benefit from inclusive and sustainable economic development that creates decent jobs, reduces multi-dimensional poverty and inequalities, and promotes economic empowerment”).

The Programme similarly aligns with **Sub-Regional Program Document (SRPD)**<sup>12</sup> (2018-2022). The SRPD encompasses strategies that support the vision of the Pacific leaders and contributes to the achievement of the 2030 Agenda of localising sustainable development goals commitments. Specifically, SRPD Output 1.2 (Effective risk informed development plans, disaster preparedness and recovery mechanisms in place at the national sector and sub-national levels.) and SRPD Output 3.2 (Green/Blue economic policies in place to support private sector initiative that create sustainable and environmentally friendly jobs and entrepreneurial opportunities for women and youth.)

The Programme specifically aligns with the regional priority of “Sustainable development that combines economic, social, and cultural development in ways that improve livelihoods and well-being and use the environment sustainably”, which also props up SDGs 1, 5, 8, 10, and 17. Furthermore, the programme contributes towards the regional priority of, “Pacific people, societies, economies, cultures, and natural environments”. The SDGs that complement this priority are 7, 13, 14, and 15. References on linkage to SDGs can be found on **Annex 6**.

The programme also links to UNCDF’s wider strategic objectives, as laid out in the UNCDF Strategic Framework 2018-2021, specifically by contributing to the two main outcomes: Outcome 1 “Enhanced inclusive financial markets and local development finance systems that benefit poor and vulnerable populations” and Outcome 2 “Unlock public and private finance for the poor”, especially with regards to its ambition in making new

<sup>9</sup> Marcelo Guigale (11 October, 2017). “Time to Insure Developing Countries Against Natural Disasters”,

<https://www.worldbank.org/en/news/opinion/2017/10/11/time-to-insure-developing-countries-against-natural-disasters>

<sup>10</sup> Vasudha Gokhale (October 2008). Role of Women in Disaster Management : An Analytical Study with Reference to Indian Society [https://www.iitk.ac.in/nicee/wcee/article/14\\_10-0049.PDF](https://www.iitk.ac.in/nicee/wcee/article/14_10-0049.PDF)

<sup>11</sup> (2018). *United Nations Pacific Strategy 2018-2022*, [https://reliefweb.int/sites/reliefweb.int/files/resources/UNDP\\_WS\\_FINAL\\_UNPS\\_2018-2022.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/UNDP_WS_FINAL_UNPS_2018-2022.pdf)

<sup>12</sup> UNOPS (September, 2017). “Subregional Programme Document for the Pacific Island Countries and Territories (2018-2022)”, [http://www.pacific.undp.org/content/pacific/en/home/operations/legal\\_framework/\\_jcr\\_content/centerparsys/download\\_13/file.res/Pacific\\_SRPD\\_2018-2022.pdf](http://www.pacific.undp.org/content/pacific/en/home/operations/legal_framework/_jcr_content/centerparsys/download_13/file.res/Pacific_SRPD_2018-2022.pdf)



financial products in the insurance sector more widely accessible to Pacific Islanders. It also sits firmly within UNCDF's ambition to "Leaving no one behind in the Digital Era", a document that lays out how UNCDF plans to leverage digital channels to enhance its contribution towards the achievement of the SDGs over the period 2019-2024. The Programme in this respect mimics the basic structure of UNCDF's recent financial inclusion programmes, by focusing on the policy and regulatory environment, the product development aspect (supply side), awareness raising and consumer empowerment (demand-side), all of which are needed for a holistic response to the challenges faced by PSIDS.

In addition to these regional and strategic frameworks, PSIDS have developed national development plans (NDP) as well as national adaptation plans or national strategic plans that are aligned with the 2030 Agenda for Sustainable Development, with terms ranging from 5 to 30 years. Climate change and disaster risk resilience are over-arching themes that find a place in all the NDPs and are therefore at the forefront of government policy making and actions. References to some NDPs, INDCs, NAPs, and NAPAs from PSIDS are provided in the **Annex 7**. The activities, interventions, outputs and outcomes proposed under the four workstreams, as well as the overall objectives of the programme, are fully aligned with the various NDPs.

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## II. STRATEGY

At present, in the Pacific, there are no appropriate micro and meso level climate risk insurance or CDRF instruments that individuals, businesses, organisations, cooperatives, sub-national governments or others can access. As a result, the various stakeholders are left with few options - borrowing, drawing down savings, postponing investments or essential expenditure, or dependence on government assistance. Governments in turn often borrow domestically or externally, reallocate budgets, cancel investment projects or seek international aid assistance. In many instances, governments do not adequately provide for post disaster recovery, with affected communities suffering the consequences long after the disaster has happened, meaning that vulnerable sections of the population face the real possibility of being pushed into poverty.

A situation analysis of several PSIDS reveals that while the countries have national DRM plans or policies, so far none of the countries have an integrated CDRF strategy. A typical CDRF strategy covers various tools and financing instruments that can be accessed post disaster, although "forecast-based financing" also considers deploying financing instruments pre and post disaster. A CDRF strategy will cover what financing instruments and tools are needed at the macro (government), meso (industry, MSMEs, cooperatives and communities), and the micro (household, individual) levels.

The Programme will build on the Pacific Financial Inclusion Programme's (PFIP) decade-long engagement with the private and public sector, experience in financial innovation, country presence, and pioneering successful microinsurance deployments in the Pacific to meaningfully address the CDRF challenges mentioned above. PFIP's experiences in insurance in the Pacific shows that while the Pacific region is small, there is strong interest and appetite for insurance, especially for climate risk insurance. This was evident in the deployment of the bundled insurance product that currently covers over 135,000 people in Fiji, launched in Vanuatu, and will soon be expanded to other PSIDS. One of the key lessons learnt from this project was that it is possible to build market-based solutions in small markets through group aggregation and leveraging technology. Details on PFIP's bundled insurance is highlighted in **Annex 12**.

The reason for targeting parametric insurance instead of indemnity-based insurance is that parametric products can cover risks that conventional insurance does not cover and allow for more scientific pricing of products that respond to specific isolated parameters, rather than the physical losses which might result from any number of a wide range of occurrences. Together with lower administration and claims management costs, this makes lines of business commercially viable that were not previously. Another advantage of parametric insurance is that it can be paid out in as quickly as seven days after an event occurs. With typical indemnity-based products, the claims handling process can take weeks and policy holders may not receive a

payout until months after the event. The speedy payout thus allows policy holders to quickly act after an event and expedite recovery efforts. It can help prevent individuals from having to sell off their assets due to losses in income, ensuring that families do not fall deeper into poverty because of these events. Parametric insurance policies can also be offered at a microinsurance level; sold directly to the consumer via mobile technologies, or as an add-on to existing microfinance services. The benefit parametric insurance offers are speedy and timely claims payment, lower costs, certainty of pay-out based on a trigger.

These traits are particularly useful in developing countries where it is far more effective to respond before a loss event has turned into a humanitarian and economic crisis, with lives and livelihoods at severe risk and a nation's development potentially put back years. Because parametric payments do not require loss adjusting on the ground, payments can be made quickly to hard-to-reach clients in remote locations, often via online payment platforms or through mobile phone networks.

Some of the earliest proponents of parametric insurance were the Caribbean nations which came together after the devastation wreaked by Hurricane Ivan (2004) to create a regional risk pool against severe weather, now known as CCRIF SPC (formally the Caribbean Catastrophic Risk Insurance Facility).

The benefits of parametric insurance have been highlighted in CCRIF's response to hurricanes Irma and Maria where the facility was able to pay out over USD 50 million to member countries such as Dominica, Antigua and Barbuda, and Turks and Caicos within 14 days. In contrast, it is estimated that relief funding from international development partners normally takes between 4 and 12 months to mobilise. The Programme will leverage its partnership with the United Nations University's Institute for Environment and Human Security (UNU-EHS)/MCII (Munich Climate Insurance Initiative) to bring to the Pacific the learnings and experience from the Caribbean and support Pacific partners.

## Summary

| Development Challenge                                | Current Situation   | Strategy   |
|--|---|--|
| Gaps in Climate Insurance Products                   | World Bank, the Asian Development Bank (ADB), and the International Finance Corporation (IFC) in the Pacific are working on a possible climate risk insurance product, however, there has been no solution that has been successfully offered and adopted by any Pacific state to date. | The Programme has started addressing this persisting gap through stakeholder workshops and scoping missions in various PSIDS and intend to provide a solution that will cater at the micro, meso and macro level. The aim is to develop sustainable interventions, hence the focus would be on developing market-based micro and meso schemes. |
| Insurance Market (Indemnity vs Parametric Insurance) | With typical indemnity-based products, the claims handling process can take weeks and policy holders may not receive a payout until months after the event.   | Parametric products cover risks that conventional insurance does not cover and allows scientific pricing of products that respond to specific isolated parameters. Parametric Insurance has lower administration and claims management costs and payout can be made in as quickly as 7 days.   |
| Market led Insurance Products                        | The Pacific region is small thus there is a perception that a market led insurance initiative does not have a business viability.   | PFIP's experiences in insurance in the Pacific shows that while the Pacific region is small, there is strong interest and appetite for insurance, especially for climate risk insurance. This was evident in the deployment of the bundled insurance product that currently covers over  |



|  |  |  |
|--|--|--|
|  |  | 135,000 people in Fiji, launched in Vanuatu, and will soon be expanded to other PSIDS. |
|--|--|--|

### *Theory of Change*

To address the significant financing and protection gap that exists at the micro, meso and macro levels, the UNCDF and the UNDP, in partnership with UNU-EHS hosted MCII, have designed the Programme to address PSIDS vulnerability and lack of access to climate and disaster risk financing (CDRF). Equipping governments and communities with tailored CDRF strategies and solutions that will help them address the growing impacts of climate change, the Programme will build resilience via four workstreams:

- 1) Enabling Policy and Regulation: Increasing risk awareness and understanding, Preparing the enabling environment for the introduction of CDRF tools, including parametric (index based) insurance, and the creation of CDRF strategies;
- 2) Open Digital Payments Ecosystem: Using digital linkages for products and payment delivery;
- 3) Inclusive Innovation: Developing and deploying inclusive market-based insurance and blended financing instruments for the micro and meso levels using mobile and digital technologies; and
- 4) Empowered Customers: Educating individuals and consumers on the benefits of using insurance and other risk financing tools as part of a DRM strategy.

The overall objective is to improve the financial preparedness of Pacific governments and communities to deal effectively with disasters. Being financially prepared would result in faster post disaster recovery, rebuilding of livelihoods and improved levels of resilience. The table below summarises the theory of change.

**Figure 1: Theory of Change**

|                      |  |  |  |  |  |  |
|----------------------|--|--|--|--|--|--|
| Goal                 | Pacific households, communities, small businesses, organisations, and governments are financially better prepared for climate change and natural hazards.  |  |  |  |  |  |
| Sector Outcomes      | Inclusive markets conditions created for sustainable deployment of CDRF instruments and digital technologies.  |  |  |  |  |  |
|                      | Financial markets in the Pacific deploy inclusive CDRF products while leveraging digital technologies.   |  |  |  |  |  |
|                      | Insurance industry and other market players set global best practice benchmarks in CDRF.   |  |  |  |  |  |
| Customer* Outcomes   | Pacific households and small businesses are covered and have access and usage of CDRF instruments.<br>Special focus on: Women, Youth and MSME segments, and Agriculture, Fisheries, and Tourism sectors. |  |  |  |  |  |
|                      | Customers have improved knowledge and skills, to understand disaster risks and meaningfully access and use appropriate CDRF instruments and tools.   |  |  |  |  |  |
| Stakeholder Outcomes | Evidence based harmonised and coordinated approach to CDRF at micro, meso, and macro levels.   | Improved government preparedness to disasters.                                     | Enhanced enabling environment for deploying market-based CDRF instruments. | Individuals, communities, and MSMEs can respond and recover quicker with access to and usage of digital linkages and payments. | Individuals, communities, and MSMEs can respond and recover quicker with access to and usage of market based CDRF instruments. | Individuals and communities have better understanding of market-based CDRF instruments.<br>Improved awareness using digital tools and e-learning interfaces.                             |
| Outputs              | Enhanced understanding by governments and private sector of disasters and their financing needs.   | Enabling policies and regulations facilitate access and usage of CDRF instruments. | Governments have robust CDRF strategies.                                   | Digital linkages for product and payments delivery enabled.  | Inclusive and innovative market-based disaster risk instruments piloted and tested.  | Capabilities and capacities of partners for delivery of risk awareness, knowledge of insurance and other CDRF instruments to customers are enhanced, including the use of digital tools. |

|                      |   |   |  |  |
|----------------------|---|---|--|--|
| Activities           | <ul style="list-style-type: none"> <li>• Develop coverage maps</li> <li>• Workshops on coverage maps with Governments</li> <li>• Workshop with industry and stakeholders</li> <li>• CDRF instruments overview developed and presented to stakeholders</li> <li>• CDRF Strategies developed</li> <li>• Awareness workshop on CDRF strategies and enabling environment</li> <li>• Develop one Regional regulatory framework for market based CDRF instruments</li> </ul> <p><i>** TA, grants, and other blended financing as appropriate.</i></p> | <ul style="list-style-type: none"> <li>• Identify suitable FinTech/InsurTech providers including start-ups***, develop digital interfaces for client onboarding</li> <li>• Development and testing of digital payment solutions for premium by individuals, cooperatives and MSMEs</li> <li>• Establish digital linkage for last mile delivery of CDRF solutions, beneficiary payments</li> </ul> <p><i>TA, grants, and other blended financing as appropriate.</i></p> | <ul style="list-style-type: none"> <li>• Market based CDRF products developed for pilot testing set up in an innovation lab</li> <li>• Framework for social protection through macro to micro</li> </ul> <p><i>TA, grants, and other blended financing as appropriate.</i></p> | <ul style="list-style-type: none"> <li>• DRM and CDRF training for partners</li> <li>• DRM and CDRF product awareness material development</li> <li>• DRM and CDRF campaigns in communities and for MSME</li> <li>• All MEAL activities, including monitoring, midterm and final evaluation, impact evaluation and learning</li> <li>• Programme implementation management and support</li> <li>• Collaboration between Caribbean &amp; Pacific and within region</li> <li>• CRI Research Collaboration research, publishing, and conferences</li> </ul> <p><i>TA, grants, and other blended financing as appropriate.</i></p> |
| Ecosystem Activities | Research, Knowledge Sharing, South-South Co-operation, Public-Private Partnerships, Community of Practice, Donor Development Partner Coordination, Learning Events, Trainings and Workshops.  |   |  |  |
|                      | <b>Workstream 1</b><br>Enabling Policy and Regulation   | <b>Workstream 2</b><br>Open Digital Payments Ecosystem  | <b>Workstream 3</b><br>Inclusive Innovation  | <b>Workstream 4</b><br>Empowered Customers   |

\* Customers include individuals and MSMEs with specific focus on women, youth and vulnerable communities.

\*\* The Programme will use UNCDF financing instruments like grants, loans and guarantees. TA will be through UNCDF/UNU technical staff or hired consultants.

\*\*\* Start-ups are categorised under MSMEs.

### *Geographical coverage*

The UNCDF and the UNDP managed PFIP and the UNU-EHS hosted MCII completed two scoping and feasibility assessments in six Pacific countries - Fiji, Papua New Guinea, Samoa, the Solomon Islands, Tonga and Vanuatu. PFIP complemented these missions with individual consultations with the different stakeholders. This culminated in stakeholder workshops to present the objectives, logic, implementation plans, and workstreams. This Programme Document has been developed based on primary and secondary research. Data and other inputs have been obtained via meetings and interviews with key stakeholders including relevant government departments, private sector stakeholders, Central Banks, insurance regulators, financial service providers, mobile network operators, civil society organisations, non-governmental organisations (NGOs), other UN agencies, CROP agencies, farmer cooperatives, donors and development partners, and focus groups of selected customer segments.

The Programme aims to have a regional focus, covering Fiji, Samoa, Solomon Islands, Tonga, Vanuatu, and other PSIDS. Given the geographical size and varied terrain, a population of over 8.6 million (World Bank 2018), degree of cultural complexity, exposure to varied natural hazards, as well as other unique circumstances and challenges in Papua New Guinea (PNG), a separate climate disaster risk financing/insurance initiative as part of a larger proposal in parallel, along with other UN agencies who are already engaged in the DRM space is being developed. UNDP in PNG is planning to implement a disaster risk management (DRM) programme along with the International Organisation for Migration (IOM) and World Food Programme (WFP). Consultations have been held by UNCDF with all the above agencies to include programme activities into the DRM programme.

### *Phased approach*

The Programme aims to make market based parametric insurance and other CDRF instruments more widely available in the Pacific, to assist communities and governments to be better prepared to face disasters, both climate change induced and otherwise. Parametric insurance is still a new and developing topic within the insurance domain globally although recent deployments, backed by robust data and refined modelling, point to greater adaption and acceptance by international development banks and governments. Despite their awareness of the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI), Pacific countries are largely unfamiliar with the emerging range of global CDRF tools including parametric insurance. The Programme will therefore be implemented in a phased manner after familiarising the stakeholders with the new concepts, approaches and product types, and factoring the early stage of market development. It is proposed that the inception phase would be for **2 years** and focus on two countries- Fiji and Vanuatu.

The inception phase will allow the management team and Investment Committee (IC) to gain valuable insights, and provide inputs on the Theory of Change, the workstream outputs, activities and results measurement framework (RMF). The final Theory of Change and the RMF are expected to be firmed up at the end of the inception phase, considering that the solutions that are being developed are new to the market.

The project aims to use a cascading approach, where the activities that were conducted in the first year for the first two countries are subsequently carried out in a third country during the second year. This approach has the advantage of allowing the project to capture the lessons learnt at each stage of the project and transfer this acquired knowledge to the next country for a more efficient and effective implementation. The choice of the third country where interventions will commence in the second year will be decided according to: a) Government and/or Central Bank support, b) resource mobilisation, c) supply and demand side factors, d) vulnerability and e) partnerships.

The Programme is cognisant of the needs of all Pacific countries and will respond to their requests for support after conducting appropriate assessments and resource planning. Consequent to the COVID-19 pandemic, this updated and revised programme document has factored restrictions on travel, conduct of workshops and physical meetings. During the first two-year inception phase, the programme will focus only on implementation in Fiji and Vanuatu, primarily in Fiji as the core team is located here. The programme objective is also aligned with Covid-19 socio-economic and development responses of major donors and host countries as it aims to build resilience in communities and integrates use of digital tools. The updated budget also reflects this new reality, hence revised downward accordingly.

An overview of the specific outputs that will be achieved at the end of the inception phase is outlined in the **Results Framework** in Section V below. Based on the achievements during the inception phase and completion of a mid-term assessment, the Results Framework for the remaining period of the five-year programme will be developed. Detailed Results Measurement Framework for the Programme aligned to the Global UNCDF IDE Strategy and as relevant to this Programme is provided as Annexure 17.

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## III. RESULTS AND PARTNERSHIPS

### *Expected Results*

In order to design well-targeted and relevant CDRF approaches, it is crucial that the Programme undertakes risk appraisal and research. Before any solutions are proposed and developed, a thorough understanding of risks and vulnerabilities is critical. Building on existing extreme weather/natural hazards, vulnerability, and socio-economic research and data collected by national governments, the PCRAFI, World Bank, UN agencies,

NGOs, and others, and supplemented with primary research as necessary, the Programme will identify how disasters are affecting different sectors and segments of society located in specific geographic areas, with a particular focus on those populations whose livelihoods depend on agriculture, fisheries, tourism and retail activities.

At the **policy and regulatory** level, the Programme will use the data to create a coverage map outlining the varying degrees in which different areas are affected by natural hazards and identify which groups would require government assistance after extreme events and which groups and institutions could benefit from private sector support. This research is a crucial step in the development of disaster risk financing and climate risk insurance solutions, as the coverage map outlines the probability and severity of different natural hazards, the financial exposure of the various stakeholders, the self-insured retention level, as well as the possible maximum loss. Without this type of information, products are unlikely to meet the needs of the target population, reducing the likelihood of successful scale-up of CDRF solutions. Within these coverage maps, special attention will be given to adequately differentiate the needs of women, youth and Micro, Small, and Medium enterprises (MSMEs) who are more vulnerable to natural hazards. Once the research is complete, workshops with government and relevant stakeholders will be held to present the results of the risk assessment and socioeconomic analysis and validate the coverage map. At these workshops, priority sectors and geographic areas will be listed for discussion and stakeholder endorsement. These interventions will enhance governments' and private sector's understanding of disasters and the financing needs of different population segments, as well as help them identify which instruments would be most suitable.

The Programme will then support the development of customised country CDRF strategies, for this first identify and present a comprehensive overview of the various CDRF instruments available and deployed globally and their relevance and applicability to the Pacific and present this to the stakeholders. This will lay the foundation for the further development of country-specific strategies

The Programme will engage all relevant country stakeholders in consultations, conduct familiarisation workshops on potential CDRF instruments, discuss and identify the ones that are most suitable for the country context, and through the creation of a technical working group collaboratively develop a gender-inclusive CDRF strategy for the country. Once the country strategy has been developed, the Programme will conduct CDRF strategy training workshops for national and sub-national level government stakeholders including regulators, as well as insurance and financial services industry stakeholders.

Climate risk insurance and parametric products are relatively new, and many countries' regulations have not evolved to facilitate the development of these types of products. The Programme will therefore engage regional Central Banks and insurance regulators to collaboratively develop a common regional regulatory framework to allow market-based CDRF instruments to be deployed in different markets.

In addressing the existing policy and regulatory gaps, the Programme can help improve government preparedness to disasters and create an enabling environment for the deployment of market-based CDRF instruments. In order to allow individuals, communities, organisations and MSMEs to better prepare for and recover more quickly from disasters, the Programme will also support market-based product development and conduct pilot testing through **Inclusive Innovation**. In consultation with stakeholders, the Programme will use its coverage map to identify those groups most exposed and highly vulnerable to different forms of hazards, paying specific attention to the development of products that meet the varying needs of women, youth, other vulnerable groups and MSMEs. Through the socio-economic data that is available on the different groups, the Programme will create a priority list of groups that could benefit from and afford market-based financial solutions. The Programme will work with these groups to design products that will meet their needs while also creating an enabling environment for CDRF products, including insurance, by strengthening the capacity of insurers and distribution channels. The Programme will explore whether out-migrants (such as Pacific Islanders living in Australia, New Zealand, United States of America, Canada, United Kingdom etc.), who are often called upon to send remittances by disaster-affected family and friends, may be a possible client group for market-based products targeting their vulnerable family members and communities back home.

Because many Pacific Islanders live in remote areas, reaching out to these customers has historically been too costly for financial service providers and insurers. In recent years, however, there have been numerous innovations in the area of financial technologies, allowing insurers, and other financial service providers to reach and serve a greater number of customers. The Programme will work with the Pacific Digital Economy Programme, as part of UNCDF's global strategy, *Leaving No One Behind in the Digital Era* to create digital and interoperable payment solutions through **Open Digital Payments Ecosystem**.

In order to facilitate the efficient supply of post-event assistance to vulnerable individuals, households, and communities, through **Inclusive Innovation**, the Programme will work with stakeholders—as part of the CDRF strategy development process—to develop a macro-to-micro scheme and then train government officials on the proposed macro-to-micro plan. The Programme's work on product development through Inclusive Innovation will allow individuals, communities, organisations, and MSMEs to respond and recover quicker with the help of CDRF instruments as well as through digital linkages.

The Programme's work on **consumer empowerment** aims at ensuring that individuals and communities have a better understanding of, access to, and usage of market based CDRF instruments. It focuses on establishing a solid base for consumer empowerment by partnering with relevant CDRF and DRM organisations who already have extensive work experience in this area and who habitually work with cooperatives, communities, and individuals. The Programme will also use research (discussed above) as a baseline to ensure consumer empowerment activities are built on an understanding of target beneficiaries' current awareness and needs with regards to CDRF.

To support awareness, the Programme will produce relevant and targeted communication materials. It will train and educate insurers and distribution channel partners on the different CDRF products, including consumer protection aspects. Training events will include distribution channel partners in order to facilitate and ensure their understanding of the products, and to enable them to reach out to their customers. Furthermore, a marketing strategy for products will be jointly developed with the distribution channel partners. This will be further complemented by a lesson learnt document from previous campaigns, analysing the strategy, methods of implementation and impacts. The campaigns will be developed with DRM partners and structured with a view to effectively reach and empower the target groups.

Taken together these consumer empowerment activities, will provide individuals and communities with a better understanding of, access to, and usage of market based CDRF instruments. It will also improve their awareness of CDRF solutions through digital tools and e-learning interfaces.

### ***Resources Required to Achieve the Expected Results***

The Programme will achieve the expected results through the usage of a unique mix of key strategic instruments:

- Assessments and research
- Technical advisory
- De-risking financial instruments such as loans, guarantees, and grants
- Capacity building and training
- Implementation and Partnerships
- Education and Awareness Raising
- Data and Insights
- Customer Centricity
- Performance Measurement

These are further explained in **Annex 8**.

## *Partnerships*

Pacific Insurance and Climate Adaptation Programme will be jointly administered by the UNCDF, the UNDP and the UNU-EHS. The MCII is hosted by the UNU-EHS. The **governance and organisational structure** of the Programme is shown in Section VIII (Figure 2). UNCDF will be the convening and implementing agency, UNDP the administrative agency and UNU-EHS, through MCII, providing technical support in the various workstream activities. A high-level overview of the workstream activities that will involve MCII is provided below:

### Workstream 1 Outputs:

- Lead activities related to the research and development of Coverage map for targeted PSIDS.
- Co-organise, develop resource materials and conduct workshop with Pacific Governments and industry stakeholders.
- Development of CDRF Strategies.
- Development of a regional regulatory framework for market based CDRF instruments.
- Co-deliver awareness workshops in the Pacific on CDRF strategies and enabling environment.

### Workstream 2 Outputs:

- Identify suitable FinTech/InsurTech providers including start-ups and develop digital interfaces for client onboarding.
- Establish digital linkage for last mile delivery of CDRF solutions to individuals, cooperatives and MSMEs.
- Development and testing of digital solutions for premium collection and payment delivery for CDRF insurance instruments.

### Workstream 3 Outputs:

- Co-create and pilot test Market based CDRF products, including using digital channels.
- Assist in development of framework for social protection through macro to micro.

### Workstream 4 Outputs:

- Co-create CDRM and CDRF product awareness material development, conduct DRM and CDRF training for partners and deliver DRM and CDRF campaigns in communities and for MSMEs.

Strategic partnerships will be established as required with other UN agencies, CROP<sup>13</sup> agencies and development partners such as International Finance Corporation (IFC)/World Bank during the implementation of the programme. Consultations and discussions have been held with UN agencies such as the Food and Agriculture Organisation (FAO), International Fund for Agricultural Development (IFAD), WFP, United Nations Entity for Gender Equality and the Empowerment of Women (UN Women), United Nations Office for Disaster Risk Reduction (UNDRR), United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), and IOM as well as agencies such as the Pacific Community (SPC), Secretariat of the Pacific Regional Environment Programme (SPREP), Pacific Islands Development Forum (PIDF), University of the South Pacific (USP), World Resources Institute (WRI) and Pacific Islands Forum Secretariat (PIFS) who have expressed interest in partnering on one or more of the workstream activities and forging more alliances as the implementation progresses. Several rounds of consultations with the private sector including insurance and digital financial service providers have been completed in all the six countries scoped. There is a recognition that the introduction of CDRF solutions could greatly help in complementing existing DRR efforts by giving communities, organisations and individuals the extra level of support needed after a disaster to quickly respond and contain damages. To ensure the sustainability of any CDRF products that are developed, the Programme will work in close cooperation with the private sector and target groups to make sure that their needs and requirements are met.

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<sup>13</sup> (2018). *Council of Regional Organizations of the Pacific*, <https://www.forumsec.org/council-of-regional-organisations-of-the-pacific/>



The Programme has been engaging with PCRIC during the consultation process and will continue the discussions to explore areas for mutual collaboration. A technical advisory committee is proposed to be setup and all relevant and interested agencies and organisations including PCRIC will be extended invitations to join.

The Programme, being a joint initiative of UNCDF, UNDP and UNU, provides the right blend of relevant expertise and experience that is required to address the market gaps and challenges in climate and CDRF in the Pacific. It represents a unique combination of parties that can deliver the objectives. The various experiences and expertise are listed hereafter.

#### UNCDF

UNCDF, through its global strategy, Leaving No One Behind in the Digital Era, is focused on assisting millions of people to use innovative digital services in their daily lives to achieve the SDGs. UNCDF, through PFIP, has been at the forefront of increasing access to and usage of appropriate and affordable mass market financial products and services in the Pacific for over a decade, engaging with financial services providers in developing, piloting and scaling innovative products and services like mobile and branchless banking, remittances, microinsurance, micro pensions, savings and credit. Use of digital technologies has facilitated overcoming the region's geographical and operational challenges and has resulted in over two million Pacific Islanders gaining access to formal financial services. Through its work with the regional Central Banks, PFIP has also placed financial inclusion at the forefront of policy making. These strong relationships with the regulators and private sector actors will be leveraged during implementation. They will also be instrumental in creating an enabling environment and ecosystem for market-based climate risk insurance and CDRF instruments.

#### UNU - EHS

The UNU is the academic arm of the United Nations and acts as a global think tank. The mission of the UNU-EHS is to carry out cutting edge research on risks and adaptation related to environmental hazards and global change. The institute's research promotes policies and programmes to reduce these risks, while considering the interplay between environmental and societal factors.

Research areas include climate change adaptation incorporating insurance-related approaches, environmentally induced migration and social vulnerability, ecosystem services and environmental deterioration processes, models and tools to analyse vulnerability and risks linked to natural hazards, with a focus on urban space and rural-urban interfaces. Research is always conducted with the underlying goal of connecting solutions to development pathways.

#### MCII

MCII was initiated as a charitable organisation by representatives of insurers, research institutes, and NGOs in April 2005 in response to the growing realisation that insurance solutions can play a role in adaptation to climate change, as suggested in the Framework Convention (United Nations Framework Convention on Climate Change) and the Kyoto Protocol. This initiative is hosted at UNU-EHS. The Initiative's purpose is to promote the requisite framework of public-private protection and insurance solutions for people worldwide affected by extreme weather, climate reinsurers, local insurers, distribution channels, government agencies, local NGOs and Civil Service Organisations to facilitate the dialogue on employing climate risk insurance products in programme countries. These instruments allow the public and private sectors to enhance countries' resilience and close the protection gap of vulnerable groups.

MCII, is particularly qualified in the area of CDRF instruments as it has over five years of experience implementing market-based climate risk insurance across countries in the Caribbean. MCII, together with their project partners of CCRIF SPC, International Labour Organisation's Impact Insurance Facility, Danish Hydraulic Institute, and Munich Re, implemented the Climate Risk Adaptation and Insurance in the Caribbean (CRAIC)

project, which introduced the first parametric microinsurance product in Jamaica, Saint Lucia, and Grenada, giving individuals the first opportunity to protect themselves with market-based CDRF instruments offered by the private sector. As most individuals did not qualify for traditional insurance protection and no agricultural insurance products were available in the market, this was an important first step in equipping communities with the risk transfer tools needed to respond in a quicker manner in the aftermath of extreme weather events like hurricanes.

## UNDP

UNDP has a robust resilience and sustainable development programme portfolio that includes several disaster risk resilience projects covering all PSIDS. The initial scoping and feasibility phase covering six countries was supported by the Disaster Resilience for Pacific Small Islands Developing States (RESPAC)<sup>14</sup> project that led to the development of the Programme. UNDP's presence, government relationships, and networks in all the PSIDS will be leveraged by the Programme throughout its implementation and expansion. Further, it is proposed to collaboratively work with the RESPAC project to leverage their work on developing climate early warning systems, DRM, and post disaster early recovery financing.

### *Risks and Assumptions*

#### *L- Low M-Medium and H-High*

| No | Risk Identified and description  | Probability or Likelihood | Impact | Mitigation  |
|----|--|---------------------------|--------|---|
| 1  | A global pandemic resulting in lockdown, economic downturn, work disruptions, travel restrictions etc. | L                         | H      | A pandemic is an uncommon event (maybe 1 in 100 or more years), however it has devastating impact on lives, livelihoods as well as socio-economic implications that are far-reaching. It is expected that post Covid-19, risk mitigation strategies to respond to such pandemics will be developed globally. Strict adherence to guidelines issued by the various Governments will be followed in the countries of operations. Business continuity plans will be tweaked to include such events. A pandemic situation also leads to changes in donor priorities that severely impact project implementation. Besides most economic sectors are affected, the capacity of beneficiaries to continue to participate in insurance schemes is impacted. |
| 2  | Other parametric insurance or CDRF initiatives   | M                         | M      | Notwithstanding launch of the Programme and deployment of relevant products, if other development partners come up with competing parametric insurance or CDRF initiatives, market size is too small for multiple initiatives. The Programme has the advantage of first to market with parametric insurance at micro and meso levels, and will continuously engage with donors and other development partners to ensure there is no overlap. Revival of the Pacific Access to finance donor group will be taken up to ensure coordination.  |
| 3  | Implementation Support from Pacific  | L                         | M      | Pacific governments recognise the need for parametric insurance and other CDRF solutions, given the important vulnerabilities of the region to natural hazards. Innovative solutions have been an ongoing request to development  |

<sup>14</sup> UNDP (2018). *Disaster Resilience for Pacific Small Island Developing States (RESPAC) Project*, <https://www.pacific.undp.org/content/pacific/en/home/operations/projects/resilience-sustainable-development/respac-project.html>

|   |   |   |   |  |
|---|---|---|---|--|
|   | governments is delayed  |   |   | partners through forums like Forum Economic Ministers Meeting (FEMM), Pacific Leaders meetings, as well as at the United Nations General Assembly. The Programme, with its interventions targeted at the macro, meso, and micro levels ideally responds to this market gap. Consultations have already been held with government and there is a keen interest to support the Programme. Support from Regional Central Banks and some Governments have already been received.   |
| 4 | Limited technical knowledge and capacity of regulators/governments on parametric insurance and other CDRF tools | H | M | Under the Policy and Regulation workstream, it is proposed to address this issue through robust engagement and capacity building of government staff and regulators, with a view to creating an enabling environment for deployment of appropriate tools and instruments. The work of other development partners in this area also serves as a mitigation.   |
| 5 | Limited private sector support or buy-in for implementation partnerships  | M | M | While private sector appetite is considered low, the Programme will continuously engage with providers to build their capacity. Also, de-risking financial instruments like grants, loans, and guarantees, besides technical advice will be provided to support innovation. MCII will facilitate communication with the necessary reinsurers.  |
| 6 | Low levels of insurance awareness   | H | M | Low levels of financial literacy and insurance awareness among Pacific Islands was identified through the PFIP supported financial competency and financial services demand side surveys. PFIP has been working with Regional Central Banks and industry stakeholders to conduct insurance awareness campaigns; this is proposed to be continued with additional inputs on risk awareness and CDRF tools. MCII also has experience in training individuals on climate risk management, DRR, and linkages to insurance. |
| 7 | Poor market response to parametric insurance and other CDRF instruments   | M | M | Globally parametric insurance has either been government or donor driven or supported. Developing/deploying market-based solutions is bound to be challenging, however, it is proposed to address this challenge through a combination of community engagement, co-creation of solutions for acceptance and sustainability, persistent awareness campaigns, innovative financing options, use of digital linkages for cost efficiency as well as concentration on meso level players for market outreach.              |
| 8 | Sustainability of market interventions and projects   | H | M | PFIP has demonstrated strong acceptance from some private sector partners for carrying on with innovation under the learn, test, and scale approach. The Programme recognises and proposes to invest in capacity building and training of its private sector partners so that they can adapt, develop appropriate solutions and continue market development. Proper due diligence of   |

|   |  |   |   |  |
|---|--|---|---|--|
|   |  |   |   | projects, partner selection, capacity building of partners and customers, and ecosystem approaches to solutions will all be integrated into the proposals developed.   |
| 9 | Technical capacity and implementation experience of the Programme team | L | L | UNCDF and UNDP has relevant Pacific wide experience, robust partnerships in several countries, in-house technical expertise, and implementation experience. MCII (UNU-EHS) has several years of relevant research experience in climate risk insurance, over 5 years of implementing parametric insurance in the Caribbean besides being a repository of high-level expertise. Besides the Programme will leverage on the technical expertise of UNCDF specialists both within and outside the region especially in the areas of policy & regulation, digital payments, agency channels, microinsurance etc. |

### ***Building on lessons learned***

The outcomes, and consequently the activities planned under the Programme are built on lessons learned from the PFIP. The end of programme evaluation of PFIP II highlights the relevance of the programme's successful micro insurance activities. One of the key recommendations of the evaluation report reads as:

*“Domains such as energy financing, climate resilience financing should be enabled within the PFIP management to align with needs of the PIC context, bring in more professional rigor and accountability for the results realized through such project commissions both from the PFIP and the partner management perspective”*

As a response to the recommendation, the Programme has been developed to address the following: (1) Increasing resilience through integrated DRM, (2) Establishing National CDRF strategies, (3) Insuring individuals, communities and governments, and (4) Developing market-based parametric insurance and other CDRF solutions for meso and micro clients.

