



## Financial tools for small scale fishers in Melanesia

### Part I: Project Information

**GEF ID**

10437

**Project Type**

MSP

**Type of Trust Fund**

SCCF

**CBIT/NGI**

CBIT

NGI

**Project Title**

Financial tools for small scale fishers in Melanesia

**Countries**

Regional, Fiji, Papua New Guinea

**Agency(ies)**

WWF-US

**Other Executing Partner(s)****Executing Partner Type**

**Other Executing Partner(s)**

Willis Towers Watson

**Executing Partner Type**

Private Sector

**GEF Focal Area**

Climate Change

**Taxonomy**

Biomes, Biodiversity, Focal Areas, Coral Reefs, Mangroves, Sea Grasses, Mainstreaming, Fisheries, Protected Areas and Landscapes, Productive Seascapes, Climate Change, Climate Change Adaptation, Livelihoods, Small Island Developing States, Mainstreaming adaptation, Private sector, Disaster risk management, Community-based adaptation, Climate resilience, Climate information, Demonstrate innovative approach, Influencing models, Convene multi-stakeholder alliances, Deploy innovative financial instruments, Stakeholders, Private Sector, SMEs, Financial intermediaries and market facilitators, Civil Society, Community Based Organization, Academia, Non-Governmental Organization, Type of Engagement, Participation, Consultation, Partnership, Information Dissemination, Indigenous Peoples, Beneficiaries, Communications, Awareness Raising, Strategic Communications, Behavior change, Education, Local Communities, Gender Equality, Gender results areas, Access to benefits and services, Knowledge Generation and Exchange, Participation and leadership, Gender Mainstreaming, Gender-sensitive indicators, Sex-disaggregated indicators, Women groups, Capacity, Knowledge and Research, Knowledge Generation, Training, Workshop, Knowledge Exchange, Peer-to-Peer, Capacity Development, Learning, Theory of change, Indicators to measure change, Adaptive management, Innovation

**Rio Markers****Climate Change Mitigation**

Climate Change Mitigation 0

**Climate Change Adaptation**

Climate Change Adaptation 2

**Duration**

36 In Months

**Agency Fee(\$)**

90,454

**Submission Date**

11/11/2019

**A. Indicative Focal/Non-Focal Area Elements**

<b>Programming Directions</b>	<b>Trust Fund</b>	<b>GEF Amount(\$)</b>	<b>Co-Fin Amount(\$)</b>
CCA-1	SCCF	1,005,046	5,300,000
	<b>Total Project Cost (\$)</b>	<b>1,005,046</b>	<b>5,300,000</b>

**B. Indicative Project description summary**

**Project Objective**

to improve resilience to the adverse impacts of climate change, including major shock events, in vulnerable coastal small-scale fisher communities in Fiji and PNG

<b>Project Component</b>	<b>Financing Type</b>	<b>Project Outcomes</b>	<b>Project Outputs</b>	<b>Trust Fund</b>	<b>GEF Amount(\$)</b>	<b>Co-Fin Amount(\$)</b>
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Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 1: Enabling environment for financial products to improve resilience for small-scale fisher communities in Fiji and PNG (Northern Viti Levu and Vanua Levu coasts and Madang)	Technical Assistance	1.1 Identification of climate adaptation and resilience solutions for targeted small-scale fishing reliant communities	1.1.1 Desktop risk assessment, community surveys, and workshops to identify and prioritize critical climate hazards and associated impacts and risks facing targeted communities and risk management solutions	SCCF	182,800	822,108
			1.2 Improved financial literacy to engage with financial products for climate resilience among vulnerable coastal small-scale fisher community members			
			1.2.1 Best practice guide (in local language(s), with visuals) and training manual for financial literacy for the products developed in 2.1.1			
			1.2.2 Community Facilitators trained to deliver 1.2.1 and to strengthen peer to peer financial literacy networks			
			1.2.3 Financial literacy training on financial products (developed in 2.1.1) in the targeted communities			

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 2: Financial products and incentives for small-scale fisher communities	Technical Assistance	2.1 Community access to appropriate financial climate risk management products	<p>2.1.1 Suite of financial products[1] to address critical climate risks to target communities (based on 1.1 results).</p> <p>2.1.2 Models for deployment of the financial products, including sources of premium financing, institutional arrangements establishing coverage as an incentive for sustainable fishing practices, administrative and regulatory issues, and markets willing to underwrite risk</p> <p>2.1.3 Financial products deployed for climate resilience and adaptation in target communities, including short-term premium finance for community coverage for ‘proof of concept’</p> <p>2.1.4 Strategy for sustainable coverage of premiums</p> <p>2.2.1 Models for deployment of the financial products, including administrative and regulatory issues and innovations in distribution tools and channels (e.g. mobile phone and internet app distribution)</p> <p>2.2.2 Specific roll-out plan for local markets willing to underwrite risk</p> <p>2.3.1 Strategy for short-term financing of community coverage for ‘proof of concept’ implementation, including identification of necessary institutional arrangements to extending coverage as an incentive for sustainable fishing practices</p>	SCCF	639,600	3,656,478