The microinsurance portfolio of PFIP will be integrated within the Pacific Insurance and Climate Adaptation Programme to optimise on the gains already made, partnerships established, and build on the lessons learned. All insurance related interventions of UNCDF in the Pacific will be absorbed and delivered by this new initiative.

### ***Stakeholder Engagement***

Whilst the programme aims to broadly improve individuals' and communities' ability to bounce back after a disaster, the Programme will specifically target those beneficiary segments that are most adversely affected by disasters and more vulnerable during the post disaster phase. These are: women, youth, MSMEs, vulnerable social protection recipients.

#### Women

The Post-Disaster Needs Assessment (PDNA) reports indicate that women are disproportionately affected, disadvantaged and, along with men, face the onerous task of rebuilding their homes, helping their families, and providing some financial support. Government and other agencies do not provide targeted support to women specifically post disaster, and this further leads to their marginalisation. Working with relevant ministries, the Programme will identify the specific and unique risk perceptions and needs of women, and develop tailor-made insurance and other CDRF solutions, that are more suitable and more accessible to women. Meso level aggregation of data, through women groups (for example savings clubs, and women's

church groups), and establishing partnerships with UN Women and other agencies targeting women will be trialled to better address this target group's needs.

### Youth

Across the PSIDS, youth are more vulnerable to hazards due to the lack of employment opportunities that precludes many from building up a financial cushion or otherwise access tools that could increase their resilience (better skills, education, and formal employment). Employment opportunities of young people are especially sensitive to economic cycles. Youths are generally the first to lose their jobs in times of economic contraction and the last to gain employment when the economy rebounds.<sup>15</sup> Furthermore, education needs further prioritisation in a disaster response.

The Programme will work with youth-based organisations and development agencies to build greater understanding of the broad-based challenges that youth face during disasters. We will help to develop innovative and comprehensive approaches that will factor into national CDRF and DRM strategies. The Programme will also engage youth-based organisations and leverage their capacities and networks to bring about meaningful change in social behaviour and attitudes in Pacific communities, to build disaster awareness thus attenuating the risks and impacts of disasters.

### MSMEs

Among PSIDS, MSMEs are a significant contributor to the Gross Domestic Product (GDP) and a significant driver of the labour market. In Fiji, the MSME segment contributes 18% to GDP<sup>16</sup> and roughly 60% to labour market<sup>17</sup>. There is strong evidence that underpins the importance of MSMEs in PSIDS, especially for women and the informal sector. Any direct or indirect impact of disasters can be devastating to MSMEs and to their financial viability and continuity. Catastrophic events have had a significant impact on MSMEs in PSIDS during recent years. MSMEs can be considered as highly vulnerable segments of Pacific economies and they are relatively resource constrained and less resilient.

The Programme will build entrepreneurial resilience by working with MSMEs in the Pacific to identify their specific disaster challenges and tailor make CDRF solutions that meet their needs. The Programme will develop MSME resilience through a collaborative partnership with the private sector, NGOs and national governments to tackle the socio-economic drivers of risk at the pre-disaster stage, and further build up the provision of swift and adequate support to MSMEs shortly after disasters strike.

### Vulnerable groups and social protection recipients

The Programme will investigate how governments can best protect the most vulnerable individuals and groups, including people living with disabilities and vulnerable migrant populations, that do not have their own resources or access to funding after disasters, and who are often the hardest hit after these events occur. This will be further supported through the framework on "macro to micro" scheme. "Macro to micro" refers to the practice of governments investing in CDRF instruments that would pay out directly to individual beneficiaries. One way for governments to implement this scheme, is through adaptive social protection schemes in which those who are part of such schemes would receive extra financial support after a disaster.

<sup>15</sup> Government of Vanuatu (March 2015). *Post-Disaster Needs Assessment*, [https://cop23.com.fj/wp-content/uploads/2017/06/vanuatu\\_pdna\\_cyclone\\_pam\\_2015.pdf](https://cop23.com.fj/wp-content/uploads/2017/06/vanuatu_pdna_cyclone_pam_2015.pdf)

<sup>16</sup> MicroSave (July, 2018). *In-depth Assessment of MSME Landscape in Fiji*.

<sup>17</sup> Reserve Bank of Fiji (28 May 2018). "Welcome Remarks by the Reserve Bank of Fiji Governor and Chairman of the National Financial Inclusion Taskforce", [https://www.rbf.gov.fj/getattachment/64c8a5e7-227f-4932-abfd-1f43bb2dc5b2/National-Microfinance-Award-Address-by-Governor\\_28](https://www.rbf.gov.fj/getattachment/64c8a5e7-227f-4932-abfd-1f43bb2dc5b2/National-Microfinance-Award-Address-by-Governor_28)

Alternatively, government could also work to register those individuals who are not part of the social protection scheme but would suffer greatly from a specific disaster (as determined by the coverage map).

A detailed assessment of the contribution of these sectors and segments to GDP in the respective countries as well as the economic losses suffered as a result of disasters is covered in **Annex 10** and **Annex 11**.

### ***South-South and Triangular Cooperation<sup>18</sup>***

The introduction of CDRF instruments into new markets needs a considerable amount of knowledge. It requires extensive market research, a revised regulatory framework, and new product development. Small island states are particularly difficult to understand and service from a parametric insurance standpoint, as most insurance companies are often reluctant to work in these markets due to their small market size and perceived lack of commercial viability. Fortunately, the MCII is experienced in researching and implementing projects that focus on climate risk insurance, CDRF, climate change adaptation, and resilience building. Specifically, MCII has already developed and implemented parametric microinsurance solutions for small island states through its CRAIC project.

#### The CRAIC project (UNU-EHS)

The CRAIC project assists Caribbean countries in their efforts to increase social and economic resilience and to adapt to climate change by incorporating climate risk insurance within a broader framework of DRR strategies. The project developed and refined index-based insurance products such as the Livelihood Protection Policy. MCII plans to bring its unique expertise in creating and introducing parametric insurance solutions to small island states in the Pacific. CRAIC will continue to produce knowledge management products that will be shared with the international community, and the Programme can benefit from these. This South-South Cooperation will be strengthened through joint research on the topics of resilience building in small island states, via the SIDS Research Cooperation. Besides, the Programme will engage with CRAIC and share lessons learnt.

#### Climate Risk Insurance Research Cooperation (CRIRC)

The Programme is working with research partners at the University of the South Pacific (USP), the University of the West Indies (UWI), UNU-EHS to create a research cooperation arrangement focusing on vulnerability, DRM, and CDRF solutions for SIDS. This cooperation will produce high quality, peer-reviewed research, as well as more action-oriented policy briefs and reports. The consortium will identify research questions and agree research approaches during the first phase of implementation, building on the analyses undertaken (and knowledge gaps identified) by the programme. A letter of Intent outlining the specific roles of each partner in the cooperation arrangement has been signed.

### ***Knowledge Management***

The Programme is committed to communicating findings from research and analyses widely, ensuring all stakeholders have access to programme knowledge and learning. The Programme will communicate programme results and information gleaned from underlying assessments to target communities and groups (clients and potential clients), vulnerable communities including those targeted by “macro to micro” schemes, and to all relevant ministries within partner governments. In order to ensure broader learning, information will also be shared (as appropriate) with other governments and stakeholders in the region, taking advantage of regional platforms and conferences.

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<sup>18</sup> <https://www.unsouthsouth.org/about/about-sstc/>



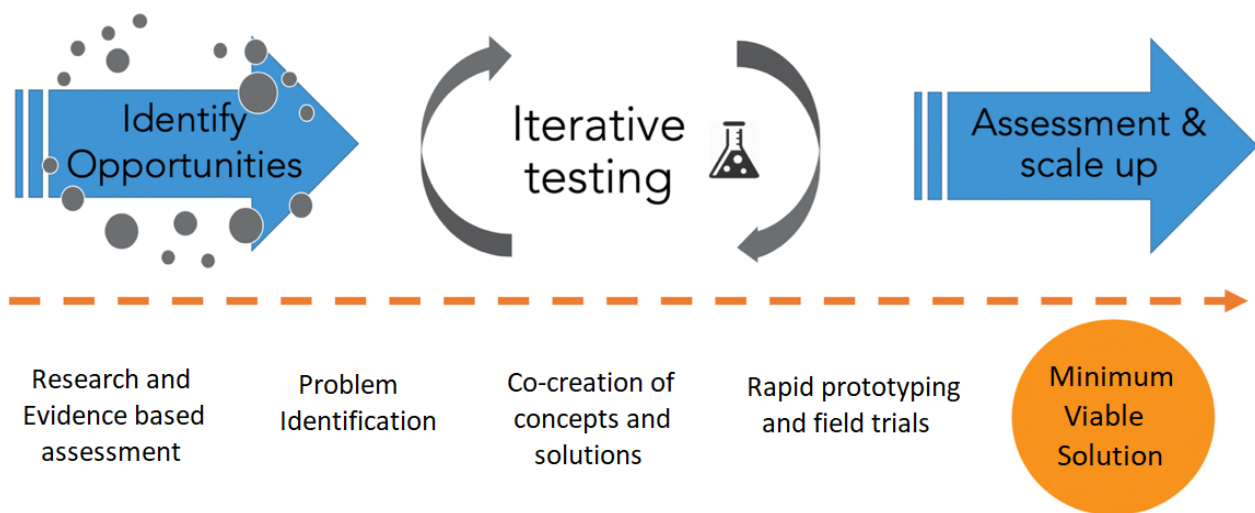
The Programme will foster internal knowledge sharing so that learnings from project implementations (successes, challenges and failures) are used for suitably modifying the approach to new projects both within the country and the region.

To ensure wider dissemination of knowledge, it is proposed to publish policy briefs and learnings directly on the programme website. Throughout the programme, the team will continue to participate in regional and global conferences to share information, knowledge, and lessons generated by the programme. These conferences will also allow stakeholders to learn from programmes and initiatives outside of the region and bring that learning back to the Pacific.

*Sustainability and Scaling Up*

In collaboration with government and private sector stakeholders the programme designs activities in such a way that successful market-based products are scaled. Using the experience of PFIP, each of the programme work streams will be implemented through specific activities with the clear intention to scale uptake and usage of relevant CDRF instruments to bring about the intended outcome of increased financial preparedness of Pacific households, communities, small businesses, organisations, and governments to disasters.

**Figure 1: Ideation and Scaling Approach**



The Programme will do this by following a standard implementation approach from ideation to scaling as depicted above. A pilot means the test of products and services within certain conditions (geography and market segment) on a smaller scale to determine the success factors for a larger scale roll-out. Once pilot milestones are met, scaling follows.

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**IV. PROJECT MANAGEMENT**

*Cost Efficiency and Effectiveness*

The Theory of Change aims at addressing market constraints, gaps, and challenges by targeting various stakeholders within the ecosystem at the same time. By stacking interventions that are interlinked, the programme expects to deliver the maximum results with the available resources. This approach builds on lessons learned from PFIP.

Furthermore, in order to ensure cost efficiency and value for investments, pilot projects are always set up with a cost sharing modality with the implementing partner. This also increases the ownership of the project, crucial for the success of the pilot, and further safeguards the efficient and effective roll-out of projects. The establishment of a project steering committee allows all partners to continuously monitor the project performance, guaranteeing that the project stays on course.

The programme will also aim to deploy new blended finance instruments (e.g. loans and guarantees) to de-risk opportunities that would otherwise go unfunded and enable the market to transition towards a more inclusive one that effectively addresses the needs of un- or under-served populations. While UNCDF will only take on risks that commercial or development financial institutions are not willing to absorb, these instruments will allow for more efficient use of resources as they can be reinvested in other projects once repaid, ensuring maximum results with the available resources.

## V. RESULTS FRAMEWORK<sup>19</sup>

### Intended Outcome as stated in the United Nations Pacific Strategy:

UNPS Outcome 1: By 2022, people and ecosystems in the Pacific are more resilient to the impacts of climate change, climate variability, and disasters; and environmental protection is strengthened.

SRPD Output 1.2: Effective risk informed development plans, disaster preparedness and recovery mechanisms in place at the national sector and sub-national levels.

UNPS Outcome 3: By 2022, people in the Pacific, in particular youth, women, and vulnerable groups, benefit from inclusive and sustainable economic development that creates decent jobs, reduces multi-dimensional poverty and inequalities, and promotes economic empowerment.

SRPD Output 3.2: Green/Blue economic policies in place to support private sector initiative that create sustainable and environmentally friendly jobs and entrepreneurial opportunities for women and youth.

### Outcome indicators as stated in the United Nations Pacific Strategy Results and Resources Framework, including baseline and targets:

Outcome Indicator 1.1: Number of PICs whose direct disaster economic loss in relation to regional GDP, including damaged to critical infrastructure and disruption of basic services has reduced based on the latest available data.

SRPD Output Indicator 1.2.2: Number of countries with formalised recovery preparedness mechanisms in place.

Outcome Indicator 3.2: Number of PICs in which the percentage of the population with access to formal financial services has increased based on the latest available data.

SRPD Output Indicator 3.2.1: Number of countries with policy, systems or institutional measures in place at the national and sub-national levels to generate and strengthened employment and livelihood.

### Applicable Outcome from UNCDF SF:

Outcome 1: Enhanced inclusive financial markets and local development finance systems that benefit poor and vulnerable populations

Outcome 2: Unlock public and private finance for the poor

### Applicable Output(s) from the UNDP Strategic Plan:

Output 2.3.1.1: Country has data informed development and investment plans that incorporate integrated solutions to reduce disaster risks and enable climate change adaptation and mitigation.

<sup>19</sup> UNDP publishes its project information (indicators, baselines, targets, and results) to meet the International Aid Transparency Initiative (IATI) standards. Make sure that indicators are S.M.A.R.T. (Specific, Measurable, Attainable, Relevant, and Time-bound), provide accurate baselines and targets underpinned by reliable evidence and data, and avoid acronyms so that external audience clearly understand the results of the project.

| Project title and Atlas Project Number: <b>TBC</b>  |   |  |          |      |   |        |        |        |        |       |   |
|---|---|--|----------|------|---|--------|--------|--------|--------|-------|---|
| EXPECTED OUTPUTS  | OUTPUT INDICATORS   | DATA SOURCE  | BASELINE |      | TARGETS (by frequency of data collection) |        |        |        |        |       | DATA COLLECTION METHODS & RISKS   |
|   |   |  | Value    | Year | Year 1                                    | Year 2 | Year 3 | Year 4 | Year 5 | FINAL |   |
| <b>Output 1</b><br>Enabling policies and regulations facilitate access and usage of CDRF instruments, including robust CDRF strategies by Government. | 1.1 Number of countries that have identified CDRF baselines and gaps to inform CDRF strategies.   | Programme unpublished document                       | 0        | 2019 | 1   | 1      |        | -      | -      |       | Programme documentation. Risks include disasters delaying assessments.                  |
|   | 1.2 Extent of PSIDS CDRF Instrument Overview established.<br><i>Scores</i><br>1) <i>No PSIDS CDRF established</i><br>2) <i>Partial PSIDS CDRF established</i><br>3) <i>PSIDS CDRF established</i> | Programme published document                         | 0        | 2019 | 2   | 3      |        | -      | -      |       | Programme documentation. Low risk.  |
|   | 1.3 Number of individuals (disaggregated by gender and country) representing governments and private sectors that have improved knowledge on CDRF.  | Programme workshop evaluations and CDRF action plans | 0        | 2019 | 100                                       | 50     |        | -      | -      |       | Programme documentation. Disasters and government schedules could delay implementation. |
|   | 1.4 Number of PSIDS with established regulatory frameworks supporting an enabling environment for deploying market-based instruments. (One for the region)  | Programme workshop invitations                       | 0        | 2019 |   | 1      |        | -      | -      |       | Programme documentation. Low risk.  |
| <b>Output 2</b><br>Digital linkages for products and payments delivery enabled.   | 2.1 Number of new digital services and business models piloted.   | Programme reports                                    | 0        | 2019 | 1   | 1      | -      | -      | -      |       | Programme documentation. Low risk.  |
|   | 2.2 Number of partners showing increased commitment in piloting digital linkages for products and payment delivery.   | Programme reports                                    | 0        | 2019 | 1   | 2      | -      | -      | -      |       | Programme documentation. Low risk.  |
|   | 2.3 Number of insurers/financial institutions that integrate digital services in their operations.  | Programme reports                                    | 0        | 2019 | 1   | 1      | -      | -      | -      |       | Programme documentation. Low risk   |
| <b>Output 3</b><br>Individuals, communities, and MSMEs respond  | 3.1 Number of market-based CDRF products developed and piloted in PSIDS (disaggregated by country)  | Insurance market                                     | 0        | 2019 | 1   | 1      |        |        |        |       | Programme documentation.<br>Risks include the private sector not being willing and      |

|  |  |   |   |      |    |      |  |  |   |   |
|--|--|---|---|------|----|------|--|--|---|---|
| and recover more quickly from disasters with the support of CDRF instruments.  |  |   |   |      |    |      |  |  |   | engaged and possible delays.  |
|  | 3.2 Number of partners showing commitment to pilot market-based CDRF solutions.  | Programme   | 0 | 2019 | 1  | 1    |  |  |   | Programme documentation.  |
|  | 3.3 Number of beneficiaries covered by CDRF market-based products disaggregated by gender.   | Programme   | 0 | 2019 | -  | 2000 |  |  |   | Programme documentation.  |
|  | 3.3.1 Percentage of beneficiaries actively using CDRF solutions disaggregated by gender.   | Programme   | 0 | 2019 | -  | 50%  |  |  |   | Programme documentation.  |
|  | 3.4 Number of government officials with an improved understanding on country based macro-to-micro plans disaggregated by gender and country.   | Programme training invitations                    | 0 | 2019 | -  | 20   |  |  | - | Programme documentation.<br>Risks include possible governmental delays.                                 |
| <b>Output 4</b><br>Individuals and communities have a better understanding of, accessibility, and usage of market based CDRF instruments | 4.1 Number of established partnerships on market-based CDRF instrument trainings, awareness and community-based promotions.  | Programme training invitations                    | 0 | 2019 | -  | 2    |  |  | - | Programme documentation.<br>Risks include lack of interest from partners.                               |
|  | 4.2 Number of market-based CDRF trainings and awareness for partners, disaggregated by gender.   | Programme training invitations                    | 0 | 2019 | 5  | 10   |  |  | - | Programme documentation.<br>Risks include lack of interest from partners.                               |
|  | 4.3 Number of participants for market-based CDRF trainings and awareness, disaggregated by gender.   | Programme training invitations                    | 0 | 2019 | 75 | 150  |  |  |   | Programme documentation.<br>Risks include lack of interest from partners.                               |
| <b>Output 5</b><br><br>Programme learnings and knowledge are shared across regional and global networks                                  | 5.1 Extent of implemented market-based communications action plan.<br><br><b>Scores</b><br>1) <i>No PSIDS market-based communications action plan implemented</i><br>2) <i>Partial PSIDS market-based communications action plan implemented</i> | Programme market-based communications action plan | 0 | 2019 | -  | 3    |  |  | - | Programme documentation.<br>Risk include possible delays from multi-stakeholder engagements - low risk. |

|  |  |                                       |   |      |   |   |  |  |  |  |  |
|--|--|---------------------------------------|---|------|---|---|--|--|--|--|--|
|  | 3) <i>PSIDS</i> market-based communications action plan implemented  |                                       |   |      |   |   |  |  |  |  |  |
|  | 5.2 Number of partner individuals participating in South-South exchanges, disaggregated by gender and location.      | Programme exchange participant roster | 0 | 2019 | 5 | 5 |  |  |  |  | Programme documentation.<br>Risks include capacity constraints and lack of partner engagement.       |
|  | 5.3 Number of shared research findings and learnings under CRIRC.  | Programme                             | 0 | 2019 | 1 | 1 |  |  |  |  | Programme documentation.<br>Risk include lack of resources.  |
|  | 5.4 Number of Impact assessments completed, published and shared. (Including gender and social inclusion assessment) | Programme                             | 0 | 2019 | - | 1 |  |  |  |  | Programme documentation. Risk includes non-occurrence of an event that triggers beneficiary payment. |



## VI. MONITORING AND EVALUATION

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans: *[Note: monitoring and evaluation plans should be adapted to project context, as needed]*. The Programme will use the Results Measurement Framework developed by UNCDF Inclusive Digital Economy Strategy suitably modified to suit the Programme context (refer to Annexure 17 – Programme RMF)

### Monitoring Plan

| Monitoring Activity              | Purpose   | Frequency  | Expected Action   | Partners (if joint)             | Cost (if any) USD                         |
|----------------------------------|---|--|---|---------------------------------|---|
| Track Results Progress           | Progress data against the results indicators in the RRF will be collected and analysed to assess the progress of the project in achieving the agreed outputs.   | Quarterly, from data collected by implementing partners. | Slower than expected progress will be addressed by the project steering committee and the project management.   | Implementing partners and UNCDF | Refer to Section VII: Multi Year Workplan |
| Monitor and Manage Risk          | Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. This includes monitoring measures and plans that may have been required as per UNDP's Social and Environmental Standards. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk. | Quarterly  | Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken. | UNCDF                           | Refer to Section VII: Multi Year Workplan |
| Learn                            | Knowledge, good practices, and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the programme.   | Continuously   | Relevant lessons are captured by the programme team and used to inform management decisions.  | UNCDF                           | Refer to Section VII: Multi Year Workplan |
| Impact Assessment                | Identify to what extent the programme has changed the lives of the intended beneficiaries   | Continuously   | Measuring the impact of specific programme interventions and use the lessons to inform design of future interventions   | UNCDF                           | Refer to Section VII: Multi Year Workplan |
| Annual Project Quality Assurance | The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to  | Bi-annually  | Areas of strength and weakness will be reviewed by project management and used to inform  | UNCDF                           |   |

|                                    |  |  |  |       |  |
|------------------------------------|--|--|--|-------|--|
|                                    | inform management decision making to improve the project.  |  | decisions to improve project performance.  |       |  |
| Review and Make Course Corrections | Internal review of data and evidence from all monitoring actions to inform decision making.  | Quarterly, led by project steering committee meetings  | Performance data, risks, lessons, and quality will be discussed by the project board and used to make course corrections.                                      | UNCDF |  |
| Project Report                     | A progress report will be presented to the Steering Committee and key stakeholders, consisting of progress data showing the results achieved against pre-defined project targets at the output level, the annual project quality rating summary, an updated risk long with mitigation measures, and any assessment/evaluation or review reports prepared over the period.  | Annually, and at the end of the project (final report) |  | UNCDF |  |
| Project Review (Project Board)     | The project's governance mechanism (i.e., project board) will hold regular project reviews to assess the performance of the project and review the Multi-Year Work Plan to ensure realistic budgeting over the life of the project. In the project's final year, the Project Board shall hold an end-of project review to capture lessons learned and discuss opportunities for scaling up and to socialise project results and lessons learned with relevant audiences. | Specify frequency (i.e., at least annually)            | Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to address the issues identified. | UNCDF |  |

## Evaluation Plan<sup>20</sup>

Joint evaluation frameworks will be developed to suit the needs of all the programme donors. The programme will have a mid-term review of the programme (target date Q3, 2022), as well as a final evaluation (target date Q1, 2025). The evaluation will be forward looking, offering lessons learnt and recommendations to improve future programme performance. It is also proposed that during the project implementation, impact assessments targeting the beneficiaries will be carried out periodically. Due to

<sup>20</sup> Optional, if needed

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the present COVID-19 situation, the mid-term assessment will serve to provide future direction to the programme. An option to conduct an external mid-term evaluation will also be considered by the Programme Board. Budgets for these activities have been incorporated in the Multi Year Workplan.

## VII. MULTI-YEAR WORK PLAN

| Expected Outputs   | Planned Activities  |                      |                        |                        |                        |                        | Responsible party | Budget description   | Total budget           |
|--|---|----------------------|------------------------|------------------------|------------------------|------------------------|-------------------|--|------------------------|
|  |   | 2020-2021            | 2021-2022              | 2022-2023              | 2023-2024              | 2024-2025              |                   |  |                        |
| Enhanced understanding by governments and private sector of disasters and their financing needs.   | Coverage map  | \$ 524,880.00        | \$ 330,484.00          | \$ 536,368.20          | \$ 142,546.61          | \$ 149,033.94          | UNU               | Coverage map, technical support cost, consultants                                      | \$ 1,683,312.75        |
|  |   | \$ 109,369.93        | \$ 109,369.93          | \$ 109,369.93          | \$ 109,369.93          | \$ 109,369.93          | UNCDF             |  | \$ 546,849.67          |
|  | Workshop with Governments   | \$ 89,369.93         | \$ 109,369.93          | \$ 139,369.93          | \$ 139,369.93          | \$ 139,369.93          | UNCDF             | Workshop and travel  | \$ 616,849.67          |
|  | Workshop with industry and stakeholders   | \$ 109,369.93        | \$ 109,369.93          | \$ 139,369.93          | \$ 139,369.93          | \$ 139,369.93          | UNCDF             | Workshop and travel  | \$ 636,849.67          |
|  | <b>Sub-total</b>  | <b>\$ 832,989.80</b> | <b>\$ 658,593.80</b>   | <b>\$ 924,478.00</b>   | <b>\$ 530,656.41</b>   | <b>\$ 537,143.74</b>   |                   |  | <b>\$ 3,483,861.75</b> |
| Improved Government's disaster responsiveness financial policies creating an enabling environment for deploying market-based instruments.  | CDRF instruments overview developed and presented to stakeholders                                       | \$ 36,440.00         | \$ 87,942.00           | \$ 39,519.10           | \$ 41,175.06           | \$ 42,913.81           | UNU               | Technical support cost, consultants, and travel  | \$ 247,989.96          |
|  |   | \$ 44,527.45         | \$ 44,527.45           | \$ 44,527.45           | \$ 44,527.45           | \$ 44,527.45           | UNCDF             |  | \$ 222,637.25          |
|  | CDRF Strategies developed   | \$ 36,440.00         | \$ 37,942.00           | \$ 39,519.10           | \$ 41,175.06           | \$ 42,913.81           | UNU               | Strategy development costs,  | \$ 197,989.96          |
|  |   | \$ 44,527.45         | \$ 44,527.45           | \$ 44,527.45           | \$ 44,527.45           | \$ 44,527.45           | UNCDF             | technical support cost, consultants,   | \$ 222,637.25          |
|  | Awareness workshop on CDRF strategies   | \$ 74,527.45         | \$ 74,527.45           | \$ 94,527.45           | \$ 94,527.45           | \$ 94,527.45           | UNCDF             | Workshop and travel  | \$ 432,637.25          |
|  | One Regional regulatory framework for market based CDRF instruments                                     | \$ 44,527.45         | \$ 104,527.45          | \$ 10,000.00           | \$ 10,000.00           | \$ 10,000.00           | UNCDF             | Workshop, technical support and travel   | \$ 179,054.90          |
|  | <b>Sub-total</b>  | <b>\$ 280,989.80</b> | <b>\$ 393,993.80</b>   | <b>\$ 272,620.55</b>   | <b>\$ 275,932.46</b>   | <b>\$ 279,409.97</b>   |                   |  | <b>\$ 1,502,946.58</b> |
| Individuals, communities, and MSMEs respond and recover more quickly from disasters with the support of CDRF instruments, including accessing through digital linkages.                  | Market based CDRF products developed for pilot testing and other micro-insurance initiatives            | \$ 81,440.00         | \$ 485,192.00          | \$ 589,131.60          | \$ 593,268.18          | \$ 597,611.59          | UNU               | Grants, technical support cost, consultants, sub-contractors, and                      | \$ 2,346,643.37        |
|  |   | \$ 135,621.96        | \$ 135,621.96          | \$ 135,621.96          | \$ 135,621.96          | \$ 135,621.96          | UNCDF             |  | \$ 678,109.80          |
|  | Identify suitable FinTech/InsurTech providers, develop digital interfaces for client onboarding.        | \$ 185,621.96        | \$ 335,621.96          | \$ 235,621.96          | \$ 135,621.96          | \$ 135,621.96          | UNCDF             | Grants, technical support cost, consultants, sub-contractors, and travel               | \$ 1,028,109.80        |
|  | Development and testing of digital payment solutions for premium by individuals, cooperatives and MSME  | \$ 135,621.96        | \$ 185,621.96          | \$ 235,621.96          | \$ 135,621.96          | \$ 85,621.96           | UNCDF             | Grants, technical support cost, consultants, sub-contractors, and travel               | \$ 778,109.80          |
|  | Establish digital linkage for last mile delivery of CDRF solutions, beneficiary payments                | \$ 85,621.96         | \$ 185,621.96          | \$ 235,621.96          | \$ 135,621.96          | \$ 85,621.96           | UNCDF             | Grants, technical support cost, consultants, sub-contractors, and travel               | \$ 728,109.80          |
|  | Framework for social protection through macro to micro  | \$ 81,440.00         | \$ 85,192.00           | \$ 89,131.60           | \$ 93,268.18           | \$ 97,611.59           | UNU               | Grants, technical support cost, consultants and travel                                 | \$ 446,643.37          |
|  |   | \$ 35,621.96         | \$ 35,621.96           | \$ 35,621.96           | \$ 35,621.96           | \$ 35,621.96           | UNCDF             |  | \$ 178,109.80          |
|  | <b>Sub-total</b>  | <b>\$ 740,989.80</b> | <b>\$ 1,448,493.80</b> | <b>\$ 1,556,373.00</b> | <b>\$ 1,264,646.16</b> | <b>\$ 1,173,332.98</b> |                   |  | <b>\$ 6,183,835.74</b> |
| Individuals and communities have better understanding of, accessibility, and usage of market-based CDRF instruments. Improved awareness through digital tools and e-learning interfaces. | DRM and CDRF training for partners  | \$ 119,369.93        | \$ 159,369.93          | \$ 159,369.93          | \$ 109,369.93          | \$ 89,369.93           | UNCDF             | Workshop, material costs, technical support cost and travel                            | \$ 636,849.67          |
|  | DRM and CDRF product awareness material development   | \$ 72,880.00         | \$ 75,884.00           | \$ 79,038.20           | \$ 12,800.00           | \$ 85,827.62           | UNU               | Grants, technical support cost, consultants, material costs and travel                 | \$ 326,429.82          |
|  |   | \$ 109,369.93        | \$ 159,369.93          | \$ 159,369.93          | \$ 159,369.93          | \$ 89,369.93           | UNCDF             |  | \$ 676,849.67          |
|  | DRM and CDRF campaigns in communities and for MSMEs   | \$ 159,369.93        | \$ 309,369.93          | \$ 259,369.93          | \$ 309,369.93          | \$ 159,369.93          | UNCDF             | Grants, transfers to partners, staff travel, technical support cost and campaign costs | \$ 1,196,849.67        |
|  | <b>Sub-total</b>  | <b>\$ 460,989.80</b> | <b>\$ 703,993.80</b>   | <b>\$ 657,148.00</b>   | <b>\$ 590,909.80</b>   | <b>\$ 423,937.42</b>   |                   |  | <b>\$ 2,836,978.82</b> |
| MEAL   | All MEAL activities, including monitoring, midterm and final evaluation, impact evaluation and learning | \$ 40,213.00         | \$ 140,213.00          | \$ 390,213.00          | \$ 140,213.00          | \$ 440,213.00          | UNCDF             | Technical support cost, consultants, workshops/events and travel                       | \$ 1,151,065.00        |
| Progr Mgt and Support staff cost   | Programme implementation management and support   | \$ 109,626.67        | \$ 114,894.67          | \$ 120,426.07          | \$ 126,234.04          | \$ 132,332.41          | UNU               | Support Staff Salaries, Office rentals and other office costs                          | \$ 603,513.84          |
|  |   | \$ 208,007.80        | \$ 218,408.19          | \$ 229,328.60          | \$ 240,795.03          | \$ 252,834.78          | UNCDF             |  | \$ 1,149,374.40        |
| South South  | Collaboration between Caribbean & Pacific and within region   | \$ 91,626.67         | \$ 93,494.67           | \$ 95,456.07           | \$ 97,515.54           | \$ 99,677.98           | UNU               | Technical support cost, consultants and events   | \$ 477,770.92          |
| CRIRC  | CRI Research Collaboration research, publishing, and conferences  | \$ 203,626.67        | \$ 205,494.67          | \$ 207,456.07          | \$ 209,515.54          | \$ 211,677.98          | UNU               | Technical support cost, consultants, workshops/events and travel                       | \$ 1,037,770.92        |
|  | <b>Sub-total</b>  | <b>\$ 653,100.80</b> | <b>\$ 772,505.19</b>   | <b>\$ 1,042,879.80</b> | <b>\$ 814,273.14</b>   | <b>\$ 1,136,736.15</b> |                   |  | <b>\$ 4,419,495.08</b> |
|  | <b>Total</b>  | <b>\$ 2,969,060</b>  | <b>\$ 3,977,580</b>    | <b>\$ 4,453,499</b>    | <b>\$ 3,476,418</b>    | <b>\$ 3,550,560</b>    |                   |  | <b>\$ 18,427,118</b>   |
| GMS (7%)   | Indirect Costs (lump sum of min. 7% on direct costs)  | \$ 207,834           | \$ 278,431             | \$ 311,745             | \$ 243,349             | \$ 248,539             |                   | General Management Support   | \$ 1,289,898           |
| MPTF Fund Cost (1%)  | Multi Party Trust Fund (MPTF) - Fund Administration Cost (1%)   | \$ 29,691            | \$ 39,776              | \$ 44,535              | \$ 34,764              | \$ 35,506              |                   | Administration Cost  | \$ 184,271             |
|  | <b>Grand Total including GMS and MPTF Admin Cost</b>  | <b>\$ 3,206,585</b>  | <b>\$ 4,295,787</b>    | <b>\$ 4,809,779</b>    | <b>\$ 3,754,531</b>    | <b>\$ 3,834,605</b>    |                   |  | <b>\$ 19,901,287</b>   |

The 2-year inception phase budget is highlighted. The Budget converted in the UNDG format is attached as Annex 15.

## VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

### Governance

The programme will be a joint programme, designed around the guidelines provided in the UN guidance note on joint programmes<sup>21</sup>. In accordance to these guidelines, UNCDF will be the convening agency, responsible for the implementation of the programme, UNDP the administrative agency and other partnering UN agencies, such as UNU-EHS will operate as participating UN organisations (PUNOs). Funds will be managed by a combination of pass-through and parallel modalities. Given that two parallel UNCDF programmes have been developed for the Pacific and several other initiatives are planned, it is proposed to have one over-arching Pacific IC. However, for final decision making on all proposals, investment decisions, workplans, etc. the Programme will have a dedicated sub-IC.

The programme will be governed by the IC, comprised of representatives of contributing donor partners, UNCDF, UNDP and PUNOs, as well as a representative of the PIFS and potentially other stakeholders.

The IC shall act as the Programme Board. The three primary governance and management roles of the IC are reflected below:

- UNCDF, UNDP and UNU-MCII: take on an executive role to ultimately ensure accountability for the project;
- PIFS: the senior user role is to ensure that the outputs produced meet the needs of the end-user, in this case the PSIDS; and
- Donor partners: to commit resources to ensure that the outputs produced will achieve the intended objectives within design, cost and time parameters.

The IC is responsible for providing guidance and strategic direction to the Programme, and for approving the annual work plan (including budgets). It is also tasked with recommending for approval to the UNCDF Executive Secretary all projects and investments, through grants, loans and guarantees, and ensuring efficient use of all resources. In addition, it will make allocation decisions while UNCDF as the Convening agency will sign Fund Transfer Requests on behalf of the Steering Committee.

In terms of approval process, all initiatives and investments are generated at the country level. Projects and other proposals are reviewed by the regional team in Suva, Fiji, and is peer reviewed by a technical advisory committee to be setup to support the implementation. Then these proposals are sent for approval to the IC. The IC shall meet no less than twice per calendar year and shall meet more frequently if necessary. Once approved, the associated agreements with the partners are signed by UNCDF's Executive Secretary and the partner. The latter may also include the procurement of expertise (e.g. consultants, climate risk modelling,

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<sup>21</sup> UNDG (2014). *UNDG Guidance Note on Joint Programmes*, <https://undg.org/document/guidance-note-on-joint-programmes/>

and data service providers) for the implementation of projects and other initiatives. More detailed information on the Investment Committee's Terms of Reference can be found in **Annex 9**.

At the level of project activities, there will be a project management team responsible for the day-to-day management and implementation of the project and to drive the overall performance of the project. This is typically made up of a team of key resource people from all project implementing partners. The project team reports to the project steering committee, which governs/oversees project in terms of scope, budget, and timelines. In most cases, the project steering committee is composed of senior leadership from all project implementing organisations and the UNCDF country technical specialist.

The Programme management team will be assisted by a technical advisory committee, made up of independent, technical experts drawn from various organisations in topical areas directly relevant. The terms of reference for this technical advisory committee will be developed and approved by the IC at the start of implementation of the programme.

### **Management arrangements**

The programme will be implemented by a team of experts from UNCDF, UNDP and UNU, managed from the regional UN Multi-Country Office in Suva, Fiji, with financial and administrative management support provided by UNDP. This approach signifies a continuation of the successful working arrangements and the experience gained under the PFIP. The technical expertise component is further strengthened by the inclusion of a team of experts from UNU.

To avoid duplication of roles and optimise costs, the Programme will share some resources with its sister programme (Pacific Digital Economy Programme), both of which are planned to be implemented in parallel. This is reflected in the colour coding of each of the roles in the detailed organogram that is provided in **Annex 13**. It also includes a detailed summary of the workstreams and activities where both programmes will leverage each other through a shared approach and use of resources. The organisation chart includes in-country based staff with programme implementation expertise, combined with a management support team and various specialists based in the regional office in Suva. These will bring a mix of specific expertise and experience derived from the public as well as the private sectors.

Both programmes will be overseen by the Regional Digital Lead and supported by shared resources for Operations and Finance, Monitoring, Evaluation, Analysis and Learning (MEAL), and Communications. The Regional Digital Lead will be the acting programme manager for the Pacific Digital Economy Programme and is the UNCDF Pacific representative to provide strategic direction to the UNCDF programmes and act as a link with other UNCDF global and regional initiatives. Besides he/she will ensure harmonized approach, programming and alignment to global strategic objectives.

A separate country climate disaster risk financing and insurance project is proposed for PNG given the country's relative size, complexities, and challenges that need specialised attention and focus using dedicated country-based resources. However, the required technical support and management oversight will be provided by the Suva Office.



On a case by case basis, the programme will also seek support from and collaborate with UNCDF experts from other regions (e.g. Asia, Africa) and UNCDF headquarters on key topics such as policy, digital innovation, knowledge management, skills development, investment and fund management. The programme will also be supported by experts from UNU-EHS across all work streams as described in this document.

During the inception phase of this programme, the daily management resides with the Programme Advisor based in Suva, Fiji. He/she will manage the entire Programme team and implementation across various PSIDS. The scope of the role and responsibilities include, but is not limited to:

- Overall programme management;
- Program strategy and governance;
- Stakeholder management (e.g. governments, donors, private sector, other UN and development agencies);
- Programme planning, budgeting and reporting;
- Knowledge, learning and communications;
- Administration and operations; and
- Results measurement and monitoring and evaluation.

For the in-country implementations, the Programme Advisor is supported by the various country leads, who could be shared resources with the sister programme. The Programme Advisor's role is primarily to oversee and support programme implementation in the various countries and ensure alignment on initiatives across the region. Where needed, additional technical expertise from the regional team will be drawn. These country technical specialists will be shared resources, however, based on the progress and results during the inception phase, the Programme can hire its own dedicated country specialists on a needs basis, and these will report to the respective Country Lead. To support the Programme Advisor for regional implementation, the team will be complemented by a Climate Risk and Insurance Associate (UNV funded by SIDA), a Regional Technical Specialist and a Research Associate, both based in Suva. MCII, as the implementing and technical partner of the project, will play an active role in all the workstreams and coordinate its activities through the Programme Advisor.

At country level, UNCDF employs several expert level resources<sup>22</sup>, capable of providing the required guidance and technical assistance to implementing partners in terms of project design and implementation. The country leads work closely with the project partners and their designated project manager/team to ensure business alignment and project performance. In cases where the project partner does not have a dedicated staff for the project, UNCDF may require the partner to dedicate some of the project funding to recruit such a resource.

Experience from a similar staffing arrangement under PFIP Phase II has shown to be effective in ensuring the right level and mix of on-ground local presence, combined with technical, functional, and administrative support from the regional office.

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<sup>22</sup> Depending on the size and complexity of the country portfolio and the availability of expertise in the country, these resources may be international staff, local staff, or international/national UNV's.

## Fund Management

The programme will be using a combination of parallel and pass-through fund management modality, for the latter UNDP Multi-Partner Trust Fund Office will act as the Administrative Agent (AA) under which the funds will be channelled for the programme through the AA. Each participating UN organization receiving funds through the pass-through would have to sign a standardized Memorandum of Understanding with the AA.

The Administrative Agent will:

- Establish a separate ledger account under its financial regulations and rules for the receipt and administration of the funds received from the donor(s) pursuant to the Administrative Arrangement. This Joint Programme Account will be administered by the Administrative Agent in accordance with the regulations, rules, directives and procedures applicable to it, including those relating to interest;
- Make disbursements to Participating UN Organizations from the Joint Programme Account based on instructions from the Steering Committee, in line with the budget set forth in the Joint Programme Document.

The Participating UN Organizations will:

- Assume full programmatic and financial responsibility and accountability for the funds disbursed by the AA.
- Establish a separate ledger account for the receipt and administration of the funds disbursed to it by the Administrative Agent.
- Each UN organization is entitled to deduct their indirect costs on contributions received according to their own regulation and rules, considering the size and complexity of the programme. Each UN organization will deduct 7% as overhead costs of the total allocation received for the agency.

The MPTF Office will charge administrative agent fee of one per cent (1%) of the total contributions made to the Joint Programme.

The Convening Agency will consolidate narrative reports provided by the Participating United Nations Organizations. As per the MoU:

- Annual narrative progress report and the final narrative report, to be provided no later than three months (31 March) after the end of the calendar year.

The MPTF Office will:

- Prepare consolidated narrative and financial progress reports, based on the narrative consolidated report prepared by the Convening Agency and the financial statements/ reports submitted by each of the Participating UN Organizations in accordance with the timetable established in the MoU;
- Provide those consolidated reports to each donor that has contributed to the Joint Programme Account, as well as the Steering Committee, in accordance with the timetable established in the Administrative Arrangement.

- Provide the donors, Steering Committee and Participating Organizations with:
  - Certified annual financial statement (“Source and Use of Funds” as defined by UNDG guidelines) to be provided no later than five months (31 May) after the end of the calendar year;
  - Certified final financial statement (“Source and Use of Funds”) to be provided no later than seven months (31 July) of the year following the financial closing of the Joint Programme.

**Budget Preparation** - The Convening Agency will prepare an aggregated/consolidated budget, showing the budget components of each participating UN organization.

**Accounting** - Each UN organization will account for the income received to fund its programme components in accordance with its financial regulations and rules.

#### **Admin Fees and Indirect Costs**

- **Administrative Agent:** The AA (UNDP) shall be entitled to allocate one percent (1%) of the amount contributed by the donor, for its costs of performing the AA’s functions.
- **Participating UN Organizations:** Each UN organization participating in the joint programme will recover indirect costs in accordance with its financial regulations and rules and as documented in the Memorandum of Understanding signed with the AA.

**Interest on funds** - Interest will be administered in accordance with the financial regulations and rules of each UN organization and as documented in the Standard Administrative Arrangement signed with donors.

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## **IX. LEGAL CONTEXT**

This regional project forms part of an overall programmatic framework under which several separate associated country level activities will be implemented. When assistance and support services are provided from this project to the associated country level activities, this document shall be the “Project Document” instrument referred to in: (i) the respective signed SBAs for the specific countries; or (ii) in the [Supplemental Provisions to the Project Document](#) attached to the Project Document in cases where the recipient country has not signed an SBAA with UNDP, attached hereto and forming an integral part hereof. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”

This project will be implemented by UNCDF (“Implementing Partner”) in accordance with its financial regulations, rules, practices, and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of UNCDF does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

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## X. RISK MANAGEMENT

### UN Agency other than UNDP, and IGO with signed SBEAA with UNDP

1. UNCDF as the Implementing Partner will comply with the policies, procedures, and practices of the United Nations Security Management System (UNSMS.)
2. In the implementation of the activities under this Project Document, UNCDF, as the Implementing Partner will handle any sexual exploitation and abuse (“SEA”) and sexual harassment (“SH”) allegations in accordance with its regulations, rules, policies, and procedures. Notwithstanding the foregoing, the [Name of UN Agency/IGO], as the Implementing Partner, will notify UNDP of any such allegations and investigations it may conduct further to such allegations.
3. UNCDF as the Implementing Partner will ensure that the following obligations are binding on each responsible party, subcontractor and sub-recipient that is not a UN entity:
  - a. Consistent with the Article III of the SBAA [or the Supplemental Provisions to the Project Document], the responsibility for the safety and security of each responsible party, subcontractor and sub-recipient and its personnel and property, and of [Name of UN Agency/IGO]’s property in such responsible party’s, subcontractor’s, and sub-recipient’s custody, rests with such responsible party, subcontractor and sub-recipient. To this end, each responsible party, subcontractor and sub-recipient shall:
    - i. put in place an appropriate security plan and maintain the security plan, considering the security situation in the country where the project is being carried;
    - ii. assume all risks and liabilities related to such responsible party’s, subcontractor’s, and sub-recipient’s security, and the full implementation of the security plan.
  - b. UNCDF reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the responsible party’s, subcontractor’s, and sub-recipient’s obligations under this Project Document.
  - c. In the performance of the activities under this Project, UNCDF as the Implementing Partner shall ensure, with respect to the activities of any of its responsible parties, sub-recipients and other entities engaged under the Project, either as contractors or subcontractors, their personnel and any individuals performing services for them, that those entities have in place adequate and proper procedures, processes and policies to prevent and/or handle SEA and SH.
4. UNCDF agrees to undertake all reasonable efforts to ensure that none of the [project funds]<sup>23</sup> [UNDP funds received pursuant to the Project Document]<sup>24</sup> are used to provide support to individuals or

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<sup>23</sup> To be used where UNDP is the Implementing Partner

<sup>24</sup> To be used where the UN, a UN fund/programme or a specialised agency is the Implementing Partner

entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via [http://www.un.org/sc/committees/1267/aq\\_sanctions\\_list.shtml](http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml).

5. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>).
6. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.
7. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.
8. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud, or corruption, by its officials, consultants, responsible parties, subcontractors, and sub-recipients in implementing the project or programme or using the UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.
9. The Implementing Partner and UNDP will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

10. The Implementing Partner agrees that, where applicable, donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities which are the subject of the Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term “Project Document” as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors, and sub-recipients.

11. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.
12. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.
13. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled “Risk Management Standard Clauses” are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled “Risk Management” are included, mutatis mutandis, in all sub-contracts or sub-agreements entered into further to this Project Document.

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## XI. ANNEXES

Annex 1 – Project Quality Assurance Report

Annex 2 – Social and Environment Screening Template

Annex 3 – Risk Analysis

Annex 4 – Natural Hazards and Impacts across Selected Pacific Countries

Annex 5 – Existing and Ongoing Climate Risk Initiatives in the Pacific

Annex 6 – Linkage to SDGs

Annex 7 – Country Development Plans

Annex 8 – Key Strategic Instruments

Annex 9 – Investment Committee’s Terms of Reference

Annex 10 – Key Sectors

Annex 11 – Key Segments

Annex 12 – Details on PFIPs Bundled Micro-Insurance

Annex 13 – Shared Resources and Alignment

Annex 14 – Draft Terms of Reference for Key Management Position

Annex 15 – Budget in UNDG format

Annex 16 – Central Bank Support Letters

## **Annex 1: Project Quality Assurance Report**

*Placeholder for PQAR - <https://intranet-apps.undp.org/ProjectQA/Forms/Design?fid=3208&year=2020&ou=FJI&pid=00123916&ftr=PROJECT>*



## Annex 2: Social and Environmental Screening Template

The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document. Please refer to the [Social and Environmental Screening Procedure](#) and [Toolkit](#) for guidance on how to answer the 6 questions.

### Project Information

| <i>Project Information</i>             |  |
|--|--|
| 1. Project Title                       | Pacific Insurance and Climate Adaption Programme |
| 2. Project Number                      |  |
| 3. Location<br>(Global/Region/Country) | Fiji, Vanuatu (Inception Phase)                  |

### Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

|   |
|---|
| <b>QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?</b>  |
| <i>Briefly describe in the space below how the Project mainstreams the human-rights based approach</i>  |
| Access to climate disaster risk financing improves the resilience especially of the most vulnerable (social welfare recipients, persons with disabilities etc.) thereby contributing to equality and equity. It also aligns with the UNCDF global theme of “Leaving No One Behind in the Digital Era” and has strong linkages to the SDGs.  |
| <i>Briefly describe in the space below how the Project is likely to improve gender equality and women’s empowerment</i>   |
| The project has a specific focus targeting women and has both tracking indicators and targets for increasing women’s access to CDRF instruments. Provision of appropriate insurance solutions for women improves their access to and usage of financial services and facilitates their participation in the real economy. The Project further proposes to co-create CDRF solutions with women. Refer to Annex 11 of the ProDoc for details. |
| <i>Briefly describe in the space below how the Project mainstreams environmental sustainability</i>   |
| The project has a strong focus on climate adaption by developing and deploying market based CDRF instruments. There are no elements envisaged under the project that adversely affect environment sustainability.   |

### Part B. Identifying and Managing Social and Environmental Risks

|  |                                     |  |                 |   |                          |
|--|-------------------------------------|--|-----------------|---|--------------------------|
| <b>QUESTION 2: What are the Potential Social and Environmental Risks?</b><br><i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses). If no risks have been identified in Attachment 1 then note “No Risks Identified” and skip to Question 4 and Select “Low Risk”. Questions 5 and 6 not required for Low Risk Projects.</i> |                                     | <b>QUESTION 3: What is the level of significance of the potential social and environmental risks?</b><br><i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i> |                 | <b>QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?</b> |                          |
| <b>Risk Description</b>  | <b>Impact and Probability (1-5)</b> | <b>Significance (Low, Moderate, High)</b>  | <b>Comments</b> | <b>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</b>      |                          |
| No Risk Identified.  | I =<br>P =                          |  |                 |   |                          |
| [add additional rows as needed]  |                                     |  |                 |   |                          |
| <b>QUESTION 4: What is the overall Project risk categorization?</b>  |                                     |  |                 |   |                          |
| Select one (see <a href="#">SESP</a> for guidance)   |                                     |  |                 |   | Comments                 |
| Low Risk   |                                     |  |                 |   | X                        |
| Moderate Risk  |                                     |  |                 |   | <input type="checkbox"/> |
| High Risk  |                                     |  |                 |   | <input type="checkbox"/> |
| <b>QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?</b>   |                                     |  |                 |   |                          |
| Check all that apply   |                                     |  |                 |   | Comments                 |

|  |   |                          |  |
|--|---|--------------------------|--|
|  | <i>Principle 1: Human Rights</i>                                    | <input type="checkbox"/> |  |
|  | <i>Principle 2: Gender Equality and Women's Empowerment</i>         | <input type="checkbox"/> |  |
|  | <i>1. Biodiversity Conservation and Natural Resource Management</i> | <input type="checkbox"/> |  |
|  | <i>2. Climate Change Mitigation and Adaptation</i>                  | <input type="checkbox"/> |  |
|  | <i>3. Community Health, Safety and Working Conditions</i>           | <input type="checkbox"/> |  |
|  | <i>4. Cultural Heritage</i>   | <input type="checkbox"/> |  |
|  | <i>5. Displacement and Resettlement</i>                             | <input type="checkbox"/> |  |
|  | <i>6. Indigenous Peoples</i>  | <input type="checkbox"/> |  |
|  | <i>7. Pollution Prevention and Resource Efficiency</i>              | <input type="checkbox"/> |  |

## Final Sign Off

| <i>Signature</i> | <i>Date</i> | <i>Description</i>  |
|------------------|-------------|---|
| QA Assessor      |             | UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted.  |
| QA Approver      |             | UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC. |
| PAC Chair        |             | UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.   |

## SESP Attachment 1. Social and Environmental Risk Screening Checklist

| Checklist Potential Social and Environmental <u>Risks</u>   |                 |
|---|-----------------|
| Principles 1: Human Rights  | Answer (Yes/No) |
| 1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?  | No              |
| 2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? <sup>25</sup>  | No              |
| 3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?  | No              |
| 4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalised groups, from fully participating in decisions that may affect them?   | No              |
| 5. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?   | No              |
| 6. Is there a risk that rights-holders do not have the capacity to claim their rights?  | No              |
| 7. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?  | No              |
| 8. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?   | No              |
| Principle 2: Gender Equality and Women's Empowerment  |                 |
| 1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?   | No              |
| 2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?  | No              |
| 3. Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?   | No              |
| 4. Would the Project potentially limit women's ability to use, develop and protect natural resources, considering different roles and positions of women and men in accessing environmental goods and services?<br><i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i> | No              |
| Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below   |                 |

<sup>25</sup> Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

|   |    |
|---|----|
|   |    |
| <b>Standard 1: Biodiversity Conservation and Sustainable <a href="#">Natural</a> Resource Management</b>  |    |
| 1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?<br><br><i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i>   | No |
| 1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?   | No |
| 1.3 Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)  | No |
| 1.4 Would Project activities pose risks to endangered species?  | No |
| 1.5 Would the Project pose a risk of introducing invasive alien species?  | No |
| 1.6 Does the Project involve harvesting of natural forests, plantation development, or reforestation?   | No |
| 1.7 Does the Project involve the production and/or harvesting of fish populations or other aquatic species?   | No |
| 1.8 Does the Project involve significant extraction, diversion or containment of surface or ground water?<br><br><i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i>   | No |
| 1.9 Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)  | No |
| 1.10 Would the Project generate potential adverse transboundary or global environmental concerns?   | No |
| 1.11 Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area?<br><br><i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i> | No |
| <b>Standard 2: Climate Change Mitigation and Adaptation</b>   |    |
| 2.1 Will the proposed Project result in significant <sup>26</sup> greenhouse gas emissions or may exacerbate climate change?  | No |
| 2.2 Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?  | No |
| 2.3 Is the proposed Project likely to directly or indirectly increase social and environmental <a href="#">vulnerability to climate change</a> now or in the future (also known as maladaptive practices)?  | No |

<sup>26</sup> In regards to CO<sub>2</sub>, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

|   |    |
|---|----|
| <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>   |    |
| <b>Standard 3: Community Health, Safety and Working Conditions</b>  |    |
| 3.1 Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?   | No |
| 3.2 Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?   | No |
| 3.3 Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?  | No |
| 3.4 Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)   | No |
| 3.5 Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?   | No |
| 3.6 Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?  | No |
| 3.7 Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?   | No |
| 3.8 Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?  | No |
| 3.9 Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?   | No |
| <b>Standard 4: Cultural Heritage</b>  |    |
| 4.1 Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts) | No |
| 4.2 Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?  | No |
| <b>Standard 5: Displacement and Resettlement</b>  |    |
| 5.1 Would the Project potentially involve temporary or permanent and full or partial physical displacement?   | No |
| 5.2 Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?  | No |
| 5.3 Is there a risk that the Project would lead to forced evictions? <sup>27</sup>  | No |
| 5.4 Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?  | No |

<sup>27</sup> Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

| <b>Standard 6: Indigenous Peoples</b>   |    |
|---|----|
| 6.1 Are indigenous peoples present in the Project area (including Project area of influence)?   | No |
| 6.2 Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?  | No |
| 6.3 Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)?<br><i>If the answer to the screening question 6.3 is "yes" the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.</i> | No |
| 6.4 Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?  | No |
| 6.5 Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?  | No |
| 6.6 Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?   | No |
| 6.7 Would the Project adversely affect the development priorities of indigenous peoples as defined by them?   | No |
| 6.8 Would the Project potentially affect the physical and cultural survival of indigenous peoples?  | No |
| 6.9 Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?  | No |
| <b>Standard 7: Pollution Prevention and Resource Efficiency</b>   |    |
| 7.1 Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or <a href="#">transboundary impacts</a> ?   | No |
| 7.2 Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?  | No |
| 7.3 Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs?<br><i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>   | No |
| 7.4 Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?   | No |
| 7.5 Does the Project include activities that require significant consumption of raw materials, energy, and/or water?  | No |



## Annex 3: Risk Analysis

## OFFLINE RISK LOG

| # | Description                           | Date Identified                     | Type   | Impact & Probability   | Countermeasures / Management response                          | Owner   | Submitted, updated by   | Last Update                                   | Status  |
|---|---------------------------------------|-------------------------------------|--|--|--|---|-------------------------|---|---|
|   | Enter a brief description of the risk | When was the risk first identified? | Environmental<br>Financial<br>Operational<br>Organizational<br>Political<br>Regulatory<br>Strategic<br>Other<br><u>Subcategories for each risk type should be consulted to understand each risk type</u> | Describe the potential effect if this risk were to occur<br><br>Enter probability on a scale from 1 (low) to 5 (high)<br>P =<br><br>Enter impact on a scale from 1 (low) to 5 (high)<br>I =<br><br>The "P x I" scores help to prioritize the risks (higher the score, higher the priority) | What actions have been taken/will be taken to manage this risk | Who has been appointed to keep an eye on this risk? | Who submitted the risk? | When was the status of the risk last checked? | e.g. dead, reducing, increasing, no change, other |

|   |  |        |  |                            |  |                                 |       |        |           |
|---|--|--------|--|----------------------------|--|---------------------------------|-------|--------|-----------|
| 1 | A global pandemic resulting in lockdown, economic downturn, work disruptions, travel restrictions etc. | Mar 20 | Operational<br>Organizational<br>Strategic | $3 \times 4 = 12$<br>P x I | <p>A pandemic is an uncommon event (maybe 1 in 100 or more years), however it has devastating impact on lives, livelihoods as well as socio-economic implications that are far-reaching. It is expected that post Covid-19, risk mitigation strategies to respond to such pandemics will be developed globally. Strict adherence to guidelines issued by the various Governments will be followed in the countries of operations. Business continuity plans will be tweaked to include such events. A pandemic situation also leads to changes in donor priorities that severely impact project implementation. Besides most economic sectors are affected, the capacity of beneficiaries to continue to participate in insurance schemes is impacted.</p> | Program<br>me<br>Managem<br>ent | UNCDF | Mar 20 | No Change |
|---|--|--------|--|----------------------------|--|---------------------------------|-------|--------|-----------|

|   |   |        |   |                           |   |                        |       |        |           |
|---|---|--------|---|---------------------------|---|------------------------|-------|--------|-----------|
| 2 | Other parametric insurance or CDRF initiatives              | Dec 19 | Operational<br>Organizational<br>Political<br>Strategic               | $3 \times 3 = 9$<br>P x I | Notwithstanding launch of the Programme and deployment of relevant products, if other development partners come up with competing parametric insurance or CDRF initiatives, market size is too small for multiple initiatives. The Programme has the advantage of first to market with parametric insurance at micro and meso levels. The Programme will continuously engage with donors and other development partners to ensure there is no overlap. Revival of the Pacific Access to finance donor group will be taken up to ensure coordination | Program me Managem ent | UNCDF | Dec 19 | No Change |
| 3 | Implementation Support from Pacific governments is delayed. | Dec 19 | Operational<br>Organizational<br>Political<br>Regulatory<br>Strategic | $2 \times 3 = 6$<br>P x I | Pacific governments recognise the need for parametric insurance and other CDRF solutions, given the important vulnerabilities of the region to natural hazards. Innovative solutions have been an ongoing request to development partners through forums like Forum Economic Ministers Meeting (FEMM), Pacific  | Program me Managem ent | UNCDF | Dec 19 | No Change |

|   |   |        |   |                     |  |                              |       |        |           |
|---|---|--------|---|---------------------|--|------------------------------|-------|--------|-----------|
|   |   |        |   |                     | Leaders meetings, as well as at the United Nations General Assembly. The Programme, with its interventions targeted at the macro, meso, and micro levels ideally responds to this market gap. Consultations have already been held with government and there is a keen interest to support the Programme. Support from Regional Central Banks and some Governments have already been received. |                              |       |        |           |
| 4 | Limited technical knowledge and capacity of regulators/governments on parametric insurance and other CDRF tools | Dec 19 | Operational<br>Organizational<br>Political<br>Regulatory<br>Strategic | 4 x 3 = 12<br>P x I | Under the Policy and Regulation workstream, this issue will be addressed through robust engagement and capacity building of government staff and regulators, with a view to creating an enabling environment for deployment of appropriate tools and instruments. The work of other development partners in this area also serves as a mitigation.   | Program me<br>Managem<br>ent | UNCDF | Dec 19 | No Change |

|   |  |        |                                      |                            |  |                        |       |        |           |
|---|--|--------|--------------------------------------|----------------------------|--|------------------------|-------|--------|-----------|
| 5 | Limited private sector support or buy-in for implementation partnerships | Dec 19 | Operational Organizational Strategic | $3 \times 3 = 9$<br>P x I  | While private sector appetite is considered low, the Programme will continuously engage with providers to build their capacity. Also, de-risking financial instruments like grants, loans, and guarantees, besides technical advice will be provided to support innovation. MCII will facilitate communication with the necessary reinsurers.  | Program me Managem ent | UNCDF | Dec 19 | No Change |
| 6 | Low levels of insurance awareness  | Dec 19 | Operational Organizational Strategic | $4 \times 3 = 12$<br>P x I | Low levels of financial literacy and insurance awareness among Pacific Islands was identified through the PFIP supported financial competency and financial services demand side surveys. PFIP has been working with Regional Central Banks and industry stakeholders to conduct insurance awareness campaigns; this is proposed to be continued with additional inputs on risk awareness and CDRF tools. MCII also has experience in training individuals on climate risk management, DRR, and linkages to insurance. | Program me Managem ent | UNCDF | Dec 19 | No Change |

|   |   |        |   |                     |   |                                 |       |        |           |
|---|---|--------|---|---------------------|---|---------------------------------|-------|--------|-----------|
| 7 | Poor market response to parametric insurance and other CDRF instruments | Dec 19 | Financial<br>Operational<br>Organizational<br>Strategic | 3 x 3 = 9<br>P x I  | Globally parametric insurance has either been government or donor driven or supported. Developing/deploying market-based solutions is bound to be challenging, however, it is proposed to address this challenge through a combination of community engagement, co-creation of solutions for acceptance and sustainability, persistent awareness campaigns, innovative financing options, use of digital linkages for cost efficiency as well as concentration on meso level players for market outreach. | Program<br>me<br>Managem<br>ent | UNCDF | Dec 19 | No Change |
| 8 | Sustainability of market interventions and projects                     | Dec 19 | Financial<br>Operational<br>Organizational              | 4 x 3 = 12<br>P x I | PFIP has demonstrated strong acceptance from some private sector partners for carrying on with innovation under the learn, test, and scale approach. The Programme recognises and proposes to invest in capacity building and training of its private sector partners so that they can adapt, develop appropriate solutions and continue market   | Program<br>me<br>Managem<br>ent | UNCDF | Dec 19 | No Change |

|   |  |        |  |                     |   |                                 |       |        |           |
|---|--|--------|--|---------------------|---|---------------------------------|-------|--------|-----------|
|   |  |        |  |                     | development. Proper due diligence of projects, partner selection, capacity building of partners and customers, and ecosystem approaches to solutions will all be integrated into the proposals developed.   |                                 |       |        |           |
| 9 | Technical capacity and implementation experience of the Programme team                                 | Dec 19 | Operational<br>Organizational              | 2 x 2 = 4<br>P x I  | PFIP (UNCDF/UNDP) has relevant Pacific wide experience, robust partnerships in several countries, in-house technical expertise, and implementation experience. MCII (UNU-EHS) has several years of relevant research experience in climate risk insurance, over 5 years of implementing parametric insurance in the Caribbean besides being a repository of high-level expertise. | Program<br>me<br>Managem<br>ent | UNCDF | Dec 19 | No Change |
| 9 | A global pandemic resulting in lockdown, economic downturn, work disruptions, travel restrictions etc. | Mar 20 | Operational<br>Organizational<br>Strategic | 4 x 3 = 12<br>P x I | A pandemic is an uncommon event (maybe 1 in 100 or more years), however it has devastating impact on lives, livelihoods as well as socio-economic implications that are far-reaching. It is expected that post Covid-19, risk mitigation strategies to respond to such pandemics will be  | Program<br>me<br>Managem<br>ent | UNCDF | Mar 20 | No Change |

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  | <p>developed globally. Strict adherence to guidelines issued by the various Governments will be followed in the countries of operations. Business continuity plans will be tweaked to include such events. A pandemic situation also leads to changes in donor priorities that severely impact project implementation.</p> <p>Besides most economic sectors are affected, the capacity of beneficiaries to continue to participate in insurance schemes is impacted.</p> |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|



## **Annex 4: Natural Hazards and Impacts across Selected Pacific Countries**

When the 2016 Tropical Cyclone Winston – one of the most powerful cyclones on record – made landfall in Fiji, it affected well over half of its 900,000 residents and caused more than US\$ 900 million in estimated damage and losses. A year earlier, impacts from Tropical Cyclone Pam exceeded 60% of Vanuatu's GDP, derailing a country's budget and fiscal position, and posing serious consequences for growth and development.

In fact, 10 countries in the Pacific are ranked as the top 30 countries in the world with the highest average annual losses as a percentage of gross domestic product (GDP). Since 1950, tropical cyclones and earthquakes have caused over US\$3 billion in estimated damage and losses in Pacific Island countries. According to the latest report from the Intergovernmental Panel on Climate Change (IPCC), losses from extreme weather will only increase in the region. In a 2-degree warmer world, more than 99 percent of coral reefs – an important protective barrier against the sea – will be decimated, while tropical cyclones will become more severe and frequent.

But the costs of these disasters are much higher than financial impacts alone. Every dollar lost to disasters often means one dollar less for essential social investments in public health, education, transportation, housing, and more. The impacts from disasters extend far beyond communities within 'ground zero' – they can slow or set back socioeconomic progress for an entire country, sometimes for generations.<sup>28</sup>

### **Fiji**

A year-round warm tropical climate is one of the main aspects of Fiji that attracts visitors from all over the world. However, the hot weather, humidity and its South Pacific location can also lead to dangerous and life-threatening disasters, including cyclones, floods, droughts, earthquakes, and tsunamis.

#### **Common Disasters in Fiji**

##### **Cyclones**

A cyclone is a tropical type of hurricane and is the main and most wide-spread natural hazard in the Pacific region. Severe tropical storms bring about massive rainfall and high winds, plus the low pressure may cause the sea to rise as much as 2 meters (6.5 feet). Destruction of houses, other infrastructure and gardens, loss of vegetation, flooding, land erosion, coastal inundation, destruction of coral reefs and sea grass beds, and pollution of water supplies are all effects of cyclones. Fiji's cyclone season is from November through April.

##### **Floods**

Flooding in Fiji can be the result of cyclones, though it can also occur during the country's rainy season between November and April. Fiji also has wet and dry zones, so naturally the wet zones, which are mostly located in the southeast region of the islands, are more prone to experience heavy rains and flooding.