<b>Project Component</b>	<b>Financing Type</b>	<b>Project Outcomes</b>	<b>Project Outputs</b>	<b>Trust Fund</b>	<b>GEF Amount(\$)</b>	<b>Co-Fin Amount(\$)</b>
Component 3: KM and M&E	Technical Assistance	3.1 Effective project communications, knowledge management and adaptive management	3.1.1 KM products disseminated to share lessons and scale up similar private sector work internationally on financial products for climate resilience  3.1.2 M&E reports, used for adaptive project management and successful project delivery	SCCF	91,278	410,505
<b>Sub Total (\$)</b>					<b>913,678</b>	<b>4,889,091</b>
<b>Project Management Cost (PMC)</b>						
				SCCF	91,368	410,909
<b>Sub Total(\$)</b>					<b>91,368</b>	<b>410,909</b>
<b>Total Project Cost(\$)</b>					<b>1,005,046</b>	<b>5,300,000</b>

**C. Indicative sources of Co-financing for the Project by name and by type**

<b>Sources of Co-financing</b>	<b>Name of Co-financier</b>	<b>Type of Co-financing</b>	<b>Investment Mobilized</b>	<b>Amount(\$)</b>
GEF Agency	WWF-US	In-kind	Recurrent expenditures	120,000
CSO	WWF-Pacific	In-kind	Recurrent expenditures	150,000
CSO	WWF-International	In-kind	Recurrent expenditures	50,000
Private Sector	Willis Towers Watson	In-kind	Recurrent expenditures	2,800,000
Private Sector	Mastercard	In-kind	Recurrent expenditures	800,000
Private Sector	pinBox Solutions	In-kind	Recurrent expenditures	600,000
CSO	World Vision	In-kind	Recurrent expenditures	780,000
			<b>Total Project Cost(\$)</b>	<b>5,300,000</b>

**Describe how any "Investment Mobilized" was identified**

Not Applicable

**D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds**

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programming of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>	<b>Total(\$)</b>
WWF-US	SCCF	Regional	Climate Change	NA	1,005,046	90,454	1,095,500
<b>Total GEF Resources(\$)</b>					<b>1,005,046</b>	<b>90,454</b>	<b>1,095,500</b>

**E. Project Preparation Grant (PPG)**

PPG Required

**PPG Amount (\$)**

50,000

**PPG Agency Fee (\$)**

4,500

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programming of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>	<b>Total(\$)</b>
WWF-US	SCCF	Regional	Climate Change	NA	50,000	4,500	<b>54,500</b>
<b>Total Project Costs(\$)</b>					<b>50,000</b>	<b>4,500</b>	<b>54,500</b>

**Core Indicators**

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

**Note: The SCCF/LDCF Results Framework has been completed**

## Part II. Project Justification

### 1a. Project Description

#### 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)

##### *Adaptation Problem & Root Causes*

Melanesia includes some of the world's smallest countries surrounded by Exclusive Economic Zones many times larger than their land surface area. The region is heavily dependent upon oceanic and coastal fisheries for food security, livelihoods, revenue, employment and development. Small-scale coastal fisheries provide work for 100,000s of people, and employ 10–20 times as many people as commercial fisheries. Additionally, households' dependence on fish for protein is high, with estimates indicating that fish provide up to 90% of animal protein intake in rural areas and 40–80% in urban areas.

Climate change is already affecting the Melanesian region disproportionately through rising temperatures, sea-level rise, flooding, coastal erosion, an increase in extreme weather events, coral reef bleaching, and ocean acidification. Such trends exacerbate the vulnerability of Melanesian coastal communities who face a range of sustainable development challenges from limited resources, high rates of population growth, remoteness, widespread poverty, and vulnerability to external shocks. Natural disasters such as tropical cyclones and floods cause average annual direct losses of US\$284 million in the Pacific. With a combined population of fewer than 10 million people, annual losses are the highest in the world on a per-capita basis. For example, Tropical Cyclone Winston, a category 5 storm, swept through Fiji in February 2016. Winston was the strongest tropical cyclone to make landfall in Fiji (and the entire South Pacific Basin) in recorded history, and it is estimated to have caused just under US\$1bn in losses and damages. It is worth noting that only around US\$130mn of those losses were insured, causing long-term economic impacts, especially affecting the most vulnerable.