##### **Droughts**

---

<sup>28</sup> <https://www.worldbank.org/en/news/feature/2018/11/01/weathering-financial-shocks-from-disasters-in-the-pacific-islands>

The areas that are driest (also called the dry zones) are the lower islands and leeward areas of the Fiji Islands. These areas are also most vulnerable to droughts. Besides affecting water supplies, droughts can have a negative impact on agriculture, which plays an important role in Fiji's economy. The 1997-98 drought in Fiji caused a F\$104 million loss in revenue in the sugarcane industry alone. The Western sides of Viti Levu and Vanua Levu and the Yasawas were the worst hit regions, where 90% of the population received food and water rations.<sup>29</sup>

### Earthquakes and Tsunamis

The Fiji Islands are seismically active, which means that they are prone to experience earthquakes. The greatest danger of earthquakes, especially severe ones, is the damage and destruction of houses and other infrastructure, as well as natural structures such as trees. Sometimes earthquakes can also cause tsunamis. A tsunami is a series of large waves that can be caused by a sudden motion of the ocean floor. Besides an earthquake, the sudden motion can also be the result of an underwater landslide or a powerful volcanic eruption.

Average Annual Loss (AAL) by hazard<sup>30</sup>

| Hazard       | Loss<br>[Million US\$] |
|--------------|------------------------|
| Earthquake   | 1.52                   |
| Wind         | 45.22                  |
| Storm Surge  | 85.05                  |
| Tsunami      | 0.03                   |
| Multi-Hazard | 131.82                 |

### Recent History of Disasters

#### Tropical Cyclone Cliff – 2007

During 2007, tropical cyclone Cliff together with the three flood events was the main significant hydro meteorological hazard that affected Fiji. The total cost of damage sustained by the various sectors in the Northern and Western Division caused by floods and TC Cliff was estimated at **FJD \$9,874,206**. Tropical cyclone Cliff cost the government of Fiji around **FJD \$6m**.<sup>31</sup>

#### Tropical Cyclone Mick – 2009

The total value of damages sustained by tropical cyclone Mick was estimated at **FJD \$59.4m**. The Western Division was most affected, with costs estimated at **FJD \$35.5m**; followed by the Central Division at **FJD \$21.6m** and the Eastern Division at **FJD \$2.2m**. An estimated amount of **FJD \$540,000** worth of assistance was provided by the development partners.<sup>32</sup>

#### Flash Flood – January 2009

<sup>29</sup> <https://www.go-fiji.com/naturaldisasters.html>

<sup>30</sup> <https://www.preventionweb.net/countries/fiji/data/>

<sup>31</sup> [http://www.ndmo.gov.fj/images/AllDisasterReports/TC\\_cliff\\_REPORT.pdf](http://www.ndmo.gov.fj/images/AllDisasterReports/TC_cliff_REPORT.pdf)

<sup>32</sup> [http://www.ndmo.gov.fj/images/AllDisasterReports/TC\\_Mick\\_Final\\_Report.jan10.pdf](http://www.ndmo.gov.fj/images/AllDisasterReports/TC_Mick_Final_Report.jan10.pdf)

The incidents of flooding caused by the heavy downpour between the 8th and 16th January 2009 are considered the worst ever in Fiji's history. The total value of damages sustained is estimated at **FJD \$112.97m**. Assistance was provided by various development partners, estimated at around **FJD \$5.65m** which consisted of approximately **FJD \$3.6m** in kind and **FJD \$1.99m** as cash grant. The estimated cost to Government for 1 month of rations for all households affected was in the vicinity of **FJD \$3.8m**.<sup>33</sup>

### 2012 January Flood

The 2012 floods began on the 21st of January and ended on the 12th of February after a trough of low pressure causing heavy rain was experienced over the Western parts of the Fiji. At the height of the flood, a total of 64 evacuation centres were active, accommodating 4,561 people. The damage was estimated by government ministries at **FJD \$45.79m** while other agencies, including government owned entities, estimated their costs at **FJD \$4.25m**.

In the initial stages, and in the final reconstruction/rehabilitation assistance initiatives negotiated approximately **FJD \$4.77m** was pledged.<sup>34</sup>

### Tropical Cyclone Tomas - 2010

The total value of damages sustained is estimated at **FJD \$83.9m**. The Northern Division was most affected with costs estimated at **FJD \$53.3m**, followed by the Eastern Division at **FJD \$15.3m**, and the Central Division at **FJD \$10,000**. Emergency Relief supplies for people at Evacuation Centres were distributed and this cost the Government **FJD \$489,626**.<sup>35</sup>

### Tropical Cyclone Evan - 2012

Tropical Cyclone Evan (TC Evan) was a massive Category 4 cyclone that ravaged Northern Vanua Levu and Western Viti Levu on 16-17 December 2012. Total damage from TC Evan, that is the value of the destruction or damage to physical assets existing in the affected areas, was estimated to be **FJD \$121.5 million**. An additional **FJD \$73.4 million** was identified as losses to the economic flows that are expected to occur over the short to medium term.

The Government of Fiji in collaboration with local and international partners distributed emergency relief supplies, including food rations, at an estimated cost of **FJD \$1.2 million**. The National Disaster Relief and Rehabilitation Fund (NDRRF), also referred to as the Prime Minister's Fund, enables business in key sectors, development partners and members of the public to make contributions. On the 29th January 2013, an addition of **FJD \$500,000** had been deposited into the Prime Minister's Fund from members of the public and development partners. To assist with the reconstruction efforts in the housing sector **FJD \$1 million** was allocated from the Prime Minister's Fund to complement the **FJD \$4 million** that was reallocated from the National Budget to assist this effort. In total the Government has reallocated **FJD \$7 million** from the National Budget.<sup>36</sup>

### Tropical Cyclone Winston – 2016

- **\$220 Million USD** was given by the Gov. of Fiji to ordinary Fijians to rebuild.
- **\$216 Million USD** in losses were experienced by the agricultural sector.
- Only **\$64 Million USD** was provided by the international community for financial assistance.<sup>37</sup>

<sup>33</sup> [http://www.ndmo.gov.fj/images/AllDisasterReports/Flood\\_Report\\_Donor\\_version\\_16\\_Feb\\_1.pdf](http://www.ndmo.gov.fj/images/AllDisasterReports/Flood_Report_Donor_version_16_Feb_1.pdf)

<sup>34</sup> [http://www.ndmo.gov.fj/images/AllDisasterReports/2012\\_JANUARY\\_FLOOD\\_REPORT\\_-\\_Final.pdf](http://www.ndmo.gov.fj/images/AllDisasterReports/2012_JANUARY_FLOOD_REPORT_-_Final.pdf)

<sup>35</sup> [http://www.ndmo.gov.fj/images/AllDisasterReports/TC\\_TOMAS\\_FINAL\\_REPORT.pdf](http://www.ndmo.gov.fj/images/AllDisasterReports/TC_TOMAS_FINAL_REPORT.pdf)

<sup>36</sup> [http://www.ndmo.gov.fj/images/AllDisasterReports/PDNA\\_Report.pdf](http://www.ndmo.gov.fj/images/AllDisasterReports/PDNA_Report.pdf)

<sup>37</sup> Fiji Government Budget supplement 2017-2018.

- The government of Fiji had to take out a **\$50 Million USD** loan from the World Bank.<sup>38</sup>

## TC Harold – 2020

TC Harold made its way to Fiji on April 8, 2020 and a tropical cyclone alert was given for Viti Levu, Kadavu, Lomaiviti as well as the Yasawa and Mamanuca and Lau group of islands. The NDMO activated their Emergency Operations Centre to prepare for the cyclone and provide evacuations centres. A total of 25 evacuation centres were initially opened and at least 2,146 people sought shelter in the centres. The number of shelters and evacuees increased during and after Harold's passage with over 6,000 people finding refuge at 197 evacuation centres.<sup>39</sup>

Due to TC Harold, Fiji's agricultural sector saw over FJD \$27 million of damages from the immense levels of rain and flooding throughout Fiji while the Fiji Roads Authority infrastructure including our roads and jetties took a hit of FJD \$22 million.<sup>40</sup> To add on, TC Harold destroyed more than 500 home with many hundreds more suffering damage. Based on recent reports, the damage caused by Harold in Fiji, particularly the Kadavu Group is currently estimated at a toll of US\$2.34 million (FJ\$5.3 million), with the agricultural damage estimated at US\$834,000 (FJ\$1.9 million)<sup>41</sup>.

The Government of Australia pledged A\$350,000 in aid to Fiji for Harold relief efforts.<sup>42</sup> The High Commissioner of New Zealand to Fiji has pledged humanitarian and disaster and relief for Fiji from New Zealand.<sup>43</sup>

## VANUATU

Vanuatu is considered one of the world's most vulnerable countries to natural hazards. Comprised of over 80 islands, the country is located on the earthquake-prone "ring of fire" and sits at the centre of the Pacific cyclone belt. These hazards result in a high frequency of volcanic eruptions, cyclones, earthquakes, tsunamis, storm surges, coastal flooding, and landslides. In addition, the country is already experiencing the impacts of climate change. Sea level rise and the increased intensity of extreme events have led to changes in agricultural productivity and water availability.

Vanuatu is estimated to incur an average of **US \$48 million** per year in losses due to earthquakes and tropical cyclones, a figure that is equivalent to 6.6 percent of its GDP. In March 2015, Tropical Cyclone Pam struck Vanuatu and caused damage, loss, and needs estimating **US \$450 million**, approximately 64 percent of the country's GDP.<sup>44</sup>

### Common Disasters in Vanuatu

#### Tropical cyclones

The tropical cyclone season in Vanuatu normally runs from November to May. Throughout this period there is a high risk of strong winds and heavy rains with associated flooding, landslides and road closures.

#### Earthquakes and tsunamis

<sup>38</sup> <http://www.worldbank.org/en/news/press-release/2016/06/30/world-bank-commits-50m-to-support-fijis-long-term-cyclone-winston-recovery>

<sup>39</sup> <https://reliefweb.int/report/fiji/fiji-tropical-cyclone-harold-humanitarian-snapshot-9-april-2020>

<sup>40</sup> <https://www.fijivillage.com/news/TC-Harold-Over-27-million-of-damages-to-Fijis-agricultural-sector-while-FRA-infrastructure-took-a-22-million-hit---PM-8frx54/>

<sup>41</sup> Source: [https://en.wikipedia.org/wiki/Cyclone\\_Harold](https://en.wikipedia.org/wiki/Cyclone_Harold)

<sup>42</sup> <https://www.fijivillage.com/news/Australia-pledges-support-to-Fijis-relief-efforts-after-TC-Harold-x4fr58/>

<sup>43</sup> <https://www.fbcnews.com.fj/news/new-zealand-commits-to-helping-fiji/>

<sup>44</sup> <https://www.gfdrr.org/en/vanuatu>

Vanuatu is prone to significant year-round seismic and volcanic activity, with associated risks of tsunamis. They are over 2,000 seismic events reported each year, most events are small scale, although larger tremors and quakes of over 5 on the Richter scale do occur on a regular basis.

## Volcanoes

There are several active volcanoes in Vanuatu, located on the islands of Tanna, Ambae, Ambrym, Lopevi, Vanua Lava, and Gaua. The Vanuatu government's Mines and Geology Department monitors volcanoes and provides advice on the level of risk. There are five alert levels for volcanoes; from zero (normal, low-level activity) up to five (very large eruption, island-wide danger). An alert level of three will often be the trigger for warnings to avoid the summit of the volcano and nearby areas. Even at lower levels, explosions and injuries from volcanic debris can occur.<sup>45</sup>

**Average Annual Loss (AAL) by hazard<sup>46</sup>**

| Hazard       | Loss<br>[Million US\$] |
|--------------|------------------------|
| Earthquake   | 7.65                   |
| Wind         | 35.05                  |
| Storm Surge  | 23.82                  |
| Tsunami      | 0.06                   |
| Volcano      | 3.20                   |
| Multi-Hazard | 66.58                  |

## Tropical Cyclone Pam

- Spending on emergency relief operations from Ministries' recurrent budgets totalled **\$450,000 USD**.
- Pacific Catastrophe Risk Insurance Company (PCRIC) pay-out of **\$1.9 million USD**.<sup>47</sup>
- Government of Vanuatu has received grants worth **\$4.1 million USD**.
- Total agriculture sector damage and losses are estimated to be approximately **\$53 million USD**.<sup>48</sup>

## Emergency Relief and Financial Assistance – TC Hola and Manaro Volcano

The destruction, loss, and damages caused by TC Hola and Manaro Volcano have been widespread. Finances and relief materials have been made available by the Government of Vanuatu and local partners to provide emergency relief and humanitarian assistance to the affected residents in two provinces: Malampa and Penama. The Council of Ministers has made the following Decisions related to these two disasters:

- Decision 223/2017- **200 Million Vatu** towards Ambae Volcano response
- Decision 035/2018 – **10 Million Vatu** towards TC Hola assessments
- Decision 46/2018- **40 Million Vatu** towards West & South Ambae Island multi-hazard response (TC Hola +Volcano)
- Decision 47/2018- **92 Million Vatu** towards TC Hola response on North West & North East Malekula, West Malo, Central Pentecost, Southwest & Southeast Ambae and Ambrym Islands

Despite substantial government commitments, there is extraordinary need for humanitarian assistance.

<sup>45</sup> <https://www.gov.uk/foreign-travel-advice/vanuatu/natural-disasters>

<sup>46</sup> <https://www.preventionweb.net/countries/vut/data/>

<sup>47</sup> <https://www.worldbank.org/en/news/feature/2017/12/19/taking-matters-into-own-hands-disaster-risk-insurance-in-the-pacific>

<sup>48</sup> [https://cop23.com.fj/wp-content/uploads/2017/06/vanuatu\\_pdna\\_cyclone\\_pam\\_2015.pdf](https://cop23.com.fj/wp-content/uploads/2017/06/vanuatu_pdna_cyclone_pam_2015.pdf)

For the Ambae response, the Ministry of Agriculture is in discussions with the World Bank for a relief package valued at **41,049,343VT**, the Ministry of Health with DFAT for support valued at **19,052,330VT**, the Ministry of Lands with UNICEF for **54,000,000VT** and with DFAT for **10,000,000VT**.<sup>49</sup>

## TC Harold – 2020

TC Harold made landfall in Vanuatu on 6 April, 2020 as a Category 5 cyclone with wind speeds as high as 235 km/h. The cyclone passed directly over Santo and hundreds of people were sheltered in evacuation centres. Official assessments are underway, however, early remote analysis of the potential damage based on the experience of TC Pam and the cyclone path suggests that approximately 22,500 households are likely to have been damaged/destroyed by TC Harold.<sup>50</sup>

In Luganville, a town of 16,000 people, roofs have been blown off, trees snapped, and the council building has been destroyed.<sup>51</sup> Extreme damages were reported in Pentecost and entire villages were relatively destroyed. In Sanma, 80 – 90% of the population have lost their homes. There also have been reports of damage to approximately 60 per cent of schools and 20 per cent of healthcare facilities. Due to the storm, Vanuatu also experienced a breakdown in telecommunications, especially in the northern provinces.

The World Vision Australia estimated around 160,000 people (a little less than half the country's population) were left homeless by the storm and declared the cyclone as a Category II disaster on their disaster rating scale.

Following TC Harold, various governments aided Vanuatu in both cash and kind.

- New Zealand foreign minister Winston Peters funded US\$485,000 (NZ\$500,000) to the Government of Vanuatu to help aid recovery following the storm on April 8.<sup>52</sup> Total direct contributions from New Zealand to Vanuatu amounted to US\$1.52 million (NZ\$2.5 million).<sup>53</sup>
- Australia's assistance package to Vanuatu included logistical, health, education, and policing support for government and non-government agencies.<sup>54</sup> Furthermore, an Australian Defence Force plane was also sent to northern Vanuatu to send supplies to impacted areas on April 9.
- France sent tents, shelter kits, kitchen sets and jerry cans to the country under request of Vanuatu's government.<sup>55</sup>
- The World Vision Australia pledged to donate US\$4 million (NZ\$6.5 million) worth of supplies to affected areas.<sup>56</sup>
- The OCHA also provided a US\$2.5 million emergency fund to Vanuatu.<sup>57</sup>

## PAPUA NEW GUINEA (PNG)

PNG is in the 'Pacific ring of fire,' at the collision point of several tectonic plates. The geological and topographic nature of PNG is extremely varied across a total of 462,840 km<sup>2</sup>, ranging from vast tropical inland forests and plains, to miniature island atolls. PNG is one of the most disaster-prone countries in the Pacific region. PNG was affected by 25% of all the disasters occurred in the Pacific between 1950 and 2008.<sup>58</sup>

<sup>49</sup> <file:///Users/reginald.singh/Downloads/High-Res-TC-Hola-and-Ambae-Volcano-Response-and-Early-Recovery-Plan-April-2018-1.pdf>

<sup>50</sup> [https://reliefweb.int/sites/reliefweb.int/files/resources/PHT%20Sitrep%207\\_TC%20Harold\\_14042020.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/PHT%20Sitrep%207_TC%20Harold_14042020.pdf)

<sup>51</sup> <https://www.fijivillage.com/news/TC-Harold-made-landfall-on-the-Vanuatu-island-of-Santo-yesterday--4rx58f/>

<sup>52</sup> <https://reliefweb.int/report/vanuatu/new-zealand-provide-assistance-vanuatu-following-tropical-cyclone-harold>

<sup>53</sup> <https://reliefweb.int/report/vanuatu/further-assistance-vanuatu-following-tropical-cyclone-harold>

<sup>54</sup> <https://reliefweb.int/report/vanuatu/immediate-response-tropical-cyclone-harold>

<sup>55</sup> <https://reliefweb.int/report/vanuatu/vanuatu-fiji-tonga-tropical-cyclone-harold-update-dg-echo-un-ocha-nemomordi-ngos-echo>

<sup>56</sup> [https://www.worldvision.com.au/media-centre/resource/cyclone-harold-leaves-160-000-homeless-cat-ii-disaster-declared?utm\\_source=miragenews&utm\\_medium=miragenews&utm\\_campaign=news](https://www.worldvision.com.au/media-centre/resource/cyclone-harold-leaves-160-000-homeless-cat-ii-disaster-declared?utm_source=miragenews&utm_medium=miragenews&utm_campaign=news)

<sup>57</sup> <https://www.aljazeera.com/news/2020/04/releases-25m-cyclone-ravaged-vanuatu-200414041437506.html>

<sup>58</sup> [http://www.pg.undp.org/content/papua\\_new\\_guinea/en/home/operations/projects/crisis\\_prevention\\_and\\_recovery/disaster-risk-](http://www.pg.undp.org/content/papua_new_guinea/en/home/operations/projects/crisis_prevention_and_recovery/disaster-risk-)

## Common Disasters in PNG

### **Volcanoes**

There are 16 active volcanoes in PNG; 6 of the volcanoes are classified as high risk. A relatively high percentage of the population is exposed to the risk of volcanic eruption. A Geoscience Australia report names the Madang and Morobe provinces as highly vulnerable to volcanic tsunami and lists New Britain as the highest concentration of calderas in the Asia-Pacific region reflecting the long-term hazards faced by this region.

### **Earthquakes**

PNG ranks in the top six countries for the highest percentage of population exposed to earthquake hazards. The country regularly experiences earthquakes between magnitude 5 and 7. Recent earthquakes have caused severe devastation and loss of human life and property. Accompanying events such as tsunamis, landslides, and floods also result from these tectonic events.

### **Droughts**

Typically, seasonal rains bring cloud cover, temperatures are moderate, and food and water sources are abundant in PNG. However, little to no cloud cover during El Niño events can lead to a severe drop in temperature causing frost in higher elevations, water sources to dry up, and crop failure. The Highlands are most severely impacted by these events and populations move in search of food and water. In 1997, a CARE International assessment estimated that over 300,000 people were in severe stages of food insecurity caused by drought and frost.

From 2015 to 2016, prolonged El Niño induced drought conditions in PNG adversely impacted the agricultural food production system which led to insufficient amounts of water available for crops and human beings to consume. The El Niño occurrence reached its peak towards the end of 2015 resulting in more than 2 million people at risk of famine and disease from contaminated water. CARE International, the World Food Program (WFP), and provincial authorities provided rice to provinces; however, they experienced difficulties reaching people living in remote locations.

Lingering food scarcity resulted as subsistence and staple crops, such as kaukau can take up to nine months to regrow, depending on location and altitude. Villagers faced substantial periods without food and shortages of many planting materials and/or seeds that are required to rebuild important garden staples.

### **Floods**

PNG is vulnerable to inland and coastal flooding. Due to heavy rainfall, the country suffered from severe flooding in 2008 where as many as 75,000 people were displaced from 8 different villages. Flooding in PNG causes significant damage to buildings and critical infrastructure such as roads, bridges, as well as agriculture.

### **Landslides**

PNG's susceptibility to landslides is due to a combination of factors including steep terrain, earthquakes, and aftershocks, as well as seasonal rains. Landslides in PNG are generally associated with earthquakes and/or heavy rainfall and flooding. The wet season could be made even more unstable due to periodic earthquakes.

## Recent History of Disasters

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[management.html](#)

### Volcano Eruption –December 2018

At 13:00 (local time), on December 20, 2018, the Manam Volcano in the north-eastern part of the island erupted ejecting an ash plume up to 13.7 km above sea level. The eruption resulted in lava flowing to the Bokure (Bokuri) and Kolang (NE Manam) communities which were evacuated.

### Earthquake - October 2018

A 7-magnitude earthquake struck the island of New Britain in PNG around 7:00am (local time) on October 10, 2018 followed by 2 aftershocks above magnitude 5 and triggering a preliminary tsunami warning that was subsequently cancelled. There were no immediate reports of damage.

### Earthquake - February 2018

On 26 February 2018, a 7.5 magnitude earthquake struck the Highlands of PNG followed by hundreds of aftershocks including a 6.7 magnitude earthquake affecting over 544,000 people. 54,000 homes were damaged and approximately 18,200 citizens were displaced and forced to seek shelter in informal care centres or with host families. The Government declared an emergency and welcomed international aid for areas of Education, Food Security, Health, Nutrition, Protection, Logistics Coordination, Shelter, and life-supporting and early recovery efforts estimated a need for **USD \$62 million**.

PNG's prime minister, Mr O'Neill said the Government had made a commitment for the next three to four years of **USD \$138 million** which would be funded out of the budget to make sure that destroyed infrastructure was rebuilt.<sup>59</sup>

Many organizations came together to assist including USAID's Office of U.S. Foreign Disaster Assistance providing **USD \$100,000** in relief supplies, water sanitation, and hygiene assistance. Additionally, the UN established an information line sending lifesaving messages over mobile phones to the community. Also, to reduce the risk of disease outbreaks following the event, the UN initiated a mass vaccination campaign, distributing vaccines of different antigens, new-born care survival kits, health kits, Solar Disk Drive refrigerators, and reproductive health kits to the affected provinces' health care facilities and Safe Spaces for women and children. The UN set up Safe Temporary Learning Spaces (STLS) for children to continue their learning since the earthquakes damaged schools and infrastructure. Additional paraphernalia was also provided including tents, school in a box and recreation kits.

Average Annual Loss due to Hazards<sup>60</sup>

| Hazard       | Loss<br>[Million US\$] |
|--------------|------------------------|
| Earthquake   | 73.59                  |
| Wind         | 0.87                   |
| Storm Surge  | 0.56                   |
| Tsunami      | 0.59                   |
| Flood        | 94.23                  |
| Volcano      | 13.70                  |
| Multi-Hazard | 169.84                 |

<sup>59</sup> <https://www.radionz.co.nz/international/pacific-news/354087/png-pm-says-hela-quake-damage-costs-over-us-61m>

<sup>60</sup> <https://www.preventionweb.net/countries/png/data/>



### Volcano Eruption – January 2018

The entire population (591 people) of Kandovar Island, comprised of five community groups including the villages of Manot, Taragauo, Dong Sarakbano, Niukatnam and Rumgiao, with a total of 145 families in PNG were evacuated and relocated to Blup Blup Island when the Kadovar Island volcano became active with mild volcanic activity on the south east side of the island covering 50-60% of the island in lava.

The Prime Minister's Office provided initial provisions of food and water for the evacuees who were later resettled to the mainland for up to three years. On-going relief efforts have been provided by the National Capital District Commission as well as private sector companies providing in-kind contributions including flour, rice, and sugar. The National Disaster Centre developed a **PGK4 million** response plan (**USD \$1.21 million**) to meet the assessed needs of the Kadovar islanders at Dandan Care Centre for up to six months.<sup>61</sup>

### Landslide – November 2016

A massive landslide completely covered two villages while people slept in the southern highlands of PNG, killing at least 40 people. Out of all the villagers, reportedly only three or four people were able to escape the disaster due to the remote location of the landslide and lack of aid available to perform rescue. Heavy rain to the area as well as a possible blast at a nearby quarry are thought to have contributed to the landslide.

Governance expenditure related to **climate change** is estimated at **USD \$4.1 million** in 2016-17<sup>62</sup>. This includes **USD \$1.5 million** to the UNDP to help build the capacity of PNG's Climate Change Development Authority (CCDA), and **USD \$300,000** to strengthen the DRM capacity of the PNG National Disaster Centre. It also includes **USD \$2.3 million** of estimated climate change expenditure through the Church Partnerships Program, which implemented drought response measures focused on DRR and capacity building in Highland communities.

## TONGA

The 176-island archipelago of Tonga is exposed to a range of natural hazards, including cyclones, earthquakes, tsunamis, and volcanoes. Estimated annual losses from these hazards are on average equivalent to 4.4 percent of the GDP. In February 2018, Tropical Cyclone Gita affected almost 75 percent of Tonga's population, which is equivalent to 80,000 people, and caused damages and losses of **USD \$164.1 million**, equivalent to 37.8 percent of the country's GDP.

In January 2014, Tropical Cyclone Ian affected almost 70 percent of the inhabitants in Tonga's Ha'apai island group (some 5,500 people) and caused damages and losses of **USD \$50 million**, 11 percent of the country's GDP. A small island developing state, Tonga is also vulnerable to the growing geographical, geological, and socio-economic impacts of climate change.<sup>63</sup>

### Recent History of Disasters

#### Tropical Cyclone Gita

- **\$47.3 Million USD** is allocated by the Gov. of Tonga over 3 years for rebuilding.
- **\$43 Million USD** in losses were experienced by the agricultural sector.
- Government had received **\$11.17 Million USD** foreign assistance for its cyclone recovery program.<sup>64</sup>

<sup>61</sup> PNG-Disaster management Reference Handbook

<sup>62</sup> PNG-Aid-Performance-Report-2016-2017

<sup>63</sup> <https://www.gfdrr.org/en/tonga>

<sup>64</sup> <https://reliefweb.int/sites/reliefweb.int/files/resources/tonga-pdna-tc-gita-2018.pdf>

- Pacific Catastrophe Risk Insurance Company (PCRIC) pay-out of **\$3.5 million USD**.<sup>65</sup>
- The total economic value of the effects was estimated to be approximately **US\$164.1 million**.

Tonga is expected to incur, on average, **US\$15.5 million** per year in losses due to earthquakes and tropical cyclones.

### Tropical Cyclone Ian - 2014

Tropical Cyclone Ian passed east of Tonga's Vava'u group (population 15,000) in the morning of 11 Jan 2014 before the eye passed directly over Ha'apai (population 6,600) in the afternoon. Recovery and initial reconstruction needs were estimated at around **TOP 90.2 million**. With the World Bank's support, Tonga developed a Housing Recovery and Reconstruction policy clearly outlining the government's strategy for housing reconstruction and self-recovery after Tropical Cyclone Ian.

A damage assessment helped to leverage **USD \$12 million** in World Bank grants and low-interest credits, and a **USD \$2 million** grant from the ACP-EU NDRR Program.<sup>66</sup>

### Tropical Cyclone Waka - 2001

The affected population was approximately 16,450 people: 15,715 in Vava'u and 735 in Niuafo'ou, representing around 2,867 households. The total damage is estimated at **TOP 104.2 million (USD 51,308,411)**.

The Government of New Zealand sent an aircraft to help the Tongan authorities assess damages. They then brought emergency relief items: a portable generator for the Vava'u water supply, seeds, fertilizer and pesticide, etc., for a total value of **NZD 200,000 (approximately USD 83,000)**. In addition, assistance to damaged schools was provided at an estimated **NZD 500,000 (approx. USD 210,000)**. The Australian Government provided an air force plane C130 (Hercules) loaded with 500 tarpaulins, 150 tents, 7 cartons of water purification tablets, etc. French Polynesia pledged **TOP 1 million (approximately USD 492,610)** worth of aid - TOP 250,000 for food and TOP 750,000 for reconstruction of schools.<sup>67</sup>

### TC Harold - 2020

Following Fiji, TC Harold made its way to Tonga on 9 April 2020 where it made devastating damages to trees and powerlines. Damage to food crops and water supplies were also done in 'Eua and Tongatapu.<sup>68</sup> To add on, Tongatapu experienced Storm surge, reaching 0.86 m (2 ft 10 in) above king tide.<sup>69</sup>

There also have been reports on damage to tourist resorts in Nuku'alofa.<sup>70</sup> Preliminary assessments show that in Tonga, 731 family homes suffered minor damages while 210 sustained major damages and 41 were destroyed after TC Harold.<sup>71</sup>

### Average Annual Loss (AAL) by hazard<sup>72</sup>

| Hazard     | Loss<br>[Million US\$] |
|------------|------------------------|
| Earthquake | 3.35                   |

<sup>65</sup> <https://reliefweb.int/report/tonga/tonga-receives-record-insurance-payout-following-cyclone-gita>

<sup>66</sup> <http://projects-beta.worldbank.org/en/results/2014/10/01/building-back-better-tonga-cyclone-ian>

<sup>67</sup> <https://reliefweb.int/report/tonga/tonga-tropical-cyclone-waka-ocha-situation-report-no-2>

<sup>68</sup> <https://reliefweb.int/report/vanuatu/tropical-cyclone-harold-situation-report-7-14-april-2020>

<sup>69</sup> <https://matangitonga.to/2020/04/10/no-lives-losttc-harold>

<sup>70</sup> <https://www.aljazeera.com/news/2020/04/pacific-monster-storm-harold-destroys-tourist-resorts-tonga-200409060320455.html>

<sup>71</sup> <https://reliefweb.int/report/tonga/initial-damage-assessment-ida-tropical-cyclone-harold>

<sup>72</sup> <https://www.preventionweb.net/countries/ton/data/>

|              |       |
|--------------|-------|
| Wind         | 18.03 |
| Storm Surge  | 11.11 |
| Tsunami      | 0.18  |
| Multi-Hazard | 32.67 |

## SAMOA

The Independent State of Samoa, known as Western Samoa until 1997, is made up of nine volcanic islands, two of which (Savai'i and Upolu) make up more than 99 per cent of land. More than half of the population lives on Upolu, where the capital Apia is located.

### Common Disasters

Samoa is highly vulnerable to natural hazards, particularly cyclones which occur mainly between November and April. The linear island chain of Samoa is situated directly northeast of the Tonga-Kermadec trench which is the main source of seismic activity directly affecting Samoa. Samoa is also susceptible to strong earthquakes which generate tsunamis impacting the many villages located along the coastlines.

### Recent History of Disasters

#### **TC Gita**

In February 2018, TC Gita passed by Samoa on 10 February 2018 and made landfall as a category 2 cyclone. Damages were reported in Samoa which included localised flooding. With coordination from the Disaster Management Office, agencies activated their response plans and responded accordingly along with other humanitarian partners. NZ Prime Minister Jacinda Ardern has assisted Samoa with **NZ\$3 million (T\$5.1 m)** in recovery work and building resilience following Cyclone Gita.<sup>73</sup>

#### **Drought - 2015**

A Meteorological Drought was officially declared in Samoa for 2015. Based on rainfall data, the north and central region of Upolu Island and the eastern region of Savaii Island were covered by the declaration. The two main islands have experienced 40 percent below average rainfall since June prompting the Government to impose water rationing for some areas, including around the capital Apia.

#### **TC Evan**

In late 2012, Samoa was severely affected by Tropical Cyclone Evan which killed 12 people and displaced thousands. The value of durable physical assets across all economic and social sectors destroyed by Evan is estimated at **SAT 235.7 million, equivalent to US\$103.3 million**. In addition, production losses and higher production costs arising from the disaster across all are estimated at **SAT 229.4 million, or US\$100.6 million**.<sup>74</sup> OCHA OP issued an Emergency Cash Grant of **US\$50,000**<sup>75</sup> and provided weather updates, assessment tools, and a global standby taskforce to support mapping. Several Pacific Humanitarian Team partners from Samoa and Fiji also supported ad-hoc requests from the government.

<sup>73</sup> <https://www.samoabserver.ws/category/samoa/11333>

<sup>74</sup> [http://www.gfdrr.org/sites/gfdrr/files/SAMOA\\_PDNA\\_Cyclone\\_Evan\\_2012.pdf](http://www.gfdrr.org/sites/gfdrr/files/SAMOA_PDNA_Cyclone_Evan_2012.pdf)

<sup>75</sup> <https://www.unocha.org/office-pacific-islands/samoa>

## Tsunami - 2009

In September 2009, Samoa was struck by a tsunami which killed 143 and injured 310 people. Over 12,000 people were affected by waves that wiped out large stretches of the south and south-east coasts of the main island of Upolu. The Government of Samoa estimates the total damage at **US\$ 147.25 million**.<sup>76</sup>

**Average Annual Loss (AAL) by hazard<sup>77</sup>**

| Hazard       | Loss<br>[Million US\$] |
|--------------|------------------------|
| Earthquake   | 0.40                   |
| Wind         | 14.29                  |
| Tsunami      | 0.01                   |
| Multi-Hazard | 14.70                  |

## SOLOMON ISLANDS

The Solomon Islands is an archipelago comprising a double chain of 992 islands, of which about one-third are populated. It is divided into nine provinces. The capital city, Honiara is located on the island of Guadalcanal. The main islands are mountainous, heavily forested and with very limited infrastructure, while many outlying islands are atolls or raised coral islands. Some islands, notably the Santa Cruz Islands to the southeast, are very isolated, with many only accessible by sea. It has a population of approximately 560,000 spread over 347 inhabited islands, which poses significant coordination, logistic and communication challenges during emergencies.

The Solomon Islands Government has established a national cluster system. While it differs from the international cluster approach, it does provide a relevant in-country framework and counterparts for the regional cluster leads but is referred to as committees comprising of all the relevant sectors.

### Recent History of Disasters

The Solomon Islands is highly vulnerable to natural hazards, including cyclones, tsunamis, floods, and drought.

## **Drought - 2016**

On 9 December 2016, a very strong undersea earthquake of magnitude 8.0 occurred at 4:39am local time about 62 kilometres west-southwest of Kirakira, Makira Ulawa Province in the Solomon Islands. Shaking was strongly felt in Makira, south of Malaita, north of Guadalcanal and in Rennel & Bellona. A tsunami was observed in Makira. The Solomon Islands government estimates that almost 7,000 people have been impacted by the earthquake. A nine-year-old child died in Guadalcanal when a house collapsed. In total, 191 houses have been destroyed and 114 damaged. Eleven schools and a medical clinic have also been damaged by the quake. As of 21 December 2016, the estimated number of people affected had climbed to 9,769 people, according to government data.

In 2016-17, Australia provided **USD \$164.1 million** in ODA to Solomon Islands. Over the past four years, the bilateral program has been stable at around **USD \$92 million**, with future budget allocations expected at similar levels.<sup>78</sup> The Solomon Islands have started feeling the impact of the Pacific wide El Niño-related drought in

<sup>76</sup> <https://reliefweb.int/report/samoa/samoatonga-tsunami-ocha-situation-report-no-5#>

<sup>77</sup> <https://www.preventionweb.net/countries/wsm/data/>

<sup>78</sup> <https://dfat.gov.au/about-us/publications/Documents/solomon-islands-appr-2016-17.pdf>

early 2016. Rationing and water deliveries were instituted in the worst hit parts of the Solomon Islands with predictions that below average rainfall would continue until February 2016. The country's Drought Index puts north east islands in a medium drought, while the south west experiences a high-level drought.

### Flooding - 2014

Three days of heavy rain from Tropical Cyclone Ita caused severe flooding in early April 2014. There were 22 confirmed deaths and over 50,000 people affected, mainly in the capital, Honiara, and other areas of Guadalcanal Province. At the peak of the crisis, approximately 10,000 people were displaced and sheltered in nearly 30 evacuation centres. On 3 April, the Government declared the affected areas a disaster zone and on 5 April, requested the support of the Pacific Humanitarian Team, which deployed over 40 personnel. The total economic value of the flooding's impact is estimated at **SI\$787.3 million (US\$107.8 million)**. This is equivalent to 9.2 percent of gross domestic product (GDP) in the Solomon Islands and gives an indication of the scale of the flooding.<sup>79</sup>

The UN Central Emergency Response Fund (CERF) released **US\$1.8 million** to support life-saving health and WASH activities. The Humanitarian Action Plan funding requirement for immediate response needs was **\$13.6 million**.<sup>80</sup>

### Earthquake - 2013

In February 2013, an 8.0 magnitude earthquake struck off the coast of the Santa Cruz Islands (Temotu Province) and was followed by a one metre high tsunami wave that killed 10 people. OCHA OP deployed six staff members to provide surge support in coordination and Humanitarian Action Plan development. OCHA also provided financial tracking, situation reports, mapping and contributions for early recovery.

### TC Harold – 2020

The Solomon Islands experienced the winds of TC Harold which affected approximately 100,000 to 150,000 Solomon Islanders. The National Emergency Operations Centre indicated that 57 houses were destroyed and another 20 were damaged. Seven classrooms were also destroyed.<sup>81</sup>

A preliminary plan for TC Harold support estimates that some 59,000 people have been affected by TC Harold. There have also been reports of widespread damage to food gardens and houses across four provinces including Honiara city as well as Guadalcanal, Makira and Rennell and Bellona.<sup>82</sup>

In addition, 27 people were reported missing at sea after being swept off a ferry MV Taemareho in rough seas conditions during the high swells caused by Harold. The ship was said to be carrying over 730 passengers on its journey from Honiara city to Malaita province when the incident happened at early hours of 3 April 2020.<sup>83</sup>

Average Annual Loss (AAL) by hazard<sup>84</sup>

| Hazard     | Loss<br>[Million US\$] |
|------------|------------------------|
| Earthquake | 3.61                   |
| Wind       | 21.24                  |

<sup>79</sup> <https://www.gfdrr.org/sites/default/files/publication/pda-2014-solomonislands.pdf>

<sup>80</sup> <https://www.unocha.org/office-pacific-islands/solomon-islands>

<sup>81</sup> <https://www.solomontimes.com/news/damages-caused-by-tc-harold-still-to-be-confirmed/9709>

<sup>82</sup> <https://reliefweb.int/report/vanuatu/tropical-cyclone-harold-situation-report-7-14-april-2020>

<sup>83</sup> <https://public.wmo.int/en/media/news/tropical-cyclone-harold-challenges-disaster-and-public-health-management>

<sup>84</sup> <https://www.preventionweb.net/countries/slb/data/>

|              |       |
|--------------|-------|
| Storm Surge  | 18.42 |
| Tsunami      | 0.13  |
| Volcano      | 0.10  |
| Multi-Hazard | 43.40 |

## **Annex 5: Existing and Ongoing Climate Risk Initiatives in the Pacific**

### **PCRIC**

**Countries Involved:** Cook Islands, Marshall Islands, Samoa, Tonga, and Vanuatu.

The Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI) commenced in 2007 with the aim of providing participating PICs with disaster risk modelling and assessment tools for enhanced DRM. It is a joint initiative of Geoscience Division, SPC, World Bank, and the Asian Development Bank with the financial support of the Government of Japan, the Global Facility for Disaster Reduction and Recovery (GFDRR) and the ACP-EU Natural DRR Programme.

At the 2015 FEMM, Pacific Islands' ministers of finance agreed to form a regional risk pool that gives governments access to affordable, catastrophic insurance to cover against climate and seismic hazards. In 2016, the region's first catastrophe insurance platform was established – the Pacific Catastrophe Risk Insurance Company (PCRIC) – and is owned and directed by its subscribing members: Cook Islands, Marshall Islands, Samoa, Tonga, and Vanuatu.

PCRIC policies are designed to payout within 10 days of a triggered event. Payouts provide an immediate injection of money for emergency costs and cushion the fiscal shock to the national budget. To date, two payouts to Tonga and Vanuatu resulted in the release of more than US\$3.2 million in funding. The US\$1.9 million paid to Vanuatu totalled eight times the emergency budget provision<sup>85</sup>.

Currently, PCRIC members and other countries are looking to expand insurance cover for additional climate hazards like drought and excess rainfall.

### **IFC**

**Countries Involved:** PNG

The IFC and the World Bank are taking part in a broad effort to create innovative insurance products that will be crucial to economic growth in emerging markets. They also participate in the Global Innovation Lab for Climate Finance, which supports the identification and piloting of cutting-edge climate finance instruments, including programs to develop new insurance mechanisms.

- Index insurance initiatives are being tried around the world. The largest effort is the Global Index Insurance Facility, a multi-donor trust fund managed by IFC and the World Bank which operates in 31 countries (primarily in Sub-Saharan Africa, Asia, and Latin America and the Caribbean) and insures a total of 1.3 million farmers<sup>86</sup>.
- Potential next steps in **PNG** include the implementation of a full feasibility study for agriculture insurance, the design and implementation of crop insurance pilots, the creation of an Agricultural Insurance Committee, and the creation of a Technical Support Unit.<sup>87</sup>

### **Australia / IFC Fiji Partnership**

**Program Name:** Fiji Insurance

The objective is to address the lack of market-based insurance solutions to cover the disaster risk exposures of institutions (banks, financial institutions - FIs, businesses, SMEs) and individuals (households, MSMEs) in Fiji. It will develop insurance products and facilitate access to the reinsurance market to mitigate the impact

<sup>85</sup> <https://www.worldbank.org/en/news/feature/2017/12/19/taking-matters-into-own-hands-disaster-risk-insurance-in-the-pacific>

<sup>86</sup> "Innovative Insurance to Manage Climate Risks", IFC, <https://www.ifc.org/wps/wcm/connect/d6407581-5ad1-4144-abe2-df06e5f3168c/Note-9-EMCompass-Innovative-Insurance-to-Manage-Climate-Risks.pdf?MOD=AJPERES>

<sup>87</sup> "Achievements in ACP Countries by GLOBAL INDEX INSURANCE FACILITY Phase 1 (2010-2015)", [https://www.indexinsuranceforum.org/sites/default/files/GIIF\\_ACP\\_Report\\_Eng\\_Web.pdf](https://www.indexinsuranceforum.org/sites/default/files/GIIF_ACP_Report_Eng_Web.pdf)  
<https://indexinsuranceforum.org/project/feasibility-study-crop-and-livestock-index-insurance-papua-new-guinea>

of disasters to institutions and individuals, thereby contributing to enhancing productivity and sustainable investments in Fiji.

IFC's role and value add in the disaster risk insurance market space is along several lines:

- 1) TA in disaster, agriculture, weather (index/parametric) insurance product design, particularly portfolio/business interruption insurance product(s);
- 2) using and building the analytical tools and data sets needed to price and structure the insurance products;
- 3) linking insurance companies to viable distribution channels;
- 4) introducing and developing technology solutions to ease the insurance claims administration and loss assessment processes; and
- 5) linking via the World Bank to stimulate the market with PPP solutions, particularly access to risk transfer/reinsurance markets.

### **Initiative to Develop Pacific Finance and Insurance Products Launched with €1 Million Support from Luxembourg**

#### **Countries Involved: Fiji**

The Fijian Government has officially launched an important new initiative to develop finance and insurance products that are tailor-made to the needs and circumstances of vulnerable and low-income households in Fiji and other Pacific Island Countries. The Government of Luxembourg will provide initial funding of 1 million euros for the initiative.

The Pacific Climate Finance and Insurance Incubator – known as the *Drua Incubator* – will bring together leaders in finance, investment, and insurance to develop and “incubate” transformational and scalable financial and insurance products that meet the specific requirements of Pacific Small Island Development States.

The incubator will also support the work the Government is doing to develop crop insurance in Fiji.<sup>88</sup>

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<sup>88</sup> <https://cop23.com.fj/initiative-develop-pacific-finance-insurance-products-launched-e1-million-support-luxembourg/>



## Annex 6: Linkage to SDGs

In 2015, world leaders agreed to 17 goals, acknowledged as the Strategic Development Goals or SDGs, for a better world by 2030. These goals have the power to end poverty, reduce inequality, and help manage climate change. All Pacific Small Island Developing States (PSIDS) are also guided by the SDGs and are actively working towards achieving their targets.

Based on the Pacific Insurance and Climate Adaptation Programme logic framework and theory of change, we can determine that the Programme has relevance to all SDGs, however, this can be viewed at differing levels based on the impact on the policy outcomes and targets under specific SDG goals:

- **Tier 1** (Direct/high Impact to major policy outcomes): **SDGs 13 and 17**
- **Tier 2** (high to moderate impact to policy outcomes): **SDGs 1, 5, and 8**
- **Tier 3** (moderate impact to policy outcomes): **SDGs 2, 3, 4, 6, 7, 9, 10, 14, and 15.**

### **SDG 13: Climate Action: Take Urgent Action to Combat Climate Change and its Impacts.**



At its core, the Programme will support PSIDS in their fight against the threats and impacts of climate change. The effects are already visible across the Pacific and will be catastrophic unless significant action is taken to mitigate the identified risks. Through the Programme, adequate education, innovation, and adherence will be provided to PSIDS for better implementation of their climate commitments and to make the necessary changes to better prepare, protect, and promote greater prosperity and disaster resilience within their countries and economies.

The Programme will directly address the following five targets to create action to combat climate change:



#### **Target 13.1: Strengthen resilience and Adaptive Capacity to Climate Related Disasters:**

**Rationale:** Through its 4 workstreams of 1) enabling policy and regulation 2) open digital payments ecosystem, 3) inclusive innovation and 4) Customer empowerment, the Programme will work with key state actors and the private sector in PSIDS to develop comprehensive CDRF strategies and innovative (digital) financial instruments that will strengthen each countries resilience and build adaptive capacity to climate-related hazards and disasters.



#### **Target 13.2: Integrate Climate Change Measures into Policies and Planning**

**Rationale:** Under the enabling policy and regulation workstream, the Programme will develop tailored CDRF strategies for each PSIDS through assessing and reviewing their current CDRF environment (mechanism, regulations, policies etc.) and creating a layered CDRF strategy to more efficiently finance the impacts of different natural hazards. To this effect, the Programme will jointly work with key Government ministries, DRM authorities, humanitarian agencies, civil society, and the private sector to consider all relevant perspectives when integrating climate change measures into national policies, strategies, and planning.



#### **Target 13.3: Build Knowledge and Capacity to Meet Climate Change**

**Rationale:** The Programme will promote awareness raising and education on natural hazards, disasters, and the role of different CDRF tools. Under the open digital payments ecosystem and inclusive innovation workstreams, the Programme will develop and enhance capacity for distribution channels for CDRF and insurance instruments. These interventions will assist in directly addressing target 13.3 which aims to improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning.



### Target 13A: Implement the UN Framework Convention on Climate Change

**Rationale:** The Programme will assist PSIDS to implement their commitments to the United Nations Framework Convention on Climate Change to reach a goal of jointly mobilizing \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund.



### Target 13B: Promote Mechanisms to Raise Capacity for Planning and Management

**Rationale:** Given the partnership of PFIP and MCII, lessons learned from the Caribbean will be transferred to the Pacific and tailored to the needs of PSIDS. The Programme will partner with local civil society organizations and NGOs to train people on disaster risk resilience and CDRF instruments, hence, promoting mechanisms for raising capacity for effective climate change-related planning and management in PSIDS, including focusing on assisting women, youth and local and marginalized communities.

## SDG 17: Partnerships for the Goals: Strengthen the means of Implementation and Revitalize the Global Partnership for Sustainable Development.



The Programme, as a joint programme of the UNDP and UNCDF, with key partnerships with the MCII, National Governments, NGOs, civil society, and the private sector will be an instrumental enabler or pillar for supporting 10 out of the 19 targets to create action for partnerships for the SDG 17 goal. With strategic interventions at the national level on building disaster risk resilience and CDRF/DRM capacity, the Programme is well placed to be a supportive, inventive, passionate, and cooperative partner in the Pacific.

The 10 targets under SDG 17 that the Programme links to is represented below:



**Rationale:** Under the enabling policy and regulation workstream, the Programme will undertake research on natural hazards and catastrophes and their impacts and provide a gap analysis on current DRM strategies in PSIDS. Additionally, a key objective is to conduct market research on possible CDRF and insurance solutions including identifying how Pacific Governments and communities can link their CDRF and insurance mechanisms to specific DRM activities to ensure quicker responses and recovery times. These interventions link to SDG targets **17.4, 17.6, 17.17, and 17.18**.

By developing CDRF strategies for PSIDS - through assessments and reviews of current CDRF environments and evaluation of CDRF instruments - to more efficiently finance managing the impacts of different natural hazards, the Programme acts an enabler for policy outcomes under targets **17.3, 17.4, and 17.7**. Through jointly working with PSIDS Governments, DRM authorities, humanitarian agencies, civil society, and the private sector to integrate all relevant perspectives, the Programme promotes and encourages effective partnerships – target **17.17**.

Moreover, by developing, testing and implementing localised insurance solutions for the PSIDS, solutions that will be distributed using digital and innovative mechanisms, not only are we promoting sustainable technologies and strengthening innovative capacities for these least developed countries (target **17.8**), we are enhancing (digital) efficiency in the economy (target **17.7**). Also, by helping to create the enabling environment for insurance protection to Pacific Islanders to cope with disasters, we create the opportunity for wealth accumulation by safeguarding Pacific households from using up savings or taking out credit whenever disaster strikes (target **17.4**).

The Programme will facilitate inter-regional, South-South learning, knowledge sharing and research and has established working relationships with the University of the South Pacific (USP), the University of the West Indies (UWI) and the UN University (UNU) Institute of Environment and Human Security. This team of academics, researchers, and technical specialists will be collectively known as the Climate Risk Insurance Research Consortium (CRIRC) and will ensure that all key findings (and data) are documented and shared for the benefit of global learning and knowledge development. This links with targets **17.6**, **17.16**, and **17.17**.

The Programme will also ensure that national Governments and local partners are at the forefront of all interventions and take ownership of the CDRF/DRM strategies. This will ensure sustainability of the initiatives and directly complements targets **17.14** and **17.15** of the SDG goals.

## SDG 1: No Poverty: End Poverty in all its forms everywhere.



**Rationale:** The Programme's goal directly aligns with target **1.5** under SDG 1 as one of the key objectives of the project is to work at the national level with key implementers. We will build the resilience of the poor and those in vulnerable situations to reduce their exposure and vulnerability to climate-related extreme events and other economic, social, and environmental shocks and disasters.



With the deployment of insurance and other financial instruments to help households from falling back below the poverty line, the Programme would help to reach targets **1.2** and **1.4**. Moreover, after disasters happen, increased government support to vulnerable families, including those who depend on social protection schemes, will also decrease their chances of falling deeper into poverty. A disaster risk insurance scheme would also provide an economic protection mechanism for national Governments.

## SDG 5: Gender Equality: Achieve Gender Equality and Empower all Women and Girls



**Rationale:** The Programme will work to see how women are affected differently from men after disasters, assess the coping mechanisms that they use, and understand what financial instruments would be useful for them. The Programme will also investigate how financial instruments for DRM can be better tailored to women and how they can better meet their needs. These interventions have a significant impact on targets **5.1**, **5.5**, **5.A** and **5.B**.



## SDG 8: Decent Work and Economic Growth: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.



**Rationale:** Comprehensive CDRF strategies will help partner Governments and their citizens better cope with the aftermath of disasters, strengthening the post-disaster economy overall, helping to avoid losses to wellbeing, and maintain development trajectories. With a new CDRF product in the market, MSMEs could be protected from incurring loss during disasters and other catastrophes. Likewise, it would also help individuals protect their assets. The Programme's role in facilitating these initiatives will be instrumental in impacting target **8.10** of the SDGs.



## **Annex 7: Country Development Plans**

### **Fiji**

#### **5-Year & 20-Year National Development Plan (2017)**

Link to document: <https://www.fiji.gov.fj/getattachment/15b0ba03-825e-47f7-bf69-094ad33004dd/5-Year-20-Year-NATIONAL-DEVELOPMENT-PLAN.aspx>

#### ***20-Year Plan***

##### **Climate Change**

Fiji will continue its stewardship of climate change issues at the local, regional, and global level with the plight of small island developing states at the centre of this concern. We will work together with other nations to access climate finance and explore innovative ways of mobilizing public and private sector resources for adaptation and mitigation. This includes support for community-based adaptation planning.<sup>89</sup>

##### **Provision of Affordable Housing**

To assist those households whose homes are destroyed during disasters, government will set up a contingency fund and explore opportunities for disaster insurance schemes with bilateral development partners and multilateral financial institutions. This is critical given Fiji's vulnerability to climate change and natural hazards.<sup>90</sup>

#### ***5-Year Plan***

##### **Improve Access to Finance**

Work with the insurance sector to develop insurance packages for climate and disaster related adversities.<sup>91</sup>

#### **NDC document "Fiji's Intended Nationally Determined Contribution":**

[https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Fiji%20First/FIJI\\_inDC\\_Final\\_051115.pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Fiji%20First/FIJI_inDC_Final_051115.pdf)

#### **5.1 Adaptation:**

Short Term (up to 2 years) • Partner with civil society in undertaking capacity building at divisional and community level on building resilience, including through incentivising performers/performance.

Long Term (over 5 years) • Capacity building provided to communities for which vulnerability assessments have indicated that relocation is the long-term adaptation strategy to minimise risks due to anticipated impacts of climate change.

#### **NAP document "Republic of Fiji National Adaptation Plan: A pathway towards climate resilience":**

[https://www4.unfccc.int/sites/NAPC/Documents/Parties/National%20Adaptation%20Plan\\_Fiji.pdf](https://www4.unfccc.int/sites/NAPC/Documents/Parties/National%20Adaptation%20Plan_Fiji.pdf)

8.2 Ensure that finance and planning institutions play a central role in strategic, whole-of-country approaches for climate change and disaster resilient development, and that all opportunities for financial and technical support, climate change financing, and insurance are pursued, with support from regional agencies.

11.6 Support and develop capacity of national and sub-national government entities to access finance from regional and international sources and funds.

11. 8 Identify the potential for national-level debt relief as a way to raise climate finance for adaptation and disaster management.

<sup>89</sup> Fiji 5-Year & 20-Year National Development Plan (Page 16)

<sup>90</sup> Fiji 5-Year & 20-Year National Development Plan (Page 4)

<sup>91</sup> Fiji 5-Year & 20-Year National Development Plan (Page 95)

12.A.9 Strengthening the resilience of farmers and farming families by encouraging the diversification of agricultural produce for subsistence consumption and market sales (especially in the sugarcane belt, coastal and interior areas and marginal land), promote the (traditional) use of food preservation, processing and storage practices, seed banks, advance inclusive market information and dissemination systems, improve financial literacy and inclusive access to financial services, collaborate with the private sector to develop low-cost and locally produced feed supplements, encourage farm based business schemes and investment into value addition and commercial agriculture venture.

## **Vanuatu**

### **Vanuatu 2030: The People's Plan**

Link to document: <https://www.gov.vu/attachments/article/26/Vanuatu2030-EN-FINAL-sf.pdf>

### **Environment Goals and Policy Objectives – Climate and Disaster Resilience**

ENV 3.3: Strengthen post disaster systems in planning, preparedness, response, and recovery.

ENV 3.4: Promote and ensure strengthened resilience and adaptive capacity to climate related and man-made hazards.

ENV 3.5: Access available financing for climate change adaptation and DRM.<sup>92</sup>

### **Vanuatu's National Adaptation Programme for Action (NAPA)**

[https://www.adaptation-undp.org/sites/default/files/downloads/vanuatu\\_napa.pdf](https://www.adaptation-undp.org/sites/default/files/downloads/vanuatu_napa.pdf)

#### **Priority 2. Sustainable Tourism Development**

Objective 3: Contribute to wider national and international understanding of climate change adaptation policies and measures by documenting and disseminating the success factors, lessons learned and barriers, as well as good practice guidelines for replication and upscaling.

#### **Priority 5. Integrated Water Resource Management**

Objective 1: To develop and pilot strategies for building resilience of farmers to the impacts of climate change and climate variability.

Outcome 1. Sustainable livelihoods practices in pilot sites enhance resilience of farmers to cope with climate change and climate variability.

Outcome 3. Climate change risks, preparedness, and mitigation integrated in protected area and watershed planning

Outcome 4. Community's awareness of climate change and variability issues enhanced leading to successful replication of coping strategies in other areas.

## **Solomon Islands**

### **National Development Strategy (2016-2035)**

Link to Document: <https://www.adb.org/sites/default/files/linked-documents/cobp-sol-2017-2019-ld-01.pdf>

Medium Term Strategy 10: Improve disaster and climate risk management, including prevention, risk reduction, preparedness, response and recovery as well as adaptation as part of resilient development.<sup>93</sup>

Build capacity of development planners at all levels to routinely integrate risk management (e.g. DRR and climate change adaptation) into development plans and policies.<sup>94</sup>

### **Solomon Islands: National Adaptation Plan of Action 2008**

<https://unfccc.int/resource/docs/napa/slb01.pdf>

<sup>92</sup> Vanuatu 2030: The People's Plan – Page 14

<sup>93</sup> Solomon Islands national Development Strategy (2016-2035) – Page 14

<sup>94</sup> Solomon Islands national Development Strategy (2016-2035) – Page 44

## Component 5.

Education, awareness and information on climate change, the main objective of this component is to promote climate change education, awareness, and information dissemination.

Outcome 1: Incorporation of climate change issues and concerns into school syllabuses.

Outcome 2: Development of Teaching Manual on impacts of climate changes for use in teacher training.

5.7 Tourism. To integrate climate change adaptation strategies and measures into tourism planning and development.

## PNG

### **Papua New Guinea Vision 50**

Link to Document: <https://actnowpng.org/sites/default/files/png%20version%202050.pdf>

### **Strategic Focus Area 5: Environment Sustainability and Climate Change**

#### **Objective**

Sustainable development measures developed in all sectors to increase resilience to the impacts of climate change and environmental changes. Effective partnership and cooperation with international community on environmental sustainability and climate change.<sup>95</sup>

## Samoa

### **Strategy for the Development of Samoa 2016/17 – 2019/20**

Link to Document: <http://extwprlegs1.fao.org/docs/pdf/sao165879.pdf>

#### **Key Outcome 14: Climate and Disaster Resilience**

Climate and disaster resilience policies will be maintained in Samoa that detail DRM arrangements to ensure the mitigation of, preparedness for, response to and recovery from the impact of disasters.<sup>96</sup>

### **National Adaptation Programme of Action, Samoa, Ministry of Natural Resources, Environment & Meteorology**

<https://unfccc.int/resource/docs/napa/sam01.pdf>

The main objectives of Samoa's NAPA are:

1. To develop and implement immediate and urgent project-based activities to adapt to climate change and climate variability;
2. To protect life and livelihoods of the people, infrastructure and environment;
3. To incorporate adaptation measures and goals into national and sectoral policies, and development goals; and
4. To increase awareness of climate change impacts and adaptation activities in communities, civil society and government.

## Tonga

### **Tonga Strategic Development Framework 2015 – 2025**

Link to Document: <http://extwprlegs1.fao.org/docs/pdf/ton168846.pdf>

**TSDF Organizational Outcome 5.4:** Improved national and community resilience to the potential disruption and damage to wellbeing, growth and development from extreme natural events and climate change, including

<sup>95</sup> Papua New Guinea Vision 50 – Page 42

<sup>96</sup> Strategy for the Development of Samoa 2016/17 – 2019/20 – Page 15

extreme weather, climate and ocean events, with a focus on the likely increase in such events with climate change.<sup>97</sup>

### **Intended Nationally Determined Contributions**

[http://prdrse4all.spc.int/system/files/tonga\\_indc.pdf](http://prdrse4all.spc.int/system/files/tonga_indc.pdf)

### **Section 7: Climate Financing and Resourcing the INDC**

The INDC can serve as a key component Tonga's climate action plans, financing and resource mobilization by adopting the following short to medium initiatives recommended by the 2015 Climate Financing and Risk Governance Assessment;

1. Open to access climate financing through multiple channels;
2. Explore multi-pronged approach to accessing climate funds but not limited to the Green Climate Fund, Adaptation Fund, Climate Technology Centre and Network Global Environment Facility;
3. Open Processes for Climate Financing Options;
4. Commit appropriate recurrent budget to maintain stable, permanent, well trained cadre of climate financing staff to monitor and evaluate climate financing opportunities.

### **Joint national action plan on climate change adaptation and disaster risk management 2010–2015**

[https://www.adaptation-undp.org/sites/default/files/downloads/tonga\\_jnap\\_2010-2015.pdf](https://www.adaptation-undp.org/sites/default/files/downloads/tonga_jnap_2010-2015.pdf)

Goal 1: Improved good governance for climate change adaptation and disaster risk management (mainstreaming, decision making, organizational and institutional policy frameworks).

Goal 2. Enhanced technical knowledge base, information, education, and understanding of climate change adaptation and effective disaster risk management.

Goal 3. Analysis and assessments of vulnerability to climate change impacts and disaster risk.

Goal 4: Enhanced community preparedness and resilience to impacts of all disasters.

### **Kiribati**

#### **Kiribati Development Plan 2016-19 Strategy**

Reduce the vulnerabilities to the impacts of climate change and disaster risks through more programs designed to mitigate against climate change and more programs implemented to assist with the adaptation to climate change.<sup>98</sup>

Link to Document:

<http://www.mfed.gov.ki/sites/default/files/Kiribati%20Development%20Plan%202016%20-%202019.pdf>

### **Cook Islands**

#### **National Sustainable Development Plan 2016 – 2020**

Link to document: <https://www.adb.org/sites/default/files/linked-documents/cobp-coo-2017-2019-Id-01.pdf>

### **Goal 13: Strengthen resilience to combat impacts of climate change and disasters**

#### **Promote Resilience Communities**

Indicator 13.1 Resilience Index

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<sup>97</sup> Tonga Strategic Development Framework 2015 – 2025 – Page 78

<sup>98</sup> Kiribati Development Plan 2016-19 – Page 38



The main aim of disaster risk mitigation efforts to reduce overall vulnerabilities of our island communities. Cook Islands have developed a resilience index which assesses efforts to reduce vulnerability of each island.

### **Enhance protection from cyclones**

Indicator 13.2 Percentage of people that have access to protection from category 3 or higher cyclone.<sup>99</sup>

## **Niue**

### **National Strategic Plan 2016 – 2026**

Link to document: <http://extwprlegs1.fao.org/docs/pdf/niu184000.pdf>

### ***Climate Change and Natural Hazards***

#### **A safe and resilient Niue to impacts and challenges of climate change**

Having an integrated approach towards increasing Niue's resilience to climate change by strategically addressing risk and vulnerability will be done by creating a well-planned and funded platform to adapt, mitigate, and manage disaster risk through partnerships at the nation, regional and international level.<sup>100</sup>

## **Tuvalu**

### **National Strategy for Sustainable Development 2016 – 2020**

Link to document: <https://www.adb.org/sites/default/files/linked-documents/cobp-tuv-2017-2019-ld-02.pdf>

### **3.5 Climate Threats and the economy**

Tuvalu's fragile economy is at risk from major and even comparatively minor climate change induced disruption. Economic growth and stability will become of secondary importance if the government is regularly forced to respond to the effects of climate change, at considerable cost and at the expense of general national development. Among other plans and initiatives to combat the effects of climate change, the Government of Tuvalu has established at Tuvalu Survival Fund (TSF) to finance climate change adaptation investments, and recovery from climate change impacts and disasters. The TSF will make available extra budgetary resources as needed, which will lessen claims on resources for normal government services in the event of immediate and unforeseen impacts from climate change and disaster recovery.<sup>101</sup>

## **Federal States of Micronesia**

### **Strategic Development Plan (2004 – 2023)**

Link to Document: <https://www.adb.org/sites/default/files/linked-documents/cobp-fsm-2015-2017-sd-02.pdf>

**Strategic Goal 1:** Mainstream environmental considerations, including climate change, in national policy and planning as well as in all economic development activities.<sup>102</sup>

## **Nauru**

### **National Sustainable Development Strategy 2005 - 2025**

Link to Document: <https://nauru-data.sprep.org/dataset/national-sustainable-development-strategy-2005-%E2%80%93-2025/resource/f2f45188-d6c0-4993-bf48>

## **11. Policies and Institutions for Environmental Sustainability**

<sup>99</sup> Cook Islands National Sustainable Development Plan 2016 – 2020 – Page 45

<sup>100</sup> Niue National Strategic Plan 2016 – 2026 – Page 31

<sup>101</sup> Tuvalu National Strategy for Sustainable Development 2016 – 2020 – Page 19

<sup>102</sup> FSM Strategic Development Plan (2004 – 2023) – Page 287



Nauru's major environmental risk is the mined-out phosphate lands that cover almost 90% of the island. Effective land rehabilitation has not happened. A national environmental management strategy exists but implementation has stalled. Adequate environmental legislation is not in place. Sector ministries do not incorporate environmental concerns. Environmental public awareness and education are not provided.<sup>103</sup>  
*Nauru does not have any development strategy regarding climate change.*

### **The Republic of the Marshall Islands**

#### **National Environment Management Strategy 2017–2022**

Link to Document: <https://www.sprep.org/sites/default/files/documents/publications/RMI-NEMS-2017-2022.pdf>

### **3.1 Theme one: Atmosphere and Climate – SDG 7, 13.**

#### **Strategies**

- ❖ Establish and support an enabling environment for improved coordination of DRM/climate change adaptation in RMI.
- ❖ Enhanced Emergency Preparedness and Response at all levels of Government.
- ❖ Improve information for storm surge preparedness and implementation of emergency response/action plan.<sup>104</sup>

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<sup>103</sup> Nauru National Sustainable Development Strategy 2005 – 2025 Page 20

<sup>104</sup> The Republic of The Marshall Islands National Environment Management Strategy 2017–2022 Page 5

## **Annex 8: Key Strategic Instruments**

### **Assessments and Research**

Under the Enabling Policy and Regulation workstream, a series of activities will also cover risk analysis and research focusing on conducting need-based primary research and use all available secondary research inputs to identify specific risks that affect communities and countries. Data analytics and research support will be provided to policy makers and regulatory bodies in the region. The objective of this technical assistance is to strengthen the capacity of national statistical systems to produce better, more reliable and internationally comparable data on disaster risk profiles and the corresponding financing needs for PSIDS.

### **Technical Advisory**

The Programme will provide specialised technical advice through in-house specialists as well as specialised expertise through consultants to address specific programme objectives. The technical advisory will cover sectors like agriculture, fisheries, and tourism as well as the targeted vulnerable segments like women, youth, and MSMEs. Other technical expertise required in the areas of parametric Insurance, CDRF, human-centred design, data analytics, weather modelling, etc. will also be through a combination of staff and hired resources. The Programme will leverage on the pool of technical expertise available within MCII given their significant work done in the Caribbean and their strong relationships with reinsurers, modellers, and service providers.

### **De-Risking Financial Instruments**

UNCDF's core financial instruments available to the Programme include grants, loans, guarantees and more increasingly blended finance instruments that use public and philanthropic funds to catalyse private and commercial investments.

Grants are used as seed capital to support insurers, FSPs, entrepreneurs, innovators and other service providers in developing and testing new & innovative solutions. They provide the necessary financial incentive for service providers to experiment and iterate new solutions.

To promote investment in digital technologies and speed up the rollout of CDRF products, the Programme will examine opportunities to deploy blended finance instruments to lower the up-front capital costs and/or reduce the investment risk for the private sector. Policies and investments, such as Public Private Partnerships (PPPs) and infrastructure sharing, that help reduce wholesale costs and facilitate investment, particularly in underserved areas, will be critical to driving the next wave of development and digital transformation for Pacific countries. Careful attention is needed to ensure that these investments are structured to maintain competitive neutrality and to minimise risks of distorting investment incentives for the private sector.

The Programme will leverage its partnership through UNCDF (for instance through the BUILD fund and the Last Mile Trust Fund) to enable Pacific insurers, FSPs, entrepreneurs, innovators and other service providers access funding through loans and guarantees. A dedicated blended financing facility where up to 15% of the total project budget will be allocated progressively is under consideration. Use of such instruments increases the leverage of funds, ensuring that projects funds are recycled through repayment of loans and redeployed to reach more partners, thereby increasing the efficiency of donor funding.

### **Capacity Building and Training**

The Programme recognises the need to build the capacities of Governments and other stakeholders to deliver sustainable results, hence a lot of focus will be given to deliver relevant, appropriate training and other capacity building Interventions to project partners. All the four workstreams will have activities relating to capacity building of Implementing partners, communities, Individuals and MSMEs.

### **Implementation and Partnerships**

The Programme will work with public and private sector stakeholders to encourage and support activities across the four workstreams. A strong country presence is crucial to provide the kind of continued support needed to build trust and create sustainable programme outcomes.

Stakeholder engagement is conducted through three main stages:

- Buy-in, i.e. engaging stakeholders through market research, workshops and face-to-face meetings to build strong relationships within the sector;
- Improve, i.e. working with service providers to expand and improve their current business and built credibility; and
- Innovate, i.e. by working with service providers to develop and launch innovative CDRF products and services and build partnership models to better reach rural areas and vulnerable segments.

### Education and Awareness Raising

Currently the people of the Pacific cope with the impacts of natural hazards using different coping mechanisms such as borrowing money from friends and family, receiving remittances from family abroad, reducing their consumption, and receiving aid from churches, local or international NGO, and government. Knowledge of more formalised support from the private sector is often low due to individuals' lack of experience with formal banks and insurance companies. For this reason, education and awareness raising will be a crucial part of the introduction of new CDRF instruments, such specialised savings accounts, parametric insurance, of contingency loans. If individuals and communities start using these instruments with having received education on how they work, there is the chance that a misunderstanding, which can cause the people to lose trust in these instruments and the institutions that offer them.