Climate-related natural catastrophe risk (such as from cyclones and extreme rainfall events), is only expected to intensify with global warming, whilst marine heatwaves (causing coral bleaching) and ocean acidification constitute an erosion of the ecosystem services on which fishers rely. The slow-onset climate pressures of chronic climate risk, such as the threat of sea level rise and associated more frequent and more severe high tide and storm surge inundation, will become more impactful over time, all else being equal, simply because the base level of the sea relative to the land will gradually change. For low-lying atolls across PNG and Fiji, and many coastal communities on the main islands, even a small rise in sea level will have huge consequences in terms of lost land area and other impacts such as saltwater intrusion. According to the IUCN, ocean warming affects global food security as a result of changes in fishery yields and the distribution of fish stocks. Damages to property and the displacement of people are expected to increase because of sea-level rise and frequent extreme weather events such as storms and floods. The health of marine species and humans will be affected by increasing bacteria and virus outbreaks as pathogens spread more easily due to the warming waters, while travel and tourism will be impacted by frequent coral bleaching events.<sup>[1]<sup>1</sup></sup>

Climate impacts and ecosystem degradation contribute to a vicious cycle of increased coastal community vulnerability; mounting climate and anthropogenic threats (e.g. increases in temperatures, sea level, storm intensity, turbidity of coastal waters – due to both extreme rainfall and poor land-use management – gradual ocean acidification, and unsustainable fishing practices) damage coastal ecosystems, which in turn leads to increased sedimentation and pollution, weakening the system and making it even more susceptible to climate impacts. As the strength of these ecosystems are threatened, so is their ability to provide critical ecosystem services such as coastal protection and habitat for fish and invertebrates. So, not only do climate events threaten lives and damage property, they also impact the natural infrastructure that underpins a critical source of risk mitigation, food, and economic activity (i.e. fishing). Therefore, climate shocks threaten lives and livelihoods – posing risks to individuals and economic activity at the household and enterprise levels. The growing materiality of climate risk means informal risk management and traditional stewardship may no longer be sufficient to support rural livelihoods.

Fiji and PNG were selected for this project as they are exceptionally vulnerable to climate risk impacts. Fiji experiences frequent tropical cyclones with damaging winds, rains, and storm surge; for example, tropical cyclones Ami, Evan, and Winston in 2003, 2012, and 2016 all caused widespread damage and numerous fatalities. PNG is

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<sup>1</sup>

also at risk to tropical cyclones. The northern part of PNG, where the project will focus, is at high risk to extreme rainfall events, and flash flooding and landslides threaten lives and livelihoods, causing fatalities and widespread destruction. The focus on two countries in this project has the advantage of a diversity of risk profile between the two countries, which allows for the development of more financial risk management products, applicable to a larger suite of risks, than if one country was the focus.

Fiji and PNG both have good potential for impact and scaling, with relatively large populations of small-scale fishers. Subsistence fishing is a particularly critical source of livelihood for many coastal communities in these countries in particular. For example, FAO cites estimates that somewhere between 250,000 and 500,000 individuals participate in the coastal subsistence fishery in PNG, and 50% of all rural households in Fiji are involved in some form of subsistence fishing.

### ***Barriers that need to be addressed (systems description)***

A number of barriers need to be addressed to increase the resilience of coastal small-scale fishers in PNG and Fiji. Currently, (1) financial tools that support the financial resilience of small-scale fishers to climate change impacts do not exist. In addition, (2) there is a lack of financial literacy to understand the value of these financial tools, and therefore low demand for climate insurance or the ability to pay for financial tools even if they do exist. Finally, there are limited incentives for sustainable management of natural resources. Without the availability and uptake of financial tools for climate adaptation, coastal small-scale fishers in PNG and Fiji are exceptionally vulnerable to severe climate events and have limited financial capacity to absorb shock-event. Each of these barriers are described further below:

1. There is a **lack of access to (and existence of) appropriate financial tools for climate adaptation**, particularly regarding financial resilience to climate shock events, in Pacific coastal small-scale fishing communities.

For the coastal fishing communities of Fiji and PNG, shock climate events such as cyclones and extreme rainfall can lead to direct damages to homes, equipment, crops, and even loss of life. This interrupts income generating and subsistence activities, resulting in economic loss. Indirectly, threats to the health of coastal ecosystems pose risks to the coastal communities that depend on their ecosystem services; extreme rainfall can increase the turbidity of coastal waters, and cyclones damage reefs and mangroves. Slow-onset climate pressures (e.g. increasing ocean temperatures, sea level rise, and gradual acidification of the ocean) are exacerbating these climate shock events. The frequency of increased warm water events is further leading to impact on coral reefs through bleaching events which impact the availability for fish, a key component of the food security and nutrition for these communities.

Altogether, climate shocks impact critical natural assets' ability to provide ecosystem services (e.g. as fish and invertebrate habitat for coastal fisheries), which underpin coastal economic activity (e.g. both income generating and subsistence fishing) and provide risk reduction (e.g. as coastal storm / flood defenses).

The financial products currently available covering climate risk in the Pacific are almost entirely insurance products for fixed assets (i.e. property) on an indemnity basis (i.e. paying out based on actual damage, often after a lengthy loss-adjustment process). Current insurance provision is almost exclusively focused on urban communities, mainly consists of commercial property insurance, and can be costly or impossible to procure for many low-income households. Existing community risk sharing arrangements (e.g. the Wontok system, where the family and community provide for individuals) are suitable for individual resilience but not climate risk. Climate risk is a covariant risk, meaning a single event impacts the entire community at the same time - the impact is highly concentrated in both space and time.

The financial products currently available are either not accessible or do not fully build the adaptive capacity of Pacific small-scale fishing communities to respond to climate shocks (e.g. livelihood protection policies available).

Without financial products that address these climate risks, small-scale fishing communities are even further unprepared to respond to extreme weather and environmental impacts. They are often left without the necessary liquidity or smoothing income to rebuild, replace lost livelihood activities interrupted by natural catastrophe events, and recover, drastically slowing down economic recovery. Without financial resilience to climate impacts, communities are often reliant on the overexploitation of marine resources, which offer a source of food security. Increased post-event anthropogenic (e.g. fishing) pressure impairs ecosystems' ability to recover, causing long-term damage to these assets and their productivity which underpins future livelihood activities. As climate change exacerbates the risk landscape, the lack of suitable climate insurance products is a severe threat to long-term economic development and prosperity, as any development gains are threatened by increasing risks.

2. There is a **lack of financial literacy** among members of coastal small-scale fishing communities.

Many coastal communities are relative newcomers to cash-based economies and have limited skills or understanding of savings and insurance cultures. Not counting life insurance, PNG's non-life insurance penetration rate is 0.59% while Fiji's is 1.42%. For rural communities in Fiji and PNG, insurance coverage is extremely limited.

A lack of financial literacy prevents these communities from understanding the value of insurance as a climate adaptation instrument and accessing these tools, leaving communities reliant on uncertain external financial flows to respond and recover from shock climate events. The lack of financial literacy is also a barrier to insurance companies distributing products to communities; the commercial opportunity related to insurance innovation in the Pacific is relatively small because distribution requires so much community engagement and training, and insurers are dependent on development actors to facilitate penetration.

The establishment of a savings culture as part of financial literacy training is needed to provide additional resilience for coastal communities.

3. **Paying premiums is a challenge** in small-scale fishing communities, as households often do not have the fiscal space to prioritize insurance and financial planning for climate shock events.

Even if the barriers listed above are removed and communities have (1) access to appropriate financial products, and (2) the financial literacy to understand their use and value, the capacity to pay or prioritize insurance products is limited. The low demand for (and capacity to pay for) climate insurance must be addressed to ensure the sustainability of financial products from the perspective of risk ownership.

4. **Incentives to drive behavior change are few** in a poverty context where the motivation is high to overexploit resources for short-term food and livelihood security needs. There are currently few incentives to adopt Community Based Fisheries Management that includes triggers for environmental events like bleaching or major flooding events (for example, payment to sit out until a coral bleaching event has recovered). Also absent is investment from fishers into iFADs to displace fishing effort from the reef to pelagic species, or assistance to get cash crops certified to increase cash flows and reduce pressure for fishing.