### Data and Insights

The collections and usage of data is crucial in evaluating natural hazards and the risk they pose to people, the economy, and society. Fortunately, much data on natural hazards and their Impacts has already been collected by met offices, governments, local NGOs, and international organizations. The Programme thus plans to first conduct a gap analysis of the existing data that is already available for the country. Based on the results of this gap analysis, a risk assessment will be done focusing on filling the existing gaps. This data collection will give governments, cooperatives, and communities better insights on how the different hazards that affect their livelihoods and should help in identifying the types of CDRF instruments that would be most appropriate in addressing these risks.

### Customer Centricity

Customer centric design and innovation is a key instrument for ensuring that the Programme's projects create value for each segment of the targeted population (small holder farmers, women, MSMEs). It enables a better understanding of the specific needs of various customer segments at various stages in their life cycle and serves as a basis for developing tailored solutions for the target audience, considering their preferences in terms of products/ services, user interfaces and pricing.

To do this, the Programme will use a shared Innovation and Incubation Specialist with its sister programme, with expertise on design, data analytics and customer engagement and who will be deployed at the various stages in projects pertaining to development of products and services (prototyping, testing and scale-up).

### Performance Measurement

The Programme plans to employ the MEAL to actively monitor the progress of the project, as well as to continuously evaluate the project work and incorporate lessons learned into the next phases. Simple, precise indicators will be used to transparently show the achievements of the project, as well as to highlight any challenges that arise and must be addressed. A biannual review on the progress that has made been on the project will be conducted to give the project partners the opportunity to evaluate what activities are successful and where improvements need to be made.

## **Annex 9: Investment Committee's Terms of Reference (draft)**

### *Draft Sub - Investment Committee Policy*

*The purpose of the Sub Investment Committee (IC) Policy is to define the composition, authority, role, and responsibilities of the Sub-IC in order to guide Sub-IC members. This policy is grounded in the Project Document to be considered for approval by the proposed Sub-IC: This Policy document may be amended from time to time by decision of the Sub-IC and signed by the Sub-IC Chairperson. The Sub-IC will resort under the Pacific Investment Committee and may have overlap of in terms of its membership.*

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## **1. Role of Sub - Investment Committee**

- 1.1. The Sub-IC shall oversee the implementation of the programme and to approve financial support under the Support Facility, a funding allocation under the Programme, in accordance with the Project Document.
  - 1.1.1. The Sub-IC shall act as the Management Board in accordance with "PRINCE 2" (Project in Controlled Environments), the project management and accountability methodology which has been adopted corporately by UNDP globally. The three primary management roles are:
    - 1.1.1.1. the executive role to ultimately ensure accountability for the project;
    - 1.1.1.2. the senior user role is to ensure that the outputs produced meet the needs of the end-user, in this case the Pacific Small Island Developing States (PSIDS); and
    - 1.1.1.3. the senior supplier role is to commit resources to ensure that the outputs produced will achieve the intended objectives within design, cost and time parameters.
  - 1.1.2. The IC shall also be the decision-making body over the Support Facility including:
    - 1.1.2.1. appraisal of proposals for financial and technical support;
    - 1.1.2.2. approval of financial support; and
    - 1.1.2.3. ensuring the Programme Management Team is appropriately monitoring funded partners.
- 1.2. The Sub-IC shall collectively discharge the responsibilities of each of the roles and shall determine the best means to do so.
- 1.3. The Sub-IC mechanism is in line with the Paris Declaration on Aid Effectiveness calling for donors' actions to be more harmonized transparent and collectively effective.

## **2. Composition of Sub - Investment Committee**

- 2.1. The IC shall be composed of the Programme's main cost-sharing and policy advocacy partners.
- 2.2. The Sub-IC shall consist of members from the following organizations:
 

**Founding Partners:**

  - 2.2.1. UNCDF;
  - 2.2.2. UNDP (Fiji MCO);
  - 2.2.3. United Nations University, Bonn;
  - 2.2.4. Pacific Islands Forum Secretariat; and

**Current Donor Partners**

  - 2.2.5. One member each from donor partners providing financial support of minimum USD\$1 million per annum to the Programme.
- 2.3. Designated members may appoint an alternate from their organization to participate in the members' absence. Both members and alternates may participate in regular IC meetings.
- 2.4. New organizations may be added to the IC according to the following guidelines.
  - 2.4.1. Organizations providing more than USD \$1 million per annum in financial support to the Programme shall be entitled a seat on the IC.

2.4.2. Other organizations with relevant policy advocacy or programme activities that reinforce the Programme's strategic objectives and/or contribute to disaster risk financing may be invited with the unanimous approval of the Sub-IC.

### **3. Decision-making**

- 3.1. Sub-IC decisions should be made by unanimous consent.
- 3.2. If an IC member and his/her alternate are unable to attend meetings, may provide their input in advance to the Sub-IC Secretary or may delegate authority to another Sub-IC member.
- 3.3. If consensus cannot be reached, the Sub-IC may opt for a majority vote at the discretion of the Chairperson.
- 3.4. All organizations have a single vote, regardless of the number of members and alternates present at the Sub-IC meeting.

### **4. Term of Service and Meetings**

- 4.1. The participating organizations of the IC shall appoint a member at their discretion to the Sub-IC for a term of no less than 18 months.
- 4.2. The Sub-IC shall meet no less than twice per calendar year and shall meet more frequently if necessary.
- 4.3. The Sub-IC may hold meetings either virtually with members providing comments via email, videoconference, teleconference, in person or, when necessary, a combination of each.
- 4.4. The Sub-IC may also agree, by special arrangement (e mail, telephone calls, when timely decisions are required).

### **5. Appointment, Role and Responsibilities of Chairperson**

- 5.1. The Sub-IC shall unanimously appoint a Chairperson for an 18-month term, which is renewable.
- 5.2. The Chairperson is responsible for:
  - 5.2.1. conducting all Sub-IC meetings;
  - 5.2.2. managing voting, when necessary;
  - 5.2.3. requesting the UNDP and/or UNCDF to sign Support Agreements (grants, loans, or contracts);
  - 5.2.4. representing the IC; and
  - 5.2.5. monitoring programme compliance with Sub-IC decisions and recommendations.

### **6. Appointment, Role and Responsibilities of the Secretary**

- 6.1. The Programme Advisor shall act as Secretary to the Sub-IC.
  - 6.1.1. The Secretary shall be assisted by other members of the Programme team forming the Secretariat.
  - 6.1.2. With the approval of the Chairperson, the Secretary may designate another staff member to act as the Secretary from time to time.
- 6.2. The Secretary does not have a vote in the Sub-IC.
- 6.3. The role of the Secretary is to ensure the smooth functioning of the Sub-IC, manage all preparation for Sub-IC meetings, document IC decisions, and respond to Sub-IC requests.
- 6.4. The Secretary is responsible for:
  - 6.4.1. scheduling and organizing all IC meetings;
  - 6.4.2. ensuring that all required documentation is available to facilitate decision-making;
  - 6.4.3. taking and disseminating minute of Sub-IC meetings;
  - 6.4.4. providing documents to the Chairperson for signature;
  - 6.4.5. responding to Sub-IC requests for information.

### **7. The Responsibilities of the Sub-IC**

- 7.1. Provide guidance and strategic direction to the Programme
  - 7.1.1. Advise on and approving the strategy of the Programme;
  - 7.1.2. Approve strategic and programmatic policies, including the Programme Support Facility policy, particularly eligibility and selection criteria.

## 7.2. Approve annual work plan and budget

7.2.1. The Programme Advisor shall present a draft annual work plan to the Sub-IC in no less than four weeks prior to the end of the fiscal year.

7.2.2. The Sub-IC shall meet prior to the end of each fiscal year to review and comment on the annual work plan.

7.2.3. The Programme Management Team shall make changes to the plan as necessary, and the Sub-IC shall approve the final plan in writing by signature of its Chairperson no later than four weeks after the start of the fiscal year.

7.2.4. The Programme Management Team must present budgets for approval to the Sub-IC prior the completion of the respective UNDP Country office plans. The Sub-ICs endorsement of the budget shall be included in the UNDP Country Offices request for approval by the UNDP Regional Bureau for Asia and Pacific (RBAP) during the fourth quarter of the calendar year.

7.2.5. However, budget modifications can be made during the fiscal year to accommodate recommendations and requests by the Sub-IC in accordance with UNDP Country office policies.

## 7.3. Contribute to the performance appraisal of the Programme Team.

7.3.1. The UNCDF member of the Sub-IC has primary responsibility for the annual performance evaluation of the Programme Advisor in accordance with UNDP personnel guidelines.

7.3.2. The Programme Advisor has primary responsibility for the appraisal of the Programme Pacific Team.

7.3.3. The UNCDF member, though shall solicit contributions from the other Sub-IC members as to their opinion of the performance of the Programme Management Team. He / She will incorporate these contributions into the appraisals of the Programme Advisor and the Programme Advisor will subsequently incorporate them into the appraisal of the Programme Team.

## 7.4. Appraise and approve financial support to partners from the Programme Support Facility.

7.4.1. The Sub-IC in its entirety may oversee the Programme Support Facility or it may appoint a subcommittee consisting of IC members to appraise and approve partners' applications.

7.4.2. The Sub-IC may establish approval authorities and delegate approvals less than a certain amount to the Programme Advisor, the Chairman of the Sub-IC, or some combination of the two. These authorities will be documented in the Programme Support Facility Policy.

7.4.3. The Chairperson of the Sub-IC or his/her appointee must forward approvals of all support to the UNDP and/or UNCDF for processing.

## 7.5. Oversee monitoring and evaluation (M&E)

7.5.1. The M & E and Reporting Framework detailed in the project document will apply to the Programme. The Programme must consolidate its progress reports into the UNDP Fiji MCO reports and other UNCDF reporting

7.5.1.1. The M&E plan will be provided to the Sub-IC for comment. Additional M&E activities may be requested by the Sub-IC from time to time.

7.5.1.2. M&E plans will include the requirements for its other funders.

7.5.2. The Sub-IC shall review the regular Programme reports.

7.5.2.1. The Programme Management Team shall provide quarterly reports toward the completion of annual work plan results.

7.5.2.2. The Programme shall provide a semi-annual budget report including actual versus projected expenditures with an explanation of significant variance

7.5.2.3. The Sub-IC shall respond with questions to the reports directed to the Programme Management Team no less than 30 days after receipt of the reports and the team shall respond no less than 10 days.

7.5.3. The Sub-IC shall review the Programme's annual performance.

7.5.3.1. The Sub-IC shall conduct a mid-year project review during the third quarter of the calendar year to assess the performance of the project. It shall focus on the extent to which progress is being made towards annual work plan outputs and the extent to which these remain aligned to appropriate outcomes. It will also inform the next annual work

plan.

7.5.3.2. The Programme management team shall complete an annual programme report no later than four weeks after the end of the calendar year.

7.5.4. The Sub-IC shall review, revise, and approve terms of reference and the evaluation team for mid-term and/or final evaluations.

7.5.4.1. The programme is subject to an independent mid-term and/or final evaluation managed by the UNCDF Evaluation Unit. The evaluation complies with the UNCDF mandatory evaluation requirements in the UNDP Evaluation Policy, to which UNCDF is party. Funding for the evaluation is included in the programme's budget.

7.5.4.2. The evaluation will assess its overall performance, the outputs, and outcomes produced against its initial targets, the impact it has brought or would likely to bring.

7.5.4.3. The evaluations will provide mechanisms for the free and meaningful participation of local stakeholders – including women and targeted vulnerable groups.

7.5.4.4. The evaluation will be forward looking offering lessons learned and recommendations to improve programme performance. The results of these evaluations will feed into strategic, thematic and outcome evaluations carried out by UNCDF and UNDP. Success in carrying out development evaluation requires partnerships in evaluation with national and international actors. Opportunities will be sought for collaboration with programme partners in conducting the evaluations.

7.6. The Sub-IC shall provide reporting on an annual basis to the FEMM and other relevant regional ministerial meetings.

7.6.1. The Sub-IC may delegate some or all of this responsibility to the Programme Advisor.

## **8. Confidentiality and conflict of interest**

8.1. Members of the Sub-IC undertake to keep in strict confidence all proprietary, commercial, or other sensitive information that it may come across in the course of their role and responsibility in the Sub-IC.

8.2. If a member of the Sub-IC believes he or she may have a conflict of interest in any matter being considered by the Sub-IC, this conflict of interest must be reported immediately to the Chairperson who, in consultation with other Sub-IC members, shall rule on the appropriate action to take: including, but not limited to, the member abstaining from contributing to a decision on the matter at hand.

## Annex 10: Focus Sectors

### Agriculture

The Pacific Islands are a diverse home of agricultural products. The countries have combined land mass of 525,000 square kilometres and a maritime territory of greater than 14 million square kilometres.<sup>105</sup> The small land mass, remoteness, geographic dispersion, and vulnerability to climate risks and natural hazards means that many of the Pacific Islands share common agricultural challenges. Pacific Islanders rely quite heavily on agriculture for subsistence and food security, especially in rural areas. Most people depend on resources from agriculture, fisheries, and forests for survival. The agricultural export industry is relatively small and dependent on agricultural commodities such as sugarcane, root crops, vanilla, coffee, coconut, copra, and cocoa.

The table below provides an overview of the contribution of the agriculture sector to PICs, as a percentage of GDP and degree of employment creation. It's evident that Agriculture has a strong impact on the lives of many Pacific islanders; PNG has a significant reliance on the sector with over 22% of its GDP accounted for by agriculture and over 85% of its labour force dependent on the sector. Similarly, countries such as the Solomon Islands, Samoa, Fiji, and Vanuatu have a strong dependency on the sector in terms of both the contribution to the economy and the size of the labour force. For other Pacific nations such as Tuvalu, Niue, and Kiribati, while a lower percentage of the labour force is engaged in the sector, its contribution to the economy is still highly significant.

**Table 1.1.1: Contribution of Agriculture to GDP and Labour Force (2017) in Select PICs<sup>106</sup>**

| Country                      | Agriculture Composition (%) | GDP Labour Force - By Occupation (%) |
|------------------------------|-----------------------------|--------------------------------------|
| PNG                          | 22.1                        | 85                                   |
| Solomon Islands              | 34.3                        | 75                                   |
| Samoa                        | 10.4                        | 65                                   |
| Vanuatu                      | 27.3                        | 65                                   |
| Fiji                         | 13.5                        | 44.2                                 |
| Cook Islands                 | 5.1                         | 29                                   |
| Tonga                        | 19.9                        | 25                                   |
| Kiribati                     | 23                          | 15                                   |
| Marshall Islands             | 4.4                         | 11                                   |
| New Caledonia                | 1.4                         | 2.7                                  |
| Palau                        | 3                           | 1.2                                  |
| Federal States of Micronesia | 26.3                        | 0.9                                  |
| Nauru                        | 6.1                         | Insignificant                        |
| Niue                         | 23.5                        | Insignificant                        |
| Tuvalu                       | 24.5                        | Insignificant                        |

<sup>105</sup> [https://www.ifoam.bio/sites/default/files/page/files/oa\\_pacific\\_web.pdf](https://www.ifoam.bio/sites/default/files/page/files/oa_pacific_web.pdf)

<sup>106</sup> <https://www.cia.gov/library/publications/the-world-factbook/fields/214.html#CW>

[https://www.spc.int/sites/default/files/wordpresscontent/wpcontent/uploads/2016/11/Gilett\\_16\\_Benefish-fisheries-in-economies-of-pacific-countries.pdf](https://www.spc.int/sites/default/files/wordpresscontent/wpcontent/uploads/2016/11/Gilett_16_Benefish-fisheries-in-economies-of-pacific-countries.pdf)



It is apparent that many countries have a heavy reliance on the Agriculture sector, and that any negative impacts to the sector (such as disasters) have far reaching and wide impacts which lead to stagnated agricultural production over the longer term. The sector often endures multiple consequences such as loss of harvests and livestock, outbreaks of disease, and destruction of rural infrastructure and irrigation systems.

### **Impact of Disasters on the Agriculture Sector in selected PICs**

#### ***Fiji***

Based on reported losses from the devastating Tropical Cyclone Winston, it was seen that the effects of the disaster on the Agriculture Sector stood at FJD \$542 million (US\$261 million). The total effects of TC Winston on crops, livestock, sugar, fisheries and forestry was FJD \$542 million, of which FJD \$80.3 million (US\$38.7 million) was attributable to damage and FJD \$460.7 million (US\$222.4 million) attributable to loss. Damages to crops, livestock and infrastructure excluding the sugar sector stood at FJD \$208.3 million.

The total value of recovery and reconstruction needs for the Agriculture sector is estimated at FJD \$161 million (US\$77.7 million); FJD \$65 million (US\$31.3 million) for recovery and FJD \$96 million (US\$46.3 million) for reconstruction needs.

The total value of standing crop of yaqona before the cyclone was FJD \$498.8 million. Yaqona, being one of the major commodities for the local and export markets and being of high value, suffered a total loss of around FJD \$116 million in damage. Dalo is another local and export market commodity that was severely affected by the cyclone. The total value of the damage to taro (Dalo) was around FJD \$20 million. The exact figure is FJD \$17.9 million and the bulk of that was in the Northern division in Taveuni, Cakaudrove mainland and part of Ra.

The next disaster with the most impact was TC Evan that hit in 2012. The total effect to the agriculture sector amounted to FJD \$43.9 million of which FJD \$12.9 million was damage and FJD \$31.0 million was loss. Of the total effect, 86 percent was attributable to the private sector and 14 percent to the public sector.<sup>107</sup> Also, TC Gita (2018), which mostly affected parts of Ono-i-Lau - recorded damages of \$324,162 to the agriculture sector (vegetation, crops and livestock).<sup>108</sup>

Apart from cyclones, droughts have also caused major damage to the sector. The most prevalent was the 1997-98 drought in Fiji which caused FJD \$104 million loss in revenue in the sugarcane industry alone. The Western sides of Viti Levu and Vanua Levu and the Yasawas were the worst hit <sup>109</sup>regions, where food and water was rationed to 90% of the population.

#### ***Samoa***

In December 2012, TC Evan struck the country's two primary islands and caused about SAT \$63 million<sup>110</sup> in damage and losses to the Agriculture sector. A total of SAT \$16.9 million was needed post disaster; SAT \$14.5 million for Agriculture sector recovery and SAT \$2.4 million for reconstruction.

Agricultural commodities that were badly damaged were fruit trees (banana, breadfruit, mango, rambutan, citrus, and avocado) with total damage at around SAT \$390,000. Buildings, machinery and equipment used for agricultural production were damaged and the total cost was around SAT \$4.05 million. Agricultural inputs

<sup>107</sup> [http://www.ndmo.gov.fj/images/AllDisasterReports/PDNA\\_Report.pdf](http://www.ndmo.gov.fj/images/AllDisasterReports/PDNA_Report.pdf)

<sup>108</sup> <https://fijisun.com.fj/2018/02/25/agriculture-sector-hit-hard-damage-estimated-at-324162/>

<sup>109</sup> <http://www.agriculture.gov.fj/index.php/newsroom/press-releases?id=408>

<sup>110</sup> [http://www.gfdr.org/sites/gfdr/files/SAMOA\\_PDNA\\_Cyclone\\_Evan\\_2012.pdf](http://www.gfdr.org/sites/gfdr/files/SAMOA_PDNA_Cyclone_Evan_2012.pdf)

such as fertilisers, seeds and agricultural chemicals were lost, and the estimated cost was around (SAT \$0.2 million).

### **Tonga**

Tonga was hit with Cyclone Gita (in 2018) — the cyclone that had the largest impact on Tonga in its recorded history. After three weeks, Gita heavily affected 70 percent, or 50,000 people. About T\$97.8 million<sup>111</sup> worth of damage was caused to agricultural land (\$92.4 million in losses and \$5.1 million in damage). Cyclone Gita put Tongans at more of a risk as the population mainly depends on fishing and agriculture for its income. Nearly 36 percent of Tonga is comprised of agricultural land.

In 2014, Cyclone Ian caused T\$20.6 million<sup>112</sup> of losses to Tonga's Agriculture and Fisheries sectors. The category 5 cyclone, which made landfall on January 11 caused near total damage to households, food crops and fruit trees. The cyclone damage was been particularly devastating to crops such as cassava and bananas, a staple food for all affected households.

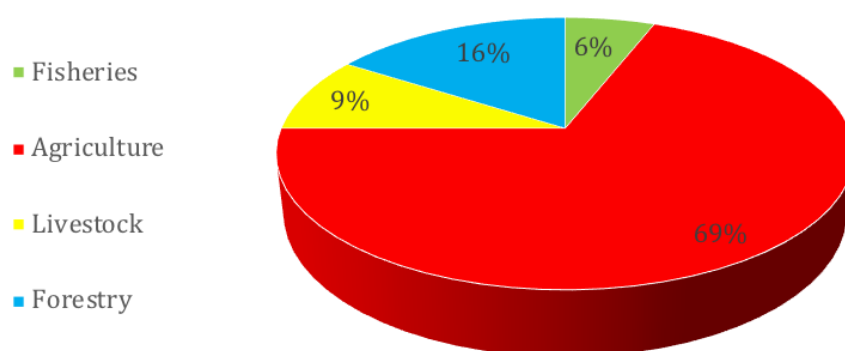
### **Vanuatu**

Cyclone Pam struck Vanuatu as a destructive category 5 cyclone on the evening of 13 March 2015, causing serious damage to infrastructure and destroying and damaging agricultural livelihoods - severely affecting over 200,000 people.

The total effect to the entire agriculture sector amounted to VUV 6.062 billion. Around 96 percent of agricultural products were wiped out in affected areas<sup>113</sup>. Most of the fruit trees had either been destroyed, or completely stripped of all fruit, including coconuts. All leafy vegetables and crops were destroyed. Wild birds and flying fox populations, common bush meat sources in rural communities, have declined by up to 90%.

Out of the four sub-sectors, agriculture was the most affected (69% of all losses and damages) followed by forestry (16%), livestock (9%) and fisheries (6%). Of the total loss and damage, 93% has been borne by the private sector and 7% by the government.

**Figure 1.1.1: Impact of TC Pam on Sectors in Vanuatu**



<sup>111</sup> <https://www.gfdr.org/sites/default/files/publication/Post%20Disaster%20Rapid%20Assessment%20%28Tonga%20-%20TC%20Gita%2C%20February%202018%29.pdf>

<sup>112</sup> <http://www.fao.org/asiapacific/news/detail-events/en/c/215345/>

<sup>113</sup> <http://www.spc.int/sites/default/files/wordpresscontent/wp-content/uploads/2016/12/TC-Pam-Lessons-Learned-Report.pdf>

Table 1.1.2: Economic Estimates of Damage and Losses in the Agricultural Sector in Vanuatu

| Sub-sector               | Damage (Vatu) | Losses (Vatu) | Total Effects (Vatu) |
|--------------------------|---------------|---------------|----------------------|
| <b>Crops Agriculture</b> |               |               |                      |
| Components of damage     | 131,596,000   |               |                      |
| Components of losses     |               | 4,043,278,000 |                      |
| Total crops              |               |               | 4,174,874,000        |
| <b>Livestock</b>         |               |               |                      |
| Components of damage     | 282,752,000   |               |                      |
| Components of losses     |               | 263,133,000   |                      |
| Total livestock          |               |               | 545,884,000          |
| <b>Forestry</b>          |               |               |                      |
| Components of damage     | 738,318,000   |               |                      |
| Components of losses     |               | 212,332,000   |                      |
| Total Forestry           |               |               | 950,650,000          |
| <b>Fishery</b>           |               |               |                      |
| Components of damage     | 268,253,000   |               |                      |
| Components of losses     |               | 122,486,000   |                      |
| Total Fishery            |               |               | 390,739,000          |

### Fisheries

Fisheries is also a significant sector in the Pacific and many Pacific islanders rely on the sector either through subsistence fishing or as formal employment. The table below summarises the importance of the Fisheries sector in the economy as a percentage of GDP.

Table 1.2.1: Contribution of Fisheries to GDP (2017) in Select PICs<sup>114</sup>

| Country                      | Fisheries as a % of GDP |
|------------------------------|-------------------------|
| Marshall Islands             | 14.1                    |
| Federal States of Micronesia | 10                      |
| Tuvalu                       | 9.4                     |
| Kiribati                     | 8.6                     |
| Cook Islands                 | 6                       |
| Niue                         | 4.3                     |
| Samoa                        | 3.5                     |
| Papua New Guinea             | 2.7                     |

<sup>114</sup> <https://www.cia.gov/library/publications/the-world-factbook/fields/214.html#CW>  
[https://www.spc.int/sites/default/files/wordpresscontent/wpcontent/uploads/2016/11/Gilett\\_16\\_Benefish-fisheries-in-economies-of-pacific-countries.pdf](https://www.spc.int/sites/default/files/wordpresscontent/wpcontent/uploads/2016/11/Gilett_16_Benefish-fisheries-in-economies-of-pacific-countries.pdf)

|                 |      |
|-----------------|------|
| Solomon Islands | 2.4  |
| Nauru           | 2.3  |
| Tonga           | 2.3  |
| Palau           | 2.2  |
| Fiji            | 1.83 |
| Vanuatu         | 0.67 |
| New Caledonia   | 0.16 |

## Impact of Disasters on the Fisheries Sector in PICs

### *Fiji*

Cyclone Winston (2016) had a significant detrimental impact to the Fijian economy and the Fisheries sector was also not spared. The Fisheries sector contributes around 1.8% of Fiji's GDP and the damage and loss that it suffered was estimated around FJD \$40.7 million with artisanal fisheries and aquaculture sustaining the highest damage.<sup>115</sup> The cost of damage to physical assets (e.g. boats, engines, gear, post-harvest equipment) in the fisheries sector was estimated at around 80% of the locally available replacement value for the assets that were fully destroyed, and 40% for assets that were damaged but were repairable.<sup>116</sup>

The FJD \$40.7 million damage to the fisheries sector represented 51 percent of the total damage to the agriculture/fisheries sector. The damage assessment covered main fisheries and aquaculture assets, including boats, engines, fishing gear, fishponds, farm equipment, farm buildings (including sheds and tanks), planting materials, farm stock, hatcheries, fences, and fish feed. Ice plants, nurseries, hatcheries, stations, and premises at 13 government stations also sustained damage.<sup>117</sup>

The most significantly affected areas were the coastal subsistence fisheries, with a value of FJD \$27.7 million, accounting for 68 percent of the total damage in the subsector. Coastal commercial fisheries sustained damage amounting to FJD \$5.3 million (13 percent), while damage to aquaculture was valued at FJD \$3.7 million (9.5 percent). Out of the 23 existing government stations, 13 sustained damage at a cost of FJD \$3.8 million (9.5 percent).

### *Samoa*

From Cyclone Evan (2012) in Samoa, the damage and loss for the fisheries sector was estimated around US \$32.8 million – mainly in the commercial and artisanal fisheries sector where boats, canoes, and fishing gear were destroyed. The losses included some freshwater aquaculture farms. The losses comprised about 30 percent of the total agriculture sector GDP.<sup>118</sup>

### *Tonga*

Fisheries represent an average of 2.3 percent of total agricultural GDP. In 2015, a total of 2,360 households in Tonga were engaged in fishing activities, mainly focused on reef finfish and tuna and to a lesser extent on shellfish, lobster, and sea cucumber. The Tongatapu and Vava'u regions had the largest number of households involved in fishing.

<sup>115</sup> [https://fcluster.org/sites/default/files/documents/wcs\\_winstonimpactonfisheries\\_06092016\\_final.pdf](https://fcluster.org/sites/default/files/documents/wcs_winstonimpactonfisheries_06092016_final.pdf)

<sup>116</sup> [https://fcluster.org/sites/default/files/documents/wcs\\_winstonimpactonfisheries\\_06092016\\_final.pdf](https://fcluster.org/sites/default/files/documents/wcs_winstonimpactonfisheries_06092016_final.pdf)

<sup>117</sup> [https://www.gfdr.org/sites/default/files/publication/Post%20Disaster%20Needs%20Assessments%20CYCLONE%20WINSTON%20Fiji%202016%20\(Online%20Version\).pdf](https://www.gfdr.org/sites/default/files/publication/Post%20Disaster%20Needs%20Assessments%20CYCLONE%20WINSTON%20Fiji%202016%20(Online%20Version).pdf)

<sup>118</sup> [http://www.gfdr.org/sites/gfdr/files/SAMOA\\_PDNA\\_Cyclone\\_Evan\\_2012.pdf](http://www.gfdr.org/sites/gfdr/files/SAMOA_PDNA_Cyclone_Evan_2012.pdf)

Cyclone Ian (2014) caused significant damage to Tonga's fisheries sector on the island of Ha'apai and the cost was around T\$1.14 million, affecting 206 households on that island.<sup>119</sup> Furthermore, damage also occurred to fishing boats, outboard motors and all the fishing gear.

Cyclone Gita (2018) damaged fisheries assets, both artisanal and commercial snapper boats. The sector recorded damage of T\$1.34 million and T\$0.25 million in losses<sup>120</sup>:

- Damage to the fisheries subsector was valued at over T\$1.3 million, representing 26 percent of total damage to the agriculture sector. The damage assessment covered main fisheries assets, including boats, engines, fishing gear, fish fences, as well as pearl, clam, and seaweed farms and hatcheries. The most heavily affected assets included snapper boats, assets belonging to subsistence fishermen, fishery infrastructure that included the main fish market
- The fisheries subsector sustained production losses of ~T\$0.25 million.

### **Vanuatu**

Subsistence and commercial fisheries and the harvest of coastal resources are a mainstay of food security throughout Vanuatu. The fisheries sector (including aquaculture) involves 15,758 households. Nearly all households in coastal villages (32% of all households in Vanuatu) are involved in coastal fishing activities at different levels of intensity. About 6% of households in the country are engaged in fishing activities for commercial purposes.

For the fisheries sector in Vanuatu, the estimated damage from Cyclone Pam was around VT258 million, which was approximately 19% of the total damage in Agriculture (VT1,420,919 million).

This damage to fisheries included the destruction of the fisheries infrastructure and the loss of fishing equipment. About half was damage to artisanal fisheries activities while the other half affected commercial fisheries. About 24% of the loss was to fisheries infrastructure 17%, community aquaculture 5%, fisheries market facilities 3%, and subsistence fisheries 1 %.<sup>121</sup>

For fisheries losses an estimate of VT122 million was made, largely resulting from a reduction in daily catches, linked to missing fishing equipment, canoes, and boats.<sup>122</sup>

### **Tourism**

Tourism is one of the world's fastest-growing industries and an increasingly important source of employment for many countries. This is evident in the Pacific where the Tourism sector is seen as one of the most important drivers of economic growth. The demand for authentic cultural and natural experiences has been increasing globally, particularly amongst the island countries of the Pacific. As a key source of employment and income in Pacific island countries, tourism is pivotal to poverty alleviation. Tourism sector development offers Pacific island countries a path to economic security that dovetails with broader development goals around infrastructure and employment.<sup>123</sup>

<sup>119</sup>[https://www.wto.org/english/tratop\\_e/devel\\_e/study\\_1\\_pacific\\_country\\_annex\\_18\\_april\\_draft\\_final.pdf](https://www.wto.org/english/tratop_e/devel_e/study_1_pacific_country_annex_18_april_draft_final.pdf)

<sup>120</sup> [https://www.gfdrr.org/sites/default/files/publication/WB\\_Tonga\\_Report\\_FA07.pdf](https://www.gfdrr.org/sites/default/files/publication/WB_Tonga_Report_FA07.pdf)

<sup>121</sup> [https://cop23.com.fj/wp-content/uploads/2017/06/vanuatu\\_pdna\\_cyclone\\_pam\\_2015.pdf](https://cop23.com.fj/wp-content/uploads/2017/06/vanuatu_pdna_cyclone_pam_2015.pdf)

<sup>122</sup> [https://cop23.com.fj/wp-content/uploads/2017/06/vanuatu\\_pdna\\_cyclone\\_pam\\_2015.pdf](https://cop23.com.fj/wp-content/uploads/2017/06/vanuatu_pdna_cyclone_pam_2015.pdf)

<sup>123</sup> <https://www.adb.org/sites/default/files/publication/430171/tourism-growth-pacific.pdf>

Additionally, foreign exchange earnings generated by the trade in tourism services represent the major contributor to surpluses in the national balance of payments in many PICs. This surplus almost counterbalances the chronic deficit in the goods account, making the tourism sector key to PICs macroeconomic stability. As a major contributor to the country's GDP, tourism provides significant revenues to the government through VAT and import duties.

The table overleaf provides an overview of the importance of the sector to PICs - as is evident from the table, Tourism made a significant contribution in terms to the GDP and to the labour force in the Cook Islands, Fiji, Niue, and Vanuatu, and the impact of the sector is strong in other PICs. Since the value or uniqueness of the Tourism sector in the Pacific is dependent on pristine, natural resources – disasters have a significant impact on the sector and effects are felt instantly in terms of tourism infrastructure damage, reduced visitor arrivals and a fall in tourist expenditure.

**Table 1.3.1: Annual Tourism Employment and Earnings as Percentage of GDP in Select PICs<sup>124</sup>**

|                  | Year Data was Last Available | No. of Tourism Employees | No. of Total Employments | Tourism Employment as % of Total Employment | Tourism Earnings as % of GDP (2017 Estimates) |
|------------------|------------------------------|--------------------------|--------------------------|---|---|
| Cook Islands     | 2014                         | 2,386                    | 6,938                    | 34.4  | 69.1  |
| Vanuatu          | 2017                         | 11,000                   | 42,295                   | 26.0  | 46.1  |
| Niue             | 2014                         | 226                      | 700                      | 32.3  | 41.0  |
| Fiji             | 2017                         | 42,300                   | 303,647                  | 13.9  | 40.3  |
| FSM              | 2014                         | 1,802                    | 6,938                    | 26.0  | 25.9  |
| Samoa            | 2016                         | 4,080                    | 45,161                   | 9.0   | 20.4  |
| Tonga            | 2017                         | 6,400                    | 33,422                   | 19.1  | 18.2  |
| French Polynesia | 2016                         | 10,500                   | 126,300                  | 8.3   | 11.8  |
| Solomon Islands  | 2017                         | 6,400                    | 208,016                  | 3.1   | 10.4  |
| Tuvalu           | 2014                         | 87                       | 3,869                    | 2.2   | 6.9   |
| Palau            | 2014                         | 1,172                    | 6,000                    | 19.5  | 6.7   |
| Timor Leste      | 2014                         | 2,586                    | 263,000                  | 1.0   | 5.7   |
| Kiribati         | 2017                         | 462                      | 28,158                   | 1.6   | 5.5   |
| Marshall Islands | 2014                         | 605                      | 12,600                   | 4.8   | 5.3   |
| American Samoa   | 2011                         |                          | 18,028                   | 0.0   | 3.3   |
| Nauru            | 2017                         | 0                        | 0                        | 0.0   | 2.8   |
| New Caledonia    | 2017                         | 4,615                    | 119,500                  | 4.9   | 2.4   |
| PNG              | 2016                         | 21,000                   | 2,344,733                | 0.9   | 2.3   |
| Total            |                              | 115,621                  | 3,569,305                |   |   |
|                  |                              |                          |                          |   |   |

#### Impact of Disasters on the Tourism Sector in PICs

<sup>124</sup> [https://corporate.southpacificislands.travel/wp-content/uploads/2017/02/2017-AnnualTourist-Arrivals-Review\\_Final.pdf](https://corporate.southpacificislands.travel/wp-content/uploads/2017/02/2017-AnnualTourist-Arrivals-Review_Final.pdf)

### ***Fiji***

From Cyclone Winston (2016), the damage and losses sustained by the Tourism sector amounted to FJD \$120 million; \$76.1 million in damage and \$43.9 million in losses<sup>125</sup>. The effects of this disaster on the tourism sector was highly detrimental in comparison to other sectors such as Agriculture because, while Fiji was recovering after TC Winston's ravaging impact, tourism and remittances were hoped to assist the economy, which was expected to be downgraded by an expected 3.5 percent of GDP that year.

Cyclone Evan had total economic disaster costs estimated at FJD \$194.9 million (US\$ 108.4 million) which is equivalent to 2.6 percent of Fiji's GDP.<sup>126</sup>

The impact of Cyclone Evan on the Tourism industry was substantial with far reaching effects. While the cyclone caused some damage to infrastructure and the environment, the reaction of the national authorities through the Tourism Disaster Committee to mitigate negative impacts on future tourist arrivals effect was a key feature of the resilience actions taken for the industry. For the Tourism industry, FJD \$44 million was spent on reconstruction, and FJD \$2.4 million was spent on recovery.

### ***Vanuatu***

The total economic cost of Cyclone Pam for the Tourism sector was estimated at VT 9.51 billion<sup>127</sup>. Cyclone Pam severely affected the tourism sector. Damage cost VT 5.9 billion and losses were VT 3.6 billion for a six-month period after the cyclone hit. The cost of damage included VT 5 billion in insurance claims for two major hotels, as well as VT0.9 billion for uninsured damage.

### ***Tonga***

The total effects of Cyclone Gita on the tourism sector were estimated at T\$40.6 million. This represents T\$26.3 million in damage and T\$14.3 million in losses – mainly related to damage to accommodation. 72 of the 76 accommodation businesses on Tongatapu and 'Eua sustained damage, with the resort category (14 properties) mostly affected.

The diagram overleaf provides a breakdown of the effects according to the type of tourism operation and shows that 88 percent of all effects related to the accommodation sector.

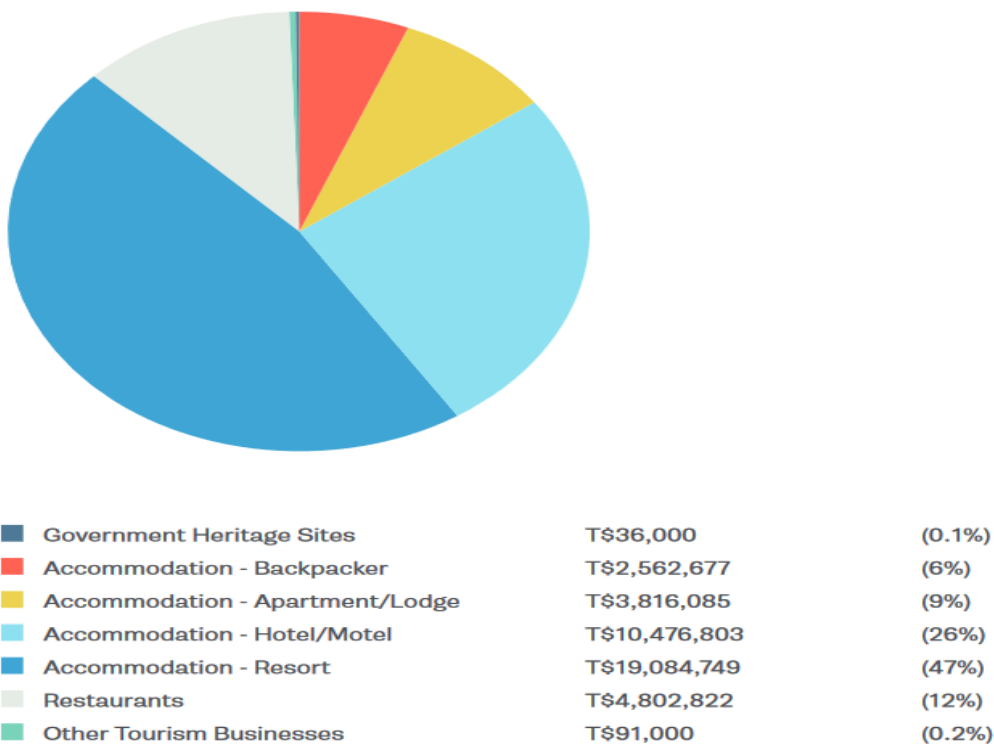
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<sup>125</sup>[https://www.gfdr.org/sites/default/files/publication/Post%20Disaster%20Needs%20Assessments%20CYCLONE%20WINSTON%20Fiji%202016%20\(Online%20Version\).pdf](https://www.gfdr.org/sites/default/files/publication/Post%20Disaster%20Needs%20Assessments%20CYCLONE%20WINSTON%20Fiji%202016%20(Online%20Version).pdf)

<sup>126</sup> [http://www.ndmo.gov.fj/images/AllDisasterReports/PDNA\\_Report.pdf](http://www.ndmo.gov.fj/images/AllDisasterReports/PDNA_Report.pdf)

<sup>127</sup>[https://www.nab.vu/sites/default/files/nab/documents/20/08/2015%20-%2011%3A47/vanuatu\\_pdna\\_cyclone\\_pam\\_2015.pdf](https://www.nab.vu/sites/default/files/nab/documents/20/08/2015%20-%2011%3A47/vanuatu_pdna_cyclone_pam_2015.pdf)

Breakdown of Total Effects of TC Gita on Tonga’s Tourism Sector (T\$)



Cyclone Gita damaged resorts resulted in cancelled bookings and caused a severe business downturn. The cyclone contributed to a short-term reduction in employment opportunities and a subsequent negative impact on the local economy.

Samoa

Tourism is one of the most important economic sectors in Samoa. Tourism revenue accounts for around 20% of total GDP with more than 130,000 tourist arrivals annually. If the expenditure of each tourist is an average of US\$ 950 during the stay, the annual revenue from tourism is around US\$ 123 million, and tourism is by far the single largest commercial earner of foreign exchange.<sup>128</sup>

The Tourism sector in Samoa was seriously affected by Cyclone Evan (2012). Detailed surveys conducted during field trips to the affected areas showed that 267 hotel rooms sustained total or partial destruction, and that the replacement cost was SAT 43.5 million. Subsequent estimated losses in revenue over the time period required to reconstruct these facilities revealed a figure of SAT 21.7 million.

These losses have a negative impact at the macroeconomic level because tourism has a relatively high weight in the Samoan economy. The effects of the disaster also impacted employment and it’s estimated that almost 1,000 were lost<sup>129</sup>. There was also a measurable negative impact on the balance of payments in view of the lost revenues from tourism and tourism-related sales in the commercial sector; accounting for 1 percent of GDP in fiscal years 2013 and 2014.

<sup>128</sup> [http://www.gfdr.org/sites/gfdr/files/documents/PDNA\\_Samoa\\_2009.pdf](http://www.gfdr.org/sites/gfdr/files/documents/PDNA_Samoa_2009.pdf)  
<sup>129</sup> [https://www.pacificclimatechange.net/sites/default/files/documents/SAMOA\\_PDNA\\_Cyclone\\_Evan\\_2012\\_WEB04032013.pdf](https://www.pacificclimatechange.net/sites/default/files/documents/SAMOA_PDNA_Cyclone_Evan_2012_WEB04032013.pdf)



After Cyclone Evan, four types of activities were needed to ensure recovery of demand in the tourism sector: clearing of debris and removal of mud in tourist areas (SAT 0.4 million); design and implementation a marketing campaign abroad to rebuild foreign tourist demand (SAT 1.5 million); capacity building to ensure tourism recovery (SAT 0.7 million); and establishment of soft credit lines for hotel and restaurant owners, so they had sufficient working capital to restart activities, with funds channelled through the private banking system (SAT 5.0 million). Hotel and restaurant owners were also encouraged to rebuild their facilities to flood-resilient standards. Reconstruction requirements for the tourism sector were around SAT 26.7 million.

#### *2009 Tsunami*

The total cost of the 2009 Tsunami in Samoa was estimated at SAT\$310.11 million (US\$124.04 million), equivalent to more than 22 percent of Samoa's GDP. Despite affecting a relatively limited geographic area of the country, the economic impact of the tsunami was considerable as it affected tourist areas and caused damage to coastal transport infrastructure.

The damage mainly affected physical infrastructure such as buildings, fixtures, furniture, and equipment. Total damage was estimated at SAT\$24.1 million (or US\$9.6 million)—with tourism being the third largest sector affected, after transport and housing. The reduced tourism levels affected the balance of payments by SAT\$55 million, and reduced tax revenues from tourism of SAT\$10-15 million.

The estimated total recovery and reconstruction needs for the tourism sector stood at SAT\$36 million. About SAT\$6 million was needed for clean-up and other immediate recovery actions and SAT\$30 million was required for facilities reconstruction.

**Intervention:** As part of workstream 3, the Programme proposes to engage with farmer cooperatives and associations in specific value chains (cocoa, coconut, coffee, vanilla, dairy, kava, sugarcane etc.) to identify which of these value chains are most affected by disasters and climate change and could benefit from CDRF instruments, such as parametric insurance. This will be done through the risk assessment and follow-up research into the specific sectors. This is then followed by consultations with the farmers and cooperatives of these different groups to investigate what their financing needs are and what types of products they believe would benefit their group most. Through this research and consultations, specific CDRF instruments can be designed and piloted together with stakeholders to reach scale. Solutions will be co-created with active involvement of the beneficiaries, and their associations and cooperatives to ensure buy-in, ownership, and sustainability. The approach can also be replicated across the fisheries and **tourism sectors**.

## **Annex 11: Target Population Segments**

### **Migrants**

Migration has long been a key feature of the Pacific identity, characterised by movements of people between the thousands of islands in the region. More recently, the migration dynamics have been dominated by the movement of Pacific Islanders to more developed economies, concentrated on Australia and New Zealand. The threats of mass displacement and forced migration resulting from climate change is also looming.

While recognizing that there are different migration dynamics within the subregions of the Pacific (Melanesia, Micronesia and Polynesia), in general, when people choose to migrate, it is in search of better economic opportunities, usually with the aim of migrants returning home in the future. Currently large numbers of Pacific Islands' own populations reside overseas. Many small island countries in the Pacific region, such as Tonga and Samoa, have gained from the outflow of human capital through the generation of foreign exchange from remittances sent by emigrants.

### ***Aid to the Pacific<sup>130</sup>***

The PICs are mostly small economies that are highly dependent on foreign assistance. The table below shows that aid per capita ranges from a few hundred dollars to over US \$8000. Administering these flows is expensive—while data are not available on overhead costs, anecdotal evidence suggests that these costs are high, especially for the multilateral agencies.

In 2016, the total amount of aid spent was US \$1.87 billion across 3,875 projects. The top five donors were Australia (US\$799m), New Zealand (US\$192 m), Japan (US\$181m), China (US\$114 m), and the Asian Development Bank (US\$104m). The World Bank Group spent US\$94 m across 55 projects. China is gaining more influence in the region, spending between US\$100 million and US\$400 million per year during the period 2011 to 2016.

The top five aid recipients were Papua New Guinea, Oceania (Regional), the Solomon Islands, Vanuatu, and Fiji. Aid per capita ranges from \$80 for PNG to over \$9,000 for Tonga. Excluding PNG and Fiji, aid as a proportion of GDP is about 30 percent. This number is by far, the highest in the world—no other region comes close to it.

**Table 2.1.1: Aid Flow to PICs**

| Country             | Aid (spent)<br>USD<br>millions | Population | GNI per capita | Aid per capita | Aid to GNI<br>(%) |
|---------------------|--------------------------------|------------|----------------|----------------|-------------------|
| <b>Cook Islands</b> | \$ 35.61                       | 17,000     | \$ 17,000.00   | \$ 2,094.00    | 12                |
| <b>Fiji</b>         | \$ 127.60                      | 899,000    | \$ 4,969.00    | \$ 141.93      | 3                 |
| <b>Kiribati</b>     | \$ 55.71                       | 114,000    | \$ 2,042.00    | \$ 488.68      | 20                |

<sup>130</sup> Source: Are the Pacific Islands Insurable? Challenges and Opportunities for Disaster Risk Finance.

|                  |           |           |              |             |    |
|------------------|-----------|-----------|--------------|-------------|----|
| Marshall Islands | \$ 29.77  | 53,000    | \$ 4,678.00  | \$ 561.70   | 12 |
| Micronesia       | \$ 77.50  | 105,000   | \$ 3,662.00  | \$ 737.62   | 20 |
| Nauru            | \$ 24.10  | 11,000    | \$ 9,420.00  | \$ 2,190.90 | 23 |
| Niue             | \$ 14.15  | 1,624     | \$ 18,000.00 | \$ 8,713.05 | 48 |
| Palau            | \$ 18.34  | 22,000    | \$ 13,000.00 | \$ 833.64   | 6  |
| PNG              | \$ 652.36 | 8,080,000 | \$ 2,352.00  | \$ 80.74    | 3  |
| Samoa            | \$ 116.35 | 195,000   | \$ 4,115.00  | \$ 596.67   | 14 |
| Solomon Islands  | \$ 189.23 | 599,000   | \$ 1,742.00  | \$ 315.90   | 18 |
| Tonga            | \$ 101.36 | 107,000   | \$ 3,827.00  | \$ 9,473.00 | 25 |
| Tuvalu           | \$ 25.16  | 11,000    | \$ 5,363.00  | \$ 2,287.27 | 43 |
| Vanuatu          | \$ 53.59  | 270,000   | \$ 3,045.00  | \$ 568.85   | 19 |

Source: Lowy Institute. All values are in current US dollars.

### Importance of Remittances during Disasters in PICs<sup>131</sup>

Remittances represent an important source of income during crises and can be a powerful mechanism to support recovery efforts. In Small Island Developing States, including the PICs, remittances are particularly significant in the context of disasters. For example, in 2006, Tonga experienced multiple cyclones and an 8.0 magnitude earthquake. Following the 2009 earthquake that caused loss of life and destruction in many villages, remittances increased to more than 20% of the country's GDP to help support recovery efforts. This was the most significant increase over a 10-year period.<sup>132</sup> Remittances were a critical source of income, when compared to the amount of support stemming from the government and from nongovernmental organisations.

In many low-income countries, there is often a lack of appropriate private or public provision for payments after loss of life and damage to property. Thus, family members who have migrated often play a crucial role in relief and reconstruction efforts on their home countries. Migrants can often react to a disaster faster than governments and NGOs in providing aid relief. As a result, households that receive remittances can manage to meet their essential requirements more quickly and have better recovery rates than those that have limited access, or no access to this source of support (Ahmed et al. 2006).

In most cases, individual remittances for disaster relief are sent through money transfer agents, the banking system, mobile wallets, or hand-carry cash and goods. Collective remittances are usually sent through local NGOs, community groups, and faith-based organizations. In the Pacific, we often see that collective

<sup>131</sup> Source: Remittances for Disaster Risk Management: Perspectives from Pacific Island Migrants Living in New Zealand; <https://link.springer.com/article/10.1007/s13753-018-0183-8>

<sup>132</sup> <http://databank.worldbank.org/data/reports.aspx?source=2&series=BX.TRF.PWKR.DT.GD.ZS&country=WSM>

remittances are organised with the faith-based organizations, to fulfil religious obligations and to contribute to the rebuilding of the community.

Nonetheless, despite the significance of migrants' remittances, limited research has been done to explore the ways that remittances support DRM, and how these remittance flows, and their distribution and application can be enhanced.

**Potential Intervention:** Remittances are often used by Pacific diaspora to their families and dependents to support immediate post disaster relief, rehabilitation, and short to medium term recovery. The Programme will investigate how remittances could benefit from the introduction of a parametric component, for example family members could elect to subscribe to a parametric insurance product that could be paid out directly to family members that are living in the Pacific island states when a disaster strikes. Another possibility would be for part of regular remittance payments to go into a specialised savings account that could be accessed after a disaster. These and other possible instruments will be explored and evaluated to see how remittances can play an even more effective role helping families recover after extreme events.














## Women

Women's contribution to the economy in PICs is significant. According to a study conducted by the World Bank in the Solomon Islands in 2010, the annual turnover at the Honiara Central Market was estimated to be between USD 10 –16 million, with women responsible for about 90% of this marketing activity – both as bulk buyers from farmers, and processors and retailers. In PNG, food production is largely the responsibility of women and has been valued at USD 55 million per year. In Samoa, 80% of businesses in the private sector are micro businesses, and women are estimated to be the head of over 40% of them (IFC, 2010).<sup>133</sup>

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<sup>133</sup> <https://www.spc.int/sites/default/files/wordpresscontent/wp-content/uploads/2017/09/Overview-Pacific-Womens-Economic-Empowerment-SPC2.pdf>

Table 2.1.2: Key Labour Market Indicators - Women

| REGION     | Country             | Labor Force Participation Rate<br>(employed and unemployed persons<br>as % of total working age population) |        |  |                    | Paid Employment Rate<br>(persons in paid work as % of<br>total working age population) |        |                    | Women's Share of<br>Wage Employment in the<br>Nonagriculture<br>Sector |                    |
|------------|---------------------|---|--------|--|--------------------|--|--------|--------------------|--|--------------------|
|            |                     | Male  | Female | Gender gap<br>(male–female)  | Year and<br>source | Male   | Female | Year and<br>source | %  | Year and<br>source |
| MELANESIA  | Fiji                | 80  | 46     | 34    | 2010–11<br>LFS     | 64.3   | 28.8   | 2010–11<br>LFS     | 33.2   | 2010–11<br>LFS     |
|            | PNG                 | 62  | 62     | 0  | 2009–10<br>HIES    | —  | —      | —                  | —  | —                  |
|            | Solomon<br>Islands  | 69  | 67     | 2     | 2009<br>census     | 35.2   | 17.6   | 2009<br>census     | 33.2   | 2009<br>census     |
|            | Vanuatu             | 81  | 61     | 20    | 2009<br>census     | 37.2   | 23.4   | 2009<br>census     | 41.3   | 2009<br>census     |
| MICRONESIA | FSM                 | 66  | 48     | 18    | 2010<br>census     | —  | —      | —                  | 37.9   | 2010<br>census     |
|            | Kiribati            | 67  | 52     | 15    | 2010<br>census     | 33.9   | 25.9   | 2010<br>census     | 47.4   | 2010<br>census     |
|            | Marshall<br>Islands | —   | —      | —  | 2011<br>census     | 48.0   | 26.5   | 2011<br>census     | 36.7   | 2011<br>census     |
|            | Nauru               | 79  | 49     | 30    | 2011<br>census     | 58.2   | 35.2   | 2011<br>census     | 37.6   | 2011<br>census     |
|            | Palau               | 77  | 60     | 17  | 2005<br>census     | —  | —      | —                  | 39.6   | 2005<br>census     |
| POLYNESIA  | Cook Islands        | 77  | 65     | 12  | 2011<br>census     | 68.9   | 59.3   | 2011<br>census     | 47.3   | 2011<br>census     |
|            | Niue                | 69  | 61     | 8   | 2011<br>census     | 65.5   | 56.1   | 2011<br>census     | 46.0   | 2011<br>census     |
|            | Samoa               | 40  | 24     | 16  | 2012<br>LFS        | 29.8   | 20.1   | 2011<br>census     | 37.5   | 2012<br>LFS        |
|            | Tonga               | 63  | 42     | 21  | 2011<br>census     | 44.0   | 29.6   | 2011<br>census     | 47.9   | 2011<br>census     |
|            | Tuvalu              | 68  | 51     | 17  | 2012<br>census     | —  | —      | —                  | 43.5   | 2012<br>census     |
|            | Timor-Leste         | 40  | 21     | 19  | 2013<br>LFS        | 29.6   | 14.3   | 2013<br>LFS        | 30.8   | 2013<br>LFS        |

The table<sup>134</sup> above provides an overview of the composition of women's participation in the labour market in PICs. We see that women's participation is important in all PICs and there is clear acceptance of women entrepreneurs. In many societies, economically active women have a 'double workday' – combining responsibilities for home and family with their economic activities. In PNG, women work on average nearly twice as many hours as men. In Tonga, women work over 50% longer than men on non-economic activities each week.<sup>135</sup> In Fiji, in 2015–2016, on average, women working for wages or salaries spent 24 hours a week on household work, while men spent 10 hours.<sup>136</sup>

<sup>134</sup> Source: <https://www.adb.org/sites/default/files/publication/181270/gender-statistics-pacific-tim.pdf>

<sup>135</sup> Hedditch, S. and Manual, C. 2010. Gender and Investment Climate Reform Assessment. World Bank and IFC in partnership with AusAID.

<sup>136</sup> 2015–16 Employment and Unemployment Survey, Preliminary Release, Fiji Bureau of Statistics. FBoS Release No: 34, 2017, 07/08/2017 (<http://www.statsfiji.gov.fj/statistics/population-censuses-and-surveys>).

During a disaster, women are especially hard-hit by the social impacts of environmental disasters. Existing inequalities are a root cause of women's disaster vulnerability. Global forces and social changes placing more people at greater risk of disaster also disproportionately impact women. Women are particularly vulnerable because they have fewer resources and under their own control. They have no permanent place in traditional decision-making systems and by virtue of their lower economic, social, and political status, women tend to be more vulnerable to disasters.<sup>137</sup>

Women's role in helping to ensure household food security, and the dependence of many of them on natural resources, makes women more likely to suffer loss of life and property in the face of disasters and reinforces the impact of disasters, whilst they try to get supplemental income; this leaves women to fend for themselves and assume even greater responsibility for caring for their family. In post disaster situations women are often more vulnerable than men. Their care giving roles expand dramatically after a disaster and experience shows that their access to resources for recovery is constrained.

Experience from past disasters has demonstrated that women and girls are affected differently from men. Women and children are 14 times more likely to die or be injured during a disaster, according to UN Women Fiji.<sup>138</sup>

### **Impact of Disasters on the Women in PICs**

The PDNA reports indicate that women are disproportionately affected, disadvantaged and, along with men, face the onerous task of rebuilding their homes, helping their families, and providing some financial support. Government and other agencies do not provide targeted support to women specifically, post-disaster and this further leads to their marginalisation. The Programme will identify the specific and unique needs of women, and develop tailor-made insurance and other CDRF solutions, that are more suitable and more accessible to women. Meso level aggregation, through women groups (for example savings clubs, and women's church groups), and establishing partnerships with UN Women and other agencies targeting women will be trialled.

#### ***Fiji***

The effects of Cyclone Gita posed risks to the lives of women, and girls, including minority groups, their rights to economic independence, safety and security, and food and nutrition. For example, women's livelihoods were affected because of extensive damage to the resources (plants, tree materials etc.) that women use in making their handicrafts. Affected women and children will remain at risk if the impacts of the cyclone are not properly addressed. An estimated 263,000 women have been affected by Cyclone Winston.<sup>139</sup>

#### ***Marshall Islands***

During the drought in Marshall Islands (2015-2016), the health and hygiene needs of men, women, and girls suffered from the lack of good quality water for bathing. Subsequently, a total of 3,279 female hygiene kits for women and girls of reproductive age were distributed in the first round of delivery, costing USD 34,102 (excluding the cost of transport for distribution). This was funded by USAID and implemented by the International Organization for Migration in partnership with WUTMI. In addition, in early September 2016, a second round of 1,155 female hygiene kits costing USD 16,102 were distributed to severely and moderately affected islands and atolls.<sup>140</sup>

#### ***Samoa***

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<sup>137</sup> [https://www.iitk.ac.in/nicee/wcee/article/14\\_10-0049.PDF](https://www.iitk.ac.in/nicee/wcee/article/14_10-0049.PDF)

<sup>138</sup> <https://www.aspistrategist.org.au/gender-and-climate-insecurity-in-the-pacific/>

<sup>139</sup> PDNA Fiji 2016

<sup>140</sup> PDNA RMI 2017

Agriculture is generally a family business, with women contributing substantially in terms of labour or management. Cyclone Evan (2013) affected the amount of time women had available for agricultural activities such as vegetable gardening, weeding, and marketing, since women in the most affected areas reported having to spend more time on domestic chores, particularly fetching water.<sup>141</sup>

### *Solomon Islands*

In the Solomon Islands most economically active women are engaged in agriculture; although their overall participation in cash generation is small, any disruption to agricultural activities is likely to have a disproportionate effect on women.<sup>142</sup>

### *Vanuatu*

In Vanuatu, agriculture is the mainstay for food security and the main source of income for most women. More women than men (49% and 41% respectively) are dependent on subsistence agriculture. Although subsistence farming is not considered in national accounting, the small scale of these agricultural products represents an important source of income for women and helps to enable their families to survive. Following the damage from Cyclone Pam in 2015, analysis on its impact on crops showed that households suffered a total loss of VT 4 billion, VT2 billions of which came from subsistence crops. This equates to VT 1,082 billion for women compared with VT 0.921 billion for men.<sup>143</sup> The impact of the cyclone on subsistence farming, where women feature prominently, means that the ability of women to generate income to provide food, nutrition, and other basic needs for their families has fallen significantly. Women also face challenges accessing equal opportunities to paid employment in the non-agricultural sector.

In 2015, Cyclone Pam also affected approximately 3,600 female micro-entrepreneurs across the four disaster-affected provinces. Assuming that it would take a microentrepreneur on average six weeks to reconstruct and four weeks to repair a workplace, the women micro-entrepreneurs are estimated to have lost productivity of around 141,110 workdays. The Vanuatu PDNA also estimated that women's additional unpaid work in restoring homes and gardens, fetching water, searching for food and taking care of children due to the closure of primary schools and kindergartens, represented lost earnings of a minimum of VT 432 million. These estimates of lost income would increase by 27% if this work was valued in monetary terms.<sup>144</sup>

The disaster had a far-reaching impact on the domestic lives of women – there was a 300% increase in new domestic violence cases reported by the Tanna Women's Counselling Centre after two tropical cyclones hit Tafe Province in Vanuatu in 2011.<sup>145</sup>

**Challenge:** Strong evidence points to women being disproportionately affected and disadvantaged following disasters. Along with men, they face the onerous task of providing immediate financial support to their families, and helping to rebuild homes, sustain families and re-establish livelihoods. Women get little or no assistance specifically targeting at them, as beneficiaries.

**Intervention:** The Programme will identify the specific and unique needs of women, develop tailor-made insurance and other CDRF solutions. Meso level aggregation through women groups (for example savings clubs) and establishing partnerships with UN Women and other agencies targeting women will be trialled.

### MSMEs

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<sup>141</sup> PDNA Samoa 2013

<sup>142</sup> Rapid Assessment of the Macro and Sectoral Impacts of Flash Floods in the Solomon Islands, April 2014

<sup>143</sup> PDNA Vanuatu 2015

<sup>144</sup> Source: Vanuatu Post Disaster Needs Assessment, Tropical Cyclone Pam, March 2015, Government of Vanuatu ([http://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/documents/publication/wcms\\_397678.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_397678.pdf)).

<sup>145</sup> <https://www.unclearn.org/sites/default/files/inventory/unwomen701.pdf>

Among PICs, Micro, Small and Medium sized Enterprises (MSME) are a significant contributor to GDP and, as importantly, they are a significant driver of the labour market. In Fiji alone the MSME segment contributes 18% to GDP<sup>146</sup> and roughly 60% to labour market<sup>147</sup>. In most Pacific countries, subsistence occupations constitute the largest share of MSMEs. The same is evident in the economic indicators and balance of trade data for the Pacific region. While the data shows that imports are significantly higher than exports, the constituents of exports are small scale produce such as copra, sugar, kava, coconut, coconut oil etc., plus, a significant share of the Pacific tourism industry is run by MSMEs.

For these reasons the development of a healthy MSME segment has been a priority of many Pacific economies, which has resulted in several interventions and policy initiatives in the region to stimulate the development and growth of this segment<sup>148</sup>.

Despite these efforts and recognizing the uniqueness of the situation in each Pacific country, some general observations regarding the challenges faced for the development of the MSME segment in the Pacific region can be made. These include:

- Difficulty in setting up a business, plus high costs and time commitments.
- Limited awareness of government policies and support.
- Access to finance.
- Opportunities to improve market linkages.
- Skill sets: Business management, financial literacy, digital literacy.

A 2014 publication by the ADB showed that for the 20 countries in Asia and the Pacific with available data during 2011–2014, on average, SMEs represented 62% of national employment, ranging from 4% to 97%. SMEs also accounted for 42% of gross domestic product (GDP), ranging from 12% to 60%.

### **Impact of Disasters on MSMEs in PICs**

#### **Tonga**

During Cyclone Gita, the value of the damage to physical infrastructure and assets in the commerce and industry sector was estimated at T\$23.5 million.<sup>149</sup>

#### **Fiji**

Due to the adverse effects of Cyclone Winston, the cost of recovery and reconstruction for SMEs totalled F\$5.6 million.<sup>150</sup>

#### **Marshall Islands**

During the 2015-2016 drought the effect of the decline in production by handicraft producers and entrepreneurs was assessed on its GDP. It was estimated that this activity would lose a total of USD 107,500 in FY 2016 as a result of the drought, and that the loss would impact all the atolls and islands where handicrafts are produced.<sup>151</sup>

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<sup>146</sup> MicroSave (July 2018), In-depth Assessment of MSME Landscape in Fiji

<sup>147</sup> NCSMED: MSME Sector Accounts for 60 percent Employment

<sup>148</sup> E.g. Government of Samoa has established an ICT steering committee to develop and manage ICT-focused policies and strategies.

<sup>149</sup> PDNA Tonga 2018

<sup>150</sup> PDNA Fiji 2016

<sup>151</sup> PDNA RMI 2017



**Challenge:** There is strong evidence that underpins the importance of the MSME sector in PICs, especially for women and the informal sector, so any direct or indirect impact of disasters can be devastating to MSMEs, and to their financial viability and continuity. Catastrophic events have had a significant impact on MSMEs in PICs during recent events. MSME sectors can be considered as highly vulnerable sections of Pacific economies and they are relatively resource constrained and less resilient.

**Intervention:** The Programme will build entrepreneurial resilience by working with MSME segments in the Pacific to identify their specific disaster challenges and tailor make CDRF solutions that meet their needs. The Programme will develop SME resilience through a collaborative partnership with the private sector, NGOs and national governments to tackle the socio-economic drivers of risk in the pre-disaster stage, and further build up the provision of swift and adequate support to MSMEs shortly after disasters strike.

## Youth

### Impact of Disasters on Youths in PICs

#### *Tonga*

Tonga has a sizeable youth population, which generally faces poor labour market outcomes. Over half (56 percent) of the country's population is aged 24 years or younger, with a total of 19,200 Tongans between the ages of 15 and 24. The majority of these youth (76 percent) reside on the main island of Tongatapu, and only a quarter live in what could be classified as urban areas (i.e., Greater Nuku'alofa). A large proportion of youths fail to transition into formal employment. There is a need to engage these individuals in meaningful employment and skill-building activities. This will assist the disaster recovery capacity.

With a significant number of homes damaged or destroyed due to Cyclone Gita, there is, for example, an opportunity to design and introduce cash-for-work or public works programmes that use this available pool of unemployed youth for the reconstruction and maintenance of homes.<sup>152</sup>

#### *Marshall Islands*

The most vulnerable segments of the Marshallese population are expected to see their livelihoods further deteriorate – these include youths with low educational attainment and / or irregular employment in the urban centres, low-income households in the outer islands, and women-headed households that have care-giving responsibilities.<sup>153</sup>

#### *Vanuatu*

Given Vanuatu's hazard-prone location, there is a high risk that future disasters could affect areas that have already been impacted by Cyclone Pam, thus undermining local economic recovery. If preparedness mechanisms (e.g. higher quality, more readily available baseline data) are not sufficiently established before future events, self-employed people who operate mainly in the informal economy are likely to remain vulnerable to external shocks and will be at risk of experiencing repeated loss of income because of disasters.

The impacts on youth and new entrants to the labour market will be particularly critical, as employment outcomes of young people are especially sensitive to economic cycles. Youths are generally the first to lose their jobs in times of economic contraction and the last to gain employment when the economy rebounds.<sup>154</sup>

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<sup>152</sup> PDNA Tonga 2018

<sup>153</sup> PDNA RMI 2017

<sup>154</sup> PDNA Vanuatu 2015

Education is generally not prioritised in a disaster response, and reconstruction or rehabilitation of damaged schools is often belated. Almost a year after Cyclone Pam hit, children were still being taught in temporary learning centres that were only meant to be used for a short period, not for many months.<sup>155</sup>

**Challenge:** Extensive research documents the negative mental health effects and financial impacts of disaster exposure for youths. Young people are often seriously affected when disasters strike, and they can face severe difficulties in coping with unexpected and traumatic interruptions to their lives. Further understanding of the effects of disasters and their impact on youths is a matter of increasing health concern, given that such events can collectively affect thousands of youths in PICs, for each disaster.

**Intervention:** The Programme will work with youth-based organisations and development agencies to build greater understanding of youth broad-based challenges faced during disasters. We will help to develop innovative and comprehensive approaches that will factor into national CDRF and DRM strategies. The Programme will also engage youth-based organisations and leverage their abilities and networks to bring about meaningful change in social behaviour and attitudes in Pacific communities to build disaster awareness to reduce the risks and impacts of disasters.

### **Vulnerable Social Protection Recipients**

The Programme will investigate how governments can best protect the most vulnerable groups that often don't have their own resources or access to funding after a disaster, and who are often the hardest hit after these events occur. This will be further investigated through the framework on "Macro to Micro" scheme. "Macro to Micro" refers to the practice when governments invest in CDRF instruments that would pay out directly to individual beneficiaries. One method government can implement is through adaptive social protection schemes, in which those who are part of government protection scheme would receive extra financial support after a disaster. Alternatively, government could also work to register those individuals who are not part of the social protection scheme but would suffer greatly from a specific natural hazard.

### **Annex 12: Details on PFIPs Bundled Micro-Insurance**

Compared to other regions around the world, the Pacific has one of the lowest insurance penetration rates. A series of national surveys conducted by the PFIP on financial services revealed that insurance coverage for individuals in the Pacific ranges from 7% (Solomon Islands) to 12% (Fiji) of the adult population. Those who reported having insurance coverage were largely urban dwellers in formal employment. Most respondents reported finding insurance products too expensive and felt that they did not need it. They also reported not understanding how insurance works and not knowing where to access insurance. The survey further

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<sup>155</sup> <https://reliefweb.int/report/world/education-disrupted-disaster-impacts-education-asia-pacific-region-2015>

demonstrated the lack of appropriate and affordable microinsurance products that can cater to low-income customers, people who are the least insured and the most vulnerable to economic shocks.<sup>156</sup>

In 2017, PFIP worked with the National Financial Inclusion Taskforce (NFIT) Inclusive Insurance Working Group (IIWG) to create an industry-backed, bundled insurance project in Fiji. The bundled product was an opportunity to design a business model that used new partners to harness different specialist abilities, technologies and capabilities that ultimately delivered a compelling customer proposition for Fijians.

After numerous discussions with insurance service providers, FijiCare Insurance Limited (FijiCare) took up the initiative and decided to pilot the rollout of the product and to handle all aspects of customer enrolment, customer servicing and claims management. The specification of the bundled microinsurance product is shown below:

Annual combined cover limit of FJD \$10,000 (~USD 5000) per insured person and annual premium FJD \$52 (~USD 25), Cover:

- Term Life – FJD \$3,000 (~USD 1,500). Maximum age of 65.
- Funeral Expenses – FJD \$1,000 (~USD 500). Maximum age of 65.
- Personal Accident – Maximum FJD \$3,000 (~USD 1,500). Maximum age 65.
- Fire on main dwelling – Maximum FJD \$3,000 (~USD 1,500)

PFIP supported FijiCare in piloting the bundled insurance in July 2017 with the sugarcane farmers through the Sugarcane Growers Fund being the first clients under the scheme. Furthermore, rice, copra, and dairy farmers also joined the scheme through their respective cooperatives as “aggregators”. This indicated that there was an appetite for micro-insurance as a market-based product.

During August 2018, the Government of Fiji also became a group policy holder and insured civil servants and the social welfare beneficiaries under the scheme.

### Highlights of the bundled micro-insurance

- To date, **135,000+** clients onboarded in two product models (FJ \$52 & FJ \$70 per annum).
- Close to FJ **\$10 million** in claims paid out; mostly life & funeral. From launch to date.
- More than **5,500** claims processed. From launch to date.
- **1,500+** Social Welfare recipients have already received pay-outs.
- FijiCare opened a new microinsurance office and hired additional staff.
- PFIP working with “aggregators” for **awareness building** (& impact stories) to ensure proper understanding of the product.
- Revision to Product model in progress - to ensure stronger sustainability and viability.
- Being **replicated in Vanuatu** through subsidiary VanCare.
- **Solomon Islands Expansion:** FijiCare has applied for license to introduce micro Insurance.
- **Kiribati Expansion:** FijiCare has tied up with Kiribati Insurance Corporation to distribute micro insurance, expected launch in Q3, 2020.

Table 3.1.1: FijiCare Bundled Micro-insurance Statistics: January – September 2019

|                           |         |
|---------------------------|---------|
| Total number of policies  | 135,163 |
| -Sugar/Rice/Dairy Farmers | 11,725  |

<sup>156</sup> <http://www.pfip.org/our-work/work-streams/financial-innovation/fiji-care-bundled-micro-insurance/>

|   |             |
|---|-------------|
| -Civil Servants and Welfare Beneficiaries             | 123,438     |
| Total number of women customers                       | 66,077      |
| Total number of men customers                         | 69,086      |
| Total number of claims paid over period               | 4,530       |
| Total value of claims paid over period (Till Q3 2019) | \$6,447,700 |

Table 3.1.2: FijiCare Disaggregated Gender Claims Data: January – September 2019

|                   | Claims Made | Male  | Female |
|-------------------|-------------|-------|--------|
| Civil Servants    | 116         | 92    | 24     |
| Social Welfare    | 4,259       | 2,762 | 1,497  |
| Sugarcane Farmers | 146         | 112   | 34     |
| Dairy Farmers     | 5           | 5     | 0      |
| Rice              | 4           | 4     | 0      |
| Copra             | 0           | 0     | 0      |
| Total Claims      | 4,530       | 2,975 | 1,555  |
|                   |             | 66%   | 34%    |

### **Annex 13: Shared Resources and Alignment**

The Pacific Digital Economy Programme and the Pacific Insurance and Climate Adaptation Programme will share resources for common services like finance, administration, office space, procurement and HR management. More details on this is provide in the organogram under Section VIII (Governance and Management arrangements). Besides the two programs will complement their activities, leveraging on the partnerships and networks already established and building on the decade long work by PFIP. A brief on the shared approach and thematic alignment is outlined below:

#### **Workstream 1: Enabling Policy and Regulations:**

This workstream will use UNCDF strategic instruments of Data and Research to develop Climate Disaster Risk financing baselines and tracking indictors. The activities will leverage the extensive work done under PFIP on conducting supply, demand and policy side market assessments while collaboratively engaging with the sister programme that will undertake parallel research relevant to its programmatic areas.

Also, the final programme evaluation of PFIP completed in 2019 clearly points to the efficiency, effectiveness and impact of delivery of PFIP for policy and regulation initiatives, the engagement with the regional Central Banks in particular. Going forward, both programmes will complimentarily continue the work with the Central Banks while increasing the levels of engagement with key Government Ministries- example Finance/Economy, ICT/Communications, Environment & Climate change, disaster management, agriculture etc. Both programmes will also leverage the UNCDF global technical expertise in the Policy space.

#### **Workstream 2: Open Digital Payments Ecosystem:**

The objective of this workstream is to build an optimal ecosystem that enables digital services to reach the 'last mile' and deliver valuable and relevant services. In this regard, both programmes will explore innovative approaches to improve and expand last mile delivery of CDRF instruments; making digital payment services available, accessible, affordable, reliable and appropriate for customer needs. Therefore, the Programme will complement its sister programme to develop and pilot new and innovative digital solutions that will impact rural communities; including women, youth and MSMEs in the Agriculture, Fisheries and Tourism sectors.

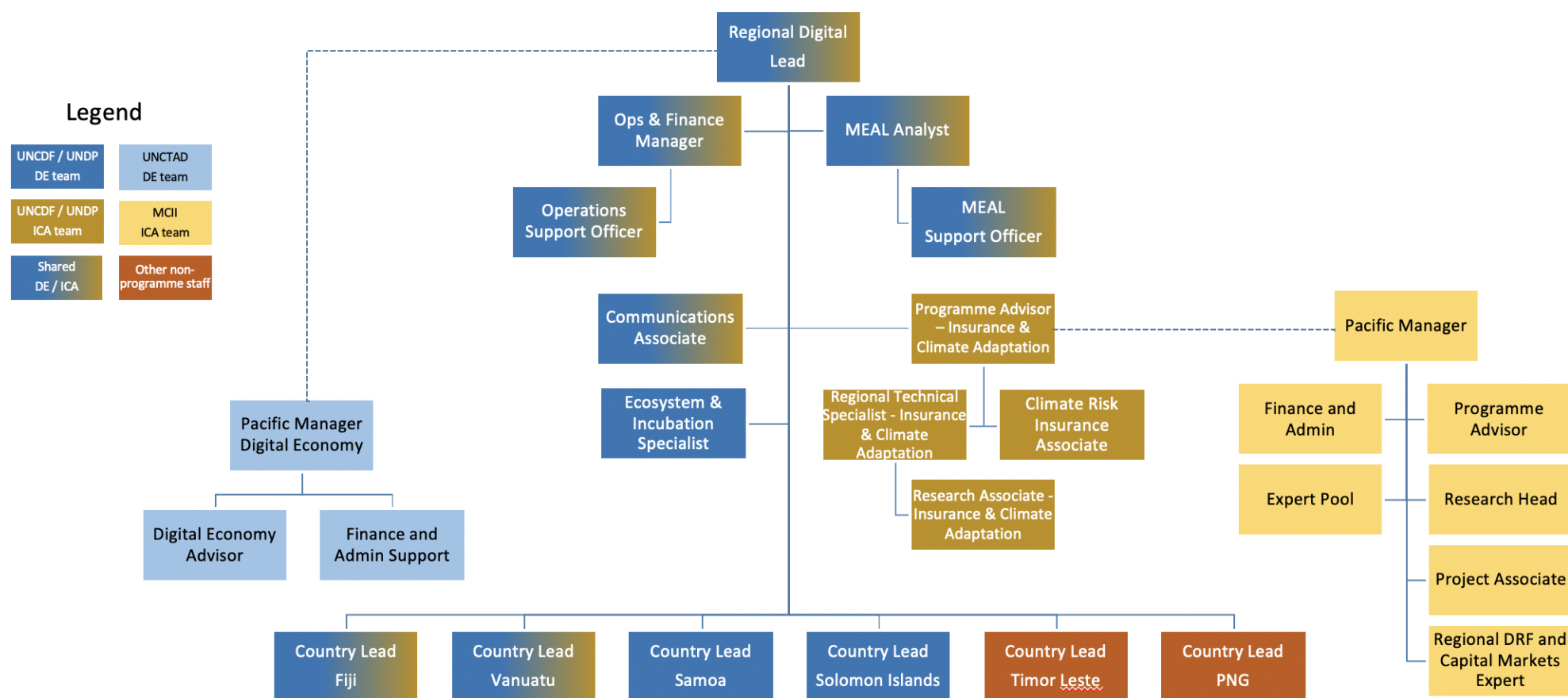
#### **Workstream 3: Inclusive Innovation:**

Both programs will continue engaging with existing partners of PFIP while establishing new relationships all aimed at building inclusive and innovative digital solutions that significantly improve/protect livelihoods. The Programme will aim to accelerate innovation in CDRF instruments with new or improved solutions that have a clear impact on the daily lives of low and moderate-income people in the Pacific.

#### **Workstream 4: Consumer Empowerment:**

At the core of both programs is the end user, the consumer. Recognizing that empowering the end user is the key to sustainability of services, both programmes will continue investing in relevant financial, digital and risk/insurance literacy with a view to ensure greater adoption and usage of services. Both programs will use shared resources, human and technical, for customer and community engagement.

## Programme Organogram (Inception Phase 2020-2022)



## **Annex 14: Draft Terms of Reference for Key Management Position**

### **Programme Advisor**

#### **Duties and Responsibilities**

##### **Summary of key functions:**

- Management and Implementation: Management support to annual planning and implementation of programme activities across all programme countries;
- Operations Management: Ensures effective management of operational support;
- Systems and Standards Management: Contribute to the development and maintenance of programme systems and standards; and
- Act as a backstop to the UNCDF Regional Head in the supervision of the UNCDF Pacific team.

##### **Programme Management:**

- In close consultation with the UNCDF Regional Head, and under the overall guidance of the Programme Investment Committee (IC), the Programme Advisor will support the implementation and management of the programme;
- S/he shall be directly responsible for the management of all staff under the Programme as well as coordinating and supervising the country technical specialists (CTAs) based in various Pacific countries;
- Lead the work for the preparation of annual work plans with performance targets and budgets for Investment Committee approval. The work plans submitted to the IC will cover both the technical components of the Programme as well as its management and administration, and clearly define indicators and targets for activities, as well as input of staff, short-term technical assistance and other resources;
- Provide management support for all aspects of programme implementation according to the annual work plan of the programme, ensuring targeted achievement of expenditures, delivery of activities and outputs; and
- Act as Secretariat to the IC.

##### **Policy Advice & Technical Assistance:**

- Help identify knowledge gaps and design responses. Provide support & guidance to drafting terms of reference in relation to the different tenders for studies, TA provision etc. Assess opportunities within the programme budget to meet capacity development needs;
- Provide technical lead in developing and/or reviewing Climate Disaster Risk Financing strategies in those Pacific countries as and when need arises and is requested by the respective Governments;
- Respond to individual governments by reviewing constraints to CDRFI and recommending solutions or expert advice;
- Provide need-based advice to undertake and/or commission market and sector studies to provide evidence-based knowledge and information to policy makers, regulators and private sector partners; and
- During the absence of the Regional Head, serve as alternate Secretariat to the Pacific Investment Committee, ensuring that all required documentation is available to facilitate decision-making, and

that performance-based agreements with policy makers, regulators and private sector partners are available for signature upon approval by the IC.

#### **Project Generation and Technical Support:**

- Engage with and establish strong and binding relationships with existing as well as potential policy makers, regulators and private sector partners and provide them required information on UNCDF grant facility;
- Provide sound technical advice to policy makers, regulators and private sector partners in developing scalable and replicable CDRFI products and services that can be grant supported through the UNCDF grant facility;
- Assist UNCDF CTAs to work with policy makers, regulators, private sector partners and other institutions to prepare sound proposals that can be considered under the UNCDF grant facility for support;
- Actively follow up and provide guidance in developing project appraisal documents to be placed before the Investment committee for approval;
- Effective management of approved grants with a view to meeting the targeted outreach and deliverables through regular follow up through the respective CTAs and if required directly with the grantees;
- Organize trainings for policy makers, regulators and private sector partners around issues where common capacity-building is required. Provide on-site TA to policy makers, regulators and private sector partners focused on issues specific to individuals. Assist recipients to identify appropriate technical assistance providers for specialized areas not within the competence of the programme team. Advise on the options for partnerships, mergers etc. where these could lead to efficiency gains for policy makers, regulators and private sector partners;
- Assist policy makers, regulators and private sector partners to ensure they have an MIS that can produce relevant and accurate on-time portfolio and financial data and meet reporting requirements; and
- Support the Regional Head and the MEAL analyst to monitor progress of recipient institutions by reviewing and verifying quarterly reported results through field visits prior to sharing the progress reports with donors.

#### **Coordination and Collaboration:**

- Manage the Grant facility and other day to day activities directed towards achieving programmatic results;
- Collaborate with the MEAL staff member in the preparation of annual reports, by provide documentation and feedback for programme monitoring and evaluation, including specific information on challenges and achievements (this includes programme aspects related to gender, achievement of targets, etc.);
- Monitor and support the work of the country teams, ensuring staff outputs are on target and aligned with the objectives of the annual work plan and overall programme;
- Coordinate and act as a bridge between country technical specialists and regional technical specialists in ensuring timely and effective programme delivery;
- Support the Regional Head to strengthen the strategic direction of UNCDFs implementation based on lessons learned; and
- Support the Regional Head in maintaining strong and professional relationships with donors and investors with a view to increasing resource mobilization.

#### **Knowledge Sharing and Networking:**

- Regularly engage with and maintain strong & strategic relationship with the regional policy makers, regulators and private sector partners;
- Support the regional and country teams in developing relevant knowledge products;



- Provide lead in organizing knowledge management events at local and regional levels either directly or in partnership with other agencies like WRI, Drua Incubator, ADB, IFC etc.; and
- Engage with global and regional institutions like Munich Climate Insurance Initiative, UN University, to share and learn from best practices in CDRFI and integrate into UNCDF work.

#### **Impact of Key Results/Key Performance Indicators:**

- Programme outputs are produced on time and financial and human resources managed well to achieve the intended results of the programme;
- Policy makers, regulators and private sector partners supported to design and implement CDRFI products, use of digital channels and new institutional models to serve low income and rural clients;
- Use of ICT-enabled solutions for financial intermediation piloted to demonstrate potential model to deliver CDRFI services to remote and isolated rural communities in the Pacific;
- Constraints removed at macro, meso and retail levels through the provision of well-targeted policy advice and technical assistance; and
- Strengthened commitment by donor, regional and national partners to adopt best practices for creating inclusive CDRFI sectors.

#### **Nature of Interactions:**

- Active and continuous engagement with policy makers, regulators and private sector partners to generate viable CDRFI projects which can be supported by the programme;
- Frequent travel to countries and/or virtual meetings with policy makers, regulators and industry actors to promote the programme, identify partnerships and programme support opportunities and to conduct monitoring of projects supported by the programme;
- Build strong working relationships, supported by an effective communications strategy, with members of the Investment Committee;
- High level substantive engagement with policymakers and regulators, FSPs and Telecommunication companies to identify policy advice and technical assistance needs to address specific constraints and to capitalize on opportunities; and
- Build strong networks with international regional and national institutions and programmes involved in CDRFI research, advocacy and development.

#### **Competencies**

##### **Corporate Responsibility and Teamwork:**

- Serves and promotes the vision, mission, values, and strategic goals of the Programme;
- Plans, prioritizes, and delivers tasks on time;
- Participates effectively in a team-based, information-sharing environment, collaborating and cooperating with others;
- Responds flexibly & positively to change through active involvement;
- Establishes clear performance goals, standards, & responsibilities; manages them accordingly; and
- Promotes a learning environment; facilitates the development of individual and team competencies.

##### **Results-Orientation:**

- Plans and produces quality results to meet established goals; and
- Generates innovative, practical solutions to challenging situations.

##### **Partnering and Networking:**

- Seeks and applies knowledge, information, and best practices from within and outside the Programme;

- Strong networking capabilities and ability to associate him/herself with a range of actors with a view to building relations and facilitating links;
- Innovation and Judgment;
- Conceptualizes and analyses problems to identify key issues, underlying problems and how they relate;
- Contributes creative, practical ideas and demonstrates sense of entrepreneurial initiative to deal with challenging situation; and
- Strives for quality client-centered services (internal/external) when making decisions and taking action.

**Communication:**

- Demonstrates effective written and oral communication skills;

**Job Knowledge and Expertise:**

- Demonstrates substantive and technical knowledge to meet responsibilities and post requirements with excellence;
- Uses ICT and web-based management systems effectively as a tool and resource; and
- Is motivated & demonstrates a capacity to pursue personal development & learn.

**Required Skills and Experience**

**Education:**

- The Programme Advisor will hold a Master's degree from a reputable institution in Business, Management, Finance, Economics or related disciplines.

**Experience:**

- Have a minimum of 10 years relevant, practical working experience within the insurance, climate disaster risk finance sector and/or microfinance, microinsurance etc.;
- Documented deep technical knowledge and experience in insurance, climate disaster risk finance good practices for industry building, and development of inclusive financial systems and products in emerging markets;
- Previous experience of working with Central banks or Government in developing National strategies, facilitating formation of apex coordinating bodies (eg: National task force and working groups);
- Adequate experience and working knowledge of supporting development of pro-poor rural finance and insurance services;
- Previous experience of leading or supporting insurance related research and field studies, preferably in the Pacific region;
- Private Sector partner management experience at senior levels is an advantage, with demonstrated experience with product development for rural, women and low-income clients and micro-entrepreneurs;
- Previous work experience in the area of inclusive finance within the UN preferably in least developed countries (LDCs);
- Familiarity with UN/UNCDF rules and procedures is an advantage; and
- Prepared to travel frequently throughout the Pacific region.

**Language Requirements:**

- Full working knowledge of English, including excellent writing skills.

## Technical Specialist (Regional)

### Summary of key functions:

- Help identify knowledge gaps and design responses. Contribute to drafting terms of reference in relation to the different tenders for studies, TA provision etc. Assess opportunities within the programme budget to meet capacity development needs;
- Based on relevant opportunities, respond to individual governments by reviewing constraints to Climate Disaster Risk Finance and Insurance (CDRFI) and recommending solutions or expert advice;
- Undertake and/or commission market and sector studies to provide evidence-based knowledge and information to policy makers, regulators and private sector partners;
- Donor Coordination and Partnership management support and events planning / Regular contact with partners through electronic and personal contact and well executed workshops, conferences and other learning;
- Participate in the identification, development and oversight of a diverse mix of strong projects that support programme outcomes. Ensure that projects are running on time and smoothly, problems are identified early, and remedial steps proposed;
- Manage CDRFI research. Facilitate the flow of information and knowledge between key stakeholders in research efforts and assist in organizing and where necessary, conducting, surveys, focus groups, workshops, research results presentations and knowledge exchange events. Assist in the planning and execution of programme events; and
- Provide UNDP/UNCDF corporate support under the direction of the Programme Advisor, including fulfilling reporting requirements, logistical support for all programme travel and assistance with fundraising.

### Build capacity of the relevant stakeholders:

- Maintain close partnership and relationship ties with the stakeholders to support interest in and execution of the national disaster risk financing strategy and its Key Results Areas to expand CDRFI in the Pacific;
- Identify key knowledge constraints and organize learning, knowledge exchange, training, workshops, etc. to build the capacity and interest in relevant themes. (i.e. consumer rights and protection; CDRFI policy, best practices, monitoring and evaluation, etc.); and
- Participate in Task Force meetings and relevant working group meetings, manage UNCDF's input to those meetings and UNCDF's reporting to the Taskforce.

### Donor Coordination and Partnership management:

- Build effective and efficient partnerships at the operational level with main funders and stakeholders at country and regional levels, including but not limited to the members of the NFIT, European Union, DFAT, ADB, IFC, India and MFAT, to coordinate CDRFI activities in country, including financial literacy, advocacy and other activities;
- Provide assistance where required to the above-mentioned agencies and their consultants operating within the country. Document and share experience on partnership interactions as input into corporate business intelligence;
- Develop and maintain partnerships with relevant regional and national stakeholders, for sharing of experience and to promote coordination of activities in the area of CDRFI. Key stakeholders include Government Ministries, Central Banks, telecommunication companies, microfinance service providers, FSPs, and donors. Maintain regular contact with partners, including updating listserv and monitoring listservs, managing contact/consultant data base, and liaising with UNDP/UNCDF knowledge management and communications team;
- Manage learning, advocacy events and publications on CDRFI issues; and

- Builds and support partnerships through regular interaction with stakeholders and assists in the planning and execution of programme related events in country.

#### **Identification, development and oversight of the Programme:**

- Working with donors and stakeholders, develop a pipeline of potential projects that help achieve programme outcomes. Projects will be related to climate disaster risk finance, mobile insurance and banking, microinsurance, remittances and potentially other areas;
- With the Programme team, work with shortlisted partners to develop strong CDRFI projects that reach low income and rural households, including a high percentage of women;
- Champion new projects and conduct verification visits and due diligence of grant applicants;
- Prepare project appraisal documents for presentation to the Programme Investment Committee. These projects will involve private sector partners, such as banks, mobile network operators, insurance companies and non-bank financial institutions amongst others;
- Undertake regular contact with partners to monitor the implementation of projects supported by the Programme. Assist partners in fulfilling reporting requirements related to CDRFI activities as required. Monitoring shall be made against quantifiable benchmarks and efficiency indicators agreed in the grant agreement, including the validation of grantees progress reports;
- Based on the findings of the monitoring visits, prepare regular progress reports to the Programme Management for the purpose of reporting to the Investment Committee; and
- Assist in preparing grant and performance-based agreement documentation for approved partners.

#### **Manage and Support Research:**

- Carry out or oversee research and studies, independently or as a counterpart to consultant(s) hired by the Programme, on various issues relating to CDRFI. These may include financial services sector assessments, financial competency surveys, studies of branchless banking and mobile phone banking, agent networks, government to people payments, client preferences and uptake of financial services; micro-insurance supply and demand studies;
- Provide support in organizing in-country events to disseminate knowledge and results of research, including venue and support services identification, lists invitees and invitation process;
- Develop “information exchange events” for CDRFI stakeholders and outside experts;
- Contribute to technical notes, highlighting challenges, opportunities and successes in country;
- Identify stakeholders to participate in knowledge sharing opportunities, assist in managing the logistics of their participation; and
- Contribute, as appropriate, to global knowledge sharing to spread the information on experience in climate disaster risk finance and insurance.

#### **UNCDF corporate support:**

- Generate and manage donor reporting on programme activities;
- Build an effective partnership with UNDP Country Office in Fiji and the Region;
- Provide advice and input from country perspective on project management or performance issues, planning and monitoring portfolio performance results for Unit and UNCDF annual/cumulative ROAR and Unit and regional work plan and UNCDF Business Plan; and
- As needed support the team in fulfilling planning and reporting requirements to the Investment Committee, UNDP, UNCDF and its other funders.

#### **Impact of Results:**

Results of the work of the Technical Specialist will be a significant contribution to the Programme achieving its outcome of serving low-income clients in the South Pacific. This will require the development of strong projects funded by the Programme operating under an improved enabling environment. It also will result in

the effective and efficient coordination of donor and stakeholder activities to maximize impact of CDRFI projects. The Technical Specialist shall contribute to developing and executing an exit strategy from its activities so that its initiatives can be carried forward by regional and national stakeholders.

## **Competencies**

### **Technical:**

- Experience working with community-based and rural initiatives, including those related to inclusive finance;
- Experience managing or conducting research, particularly related to CDRFI projects;
- Ability to develop project documents, corresponding budgets, and monitoring and evaluation plans;
- Experience in monitoring development projects with financial component, conducting basic financial analysis, establishing and monitoring performance-based indicators, and investigating impact;
- Working knowledge of current developments in climate change, disaster risk finance, including one or more of the following: branchless banking, micro-insurance, social performance, financial literacy;
- Working experience and knowledge of socio-economic issues, which results in the exclusion of various groups, in particular women, from the CDRFI sectors and ability to generate strategies to address those issues; and
- Working knowledge of international donor organizations and development partners and preferably experience in preparing proposals for funding.

### **Functional:**

- Demonstrated broad knowledge of development issues, especially in the areas of poverty alleviation and local development;
- Excellent analytical skills with proven ability to manage projects;
- Comprehensive understanding of the project management cycle and managing for results;
- Knowledge of UNDP/UNCDF field level organization;
- Knowledge of Atlas (Enterprise Resource Planning system used by UNCDF and UNDP) at level required for the position;
- Excellent speaking and writing skills in English with proven cross-cultural communication. The candidate(s) should be able to function effectively in an international, multicultural environment;
- Strong IT skills, including ability to work regularly with MS Word, Excel, Outlook and PowerPoint;
- Experience in the Pacific is preferred; and
- Ability to travel regularly.

### **Managerial/Behavioural:**

- Focus on impact and results for clients and stakeholders;
- Builds trust in interactions with others;
- Ability to work with a multitude of stakeholders at the policy-maker, industry and community levels;
- Shows initiative and manages risks;
- Approaches challenges creatively and effectively;
- Demonstrates integrity, exhibits high ethical standards;
- Approaches work with energy and a positive, constructive attitude and responds positively to feedback;
- Committed to teamwork, working with other stakeholders;
- Remains calm, in control and good humoured even under pressure; and
- Demonstrates openness to change and ability to manage complexities and resolve problems.

### **Corporate:**

- Demonstrates integrity and fairness by modelling UN values and ethical standards;

- Displays cultural and gender sensitivity and adaptability;
- Treats all persons fairly without favouritism;
- Shows strong corporate commitment; and
- Promotes the vision, mission and strategic goals of UNCDF and UNDP.

## **Required Skills and Experience**

### **Education:**

- A Master's degree in economics, public/business administration, social sciences, or related disciplines.

### **Experience:**

- A minimum of five (5) years' experience in progressively more responsible positions in the banking, finance or development field, including in financial inclusion and climate disaster risk insurance;
- Experience of working with UN or other international organizations is an asset;
- Experience working in or with microfinance institutions, or CDRFI support projects;
- Previous work experience in the area of inclusive finance within the UN preferably in least developed countries (LDCs); and
- Familiarity with UN/UNCDF rules and procedures is an advantage.

### **Language Requirements:**

- Full working knowledge of English, including excellent writing skills.

## **Research Associate**

### **Summary of key functions:**

- Support the pipeline development and implementation of inclusive insurance and climate disaster risk insurance projects in the Pacific;
- Administration support of the budgeting and reporting function for insurance related projects of the Programme; and
- Facilitation of knowledge building and knowledge sharing pertaining to projects of the Programme.

Assist the Programme Advisor and Technical Specialists to identify, develop and manage inclusive insurance and climate risk insurance projects at national or sub-national levels

- Work with climate and disaster insurance specialists from the UNCDF and Munich Climate Insurance Initiative (MCII) for the scoping, development and implementation of a parametric, disaster and climate micro insurance product in the Pacific;
- Compile meeting notes and undertake research that is required by the consultancy team and any other tasks assigned by the Supervisors;
- Co-ordinate and track progress of projects in the Pacific;
- Assist develop learning materials and impact stories;
- Preparing reports, presentations and spreadsheets and assist in delivery of briefing sessions;
- Maintaining documents related to inclusive insurance and climate disaster risk insurance; and
- Any other work related to the Programme Workstream areas as directed by Programme Management.

Develop reports and lessons learnt documentation on inclusive insurance and climate risk insurance at national and sub-national level

- *Develop a suite of lessons learnt documentation on projects already conducted or currently being implemented at national or sub-national level; and*
- *Develop and prepare reports for relevant stakeholders on inclusive insurance and climate disaster risk insurance projects undertaken by the Programme.*

Provide support to national and sub-national stakeholders in selected Pacific Island countries in relation to the introduction of inclusive insurance and climate disaster risk insurance in these countries:

- Support the Programme's inclusive insurance and climate disaster risk insurance work in other Pacific Island countries;
- Represent members of the Programme where necessary in the above areas of work; and
- Liaise with UNDP and UNCDF focal points and personnel in Fiji, Vanuatu and other Pacific Island countries as and when required.

### **Impact of Results:**

The key results have an impact on the reputation and standing of the Programme in the Region. Inclusive insurance and climate disaster risk insurance work is a priority area for the countries in which the Programme presently work, with MCII.

### **Competencies**

#### **Functional Competencies:**

##### **Corporate Responsibility & teamwork:**

- Serves and promotes the vision, mission, values, and strategic goals of the Programme and its support partners;
- Plans, prioritizes, and delivers tasks on time; and
- Participates effectively in a team-based, information-sharing environment, collaborating and cooperating with others.

##### **People Skills**

- Promotes a learning environment; facilitates the development of individual and team competencies.

##### **Partnering & Networking:**

- Seeks and applies knowledge, information, and best practices from within and outside the Programme.

##### **Results-Orientation:**

- Determines clients' needs & adapts the Programme's products & services to meet them.

##### **Innovation & Judgment**

- Contributes creative, practical ideas and approaches to deal with challenging situations; and
- Pursues own personal and professional development.

##### **Communication:**

- Demonstrates excellent written and oral communication skills;
- Demonstrates excellent presentation skills; and
- Demonstrates excellent command, familiarity with social media.

#### **Job Knowledge & Expertise**

- Uses Information Technology effectively as a tool and resource; and
- Is motivated & demonstrates a capacity to pursue personal development & learn.

#### **Required Skills and Experience**

##### **Education:**

- University Degree in Environmental Science, Climate Change, Development, Public Policy, Economics, Banking and Finance or related disciplines.

##### **Experience:**

- Minimum of 2 years of working experience in Climate Disaster Risk Finance and Financial Inclusion;
- Experience working with Climate Adaptation projects in Pacific Islands or other developing countries;
- Experience of working with UN or other international organizations is an asset;
- Full proficiency in the usage of computers and office software packages (MS Word, Excel, etc.) and advance knowledge of spreadsheet and database packages;
- Previous work experience in the area of climate disaster risk finance within the UN preferably in least developed countries (LDCs); and
- Familiarity with UN/UNCDF rules and procedures is an advantage.

##### **Language Requirements:**

- Full working knowledge of English, including excellent writing skills.



Annex 15: Budget in UNDG Format

|  | Year 1                 | Year 2                 | Year 3                 | Year 4                 | Year 5                 | Total                   |
|--|------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|
| <b>Budget</b>  |                        |                        |                        |                        |                        |                         |
|  | <b>Cost</b>            | <b>Cost</b>            | <b>Cost</b>            | <b>Cost</b>            | <b>Cost</b>            | <b>Cost</b>             |
|  | <b>(USD)</b>           | <b>(USD)</b>           | <b>(USD)</b>           | <b>(USD)</b>           | <b>(USD)</b>           | <b>(USD)</b>            |
| <b>UNDG Harmonized Budget Categories</b>                           |                        |                        |                        |                        |                        |                         |
| <b>1. Staff and other personnel Cost</b>                           | \$ 408,007.80          | \$ 418,408.19          | \$ 484,328.60          | \$ 490,795.03          | \$ 492,834.78          | <b>\$ 2,294,374.40</b>  |
| <b>2. Supplies, Commodities, Materials</b>                         | \$ 460,989.80          | \$ 703,993.80          | \$ 677,148.00          | \$ 590,909.80          | \$ 423,937.42          | <b>\$ 2,856,978.82</b>  |
| <b>3. Equipment, Vehicles and furniture including Depreciation</b> | \$ 150,000.00          | \$ 100,000.00          | \$ 50,000.00           | \$ 50,000.00           | \$ 40,000.00           | <b>\$ 390,000.00</b>    |
| <b>4. Contractual Services</b>                                     | \$ 1,027,258.08        | \$ 1,105,347.68        | \$ 1,408,519.80        | \$ 924,053.58          | \$ 1,212,364.06        | <b>\$ 5,677,543.20</b>  |
| <b>5. Travel</b>   | \$ 181,814.52          | \$ 201,336.92          | \$ 277,129.95          | \$ 156,013.40          | \$ 208,091.01          | <b>\$ 1,024,385.80</b>  |
| <b>6. Transfers &amp; Grants</b>                                   | \$ 629,841.33          | \$ 1,231,219.73        | \$ 1,322,917.05        | \$ 1,074,949.24        | \$ 997,333.03          | <b>\$ 5,256,260.38</b>  |
| <b>7. General Operating Expenses</b>                               | \$ 111,148.47          | \$ 217,274.07          | \$ 233,455.95          | \$ 189,696.92          | \$ 175,999.95          | <b>\$ 927,575.36</b>    |
| <b>8. Total Direct costs of the Actions</b>                        | <b>\$ 2,969,060.00</b> | <b>\$ 3,977,580.39</b> | <b>\$ 4,453,499.35</b> | <b>\$ 3,476,417.97</b> | <b>\$ 3,550,560.25</b> | <b>\$ 18,427,117.95</b> |
| <b>9. GMS (7%)</b>   | <b>\$ 207,834.20</b>   | <b>\$ 278,430.63</b>   | <b>\$ 311,744.95</b>   | <b>\$ 243,349.26</b>   | <b>\$ 248,539.22</b>   | <b>\$ 1,289,898.26</b>  |
| <b>Total Programmatic Costs</b>                                    | <b>\$ 3,176,894.20</b> | <b>\$ 4,256,011.02</b> | <b>\$ 4,765,244.30</b> | <b>\$ 3,719,767.23</b> | <b>\$ 3,799,099.46</b> | <b>\$ 19,717,016.21</b> |
| <b>10. Administrative Agent (1% of Contribution)</b>               | <b>\$ 29,690.60</b>    | <b>\$ 39,775.80</b>    | <b>\$ 44,534.99</b>    | <b>\$ 34,764.18</b>    | <b>\$ 35,505.60</b>    | <b>\$ 184,271.18</b>    |
| <b>11. Total Contribution</b>                                      | <b>\$ 3,206,584.80</b> | <b>\$ 4,295,786.82</b> | <b>\$ 4,809,779.30</b> | <b>\$ 3,754,531.41</b> | <b>\$ 3,834,605.07</b> | <b>\$ 19,901,287.39</b> |