## 2) Baseline

### *Coastal Resource Management*

During project implementation, WWF South Pacific will continue to build off a long history of working with key government agencies at the National, Provincial and Ward level in PNG and Fiji. WWF will provide a strong baseline of coastal small-scale fish resource management and community-based fisheries management during the project period, including:

- Developing an automated smart phone application to simplify the rapid stock assessment process for coastal fisheries.
- Supporting alternative fishing methods to reduce pressures on inshore fisheries, in collaboration with communities and local authorities. Such cost-efficient innovations include the deployment of inshore fish attracting devices (iFADs), used to reduce fishing pressure on the near-shore reef systems and as a stepping stone to addressing poverty and food security issues. iFADs are often used in combination with an innovative approach to stock assessments called Spawning Potential Surveys (SPS), these establish spawning potential ratios (SPR), which in turn allow coastal communities to conduct their own assessments after receiving basic training.
- Engaging with coastal fishers and local government to accelerate the uptake of Community-Based Fisheries Management (CBFM). WWF will continue to build capacity within the Provincial Fisheries Division to ensure sustainability and adoption of co-management at the provincial level. At the request of several communities, WWF will support them in developing Community-Based Fisheries Management Plans, including integration of climate change resilience into CBFM planning.

The Governments of Fiji and PNG also provide a baseline of coastal fisheries management. In PNG, coastal fisheries management is undertaken under the National Fisheries Authority (NFA) and the Conservation and Environment Protection Authority. Government recognizes the pivotal role of local communities and the customary landowners, and aims to further support communities developing sustainable livelihoods while protecting biodiversity. The PNG Policy on Protected Areas (2014) highlights the intention of government to develop a sustainable financing model to enable active management and capacity building throughout PNG, including coastal resource management.

### *Community engagement, financial inclusion and livelihoods*

WWF's ongoing baseline of work supports community engagement and sustainable community enterprises like tourism, agriculture, arts and food services, which are unrelated to fisheries, to release pressure on coastal resources and encourage stewardship within the community. WWF is coordinating with 109 communities in Fiji on coastal fisheries and 15 communities in Madang in PNG. This includes:

- Supporting the Community Facilitator (CF) model in PNG, including in Madang. Female and male representatives selected by the community leaders are trained by WWF across program themes, including: community-based fisheries management; disaster risk reduction and climate change resilience; and, financial literacy, village savings and loans scheme (VSL) administration, and small to medium enterprise development. Community facilitators are supported by peer-to-peer networks. The CF model promotes gender equity and program longevity within the communities by upskilling and implementation of projects in a situationally appropriate manner. In Fiji, WWF engages with communities through village chiefs and district authorities.
- Work with women's groups to ensure that the benefits from the transition to more sustainable fishing activities also contribute to improving livelihoods, not just improving food security. Fish that are caught by local communities are generally sold at market by the women of those communities. By supporting women and enabling their financial inclusion, sustainable fishing practices can feed into livelihood opportunities for women, which in turn will benefit families and communities as a whole.
- Financial inclusion workshops for women in PNG. Such workshops in the past years in Solomon Islands and Papua New Guinea have led to numerous women saving their earnings and some starting new businesses that have met environmental sustainability criteria.
- Rollout of Village Savings and Loans Schemes in Madang Province. The VSL provides financial literacy training to community members and establishes a formal community to run the VSL in individual communities. VSL members can take out "loans", up to their savings amount, but are bound by social and environmental loan conditions that preclude the use of the loan for activities that have social (buying alcohol or tobacco for resale) or environmental (buying a chain saw to cut mangroves) impacts. Community members can use their involvement in the VSL to transition to a formal bank. WWF PNG currently supports Village Savings and Loans Groups in 15 communities across three of Madang's four coastal Districts. This provides a good basis in relation to financial literacy for roll out of financial products. WWF's focus over the coming years is on developing formal partnerships with banking institutions willing to adopt environmental and social loan conditions and to assist in the implementation of a roll out of a broader financial literacy program.

### ***Microfinance in Fiji and Papua New Guinea***

#### **Fiji**

The Reserve Bank of Fiji lists financial inclusion as a key objective of their activities, with microfinance identified as one mechanism to deliver upon this. For example, all commercial banks are required to develop microfinance policies and services, whilst the Microfinance Working Group supports the Fiji National Financial Inclusion Taskforce. The Reserve Bank readily acknowledge more progress is necessary to further unlock the protective and promotive characteristics of microfinance on the livelihoods of the poor.

Microfinance is delivered by a series of different institutions, including dedicated MFIs (i.e. South Pacific Business Development), banks (i.e. HFC, Bank of South Pacific), credit unions, cooperatives, mobile network operators (Vodafone Fiji, Digicel Fiji), and other money lenders.

The primary providers are Fiji Council of Social Services in the Central Division, Microfinance West in the Western Division and Cooperative Microfinance North in the Northern Division. All three of these institutions receive state support. Such provider diversity confers an array of product types, with interest rates varying from 1.5% from HFC Microfinance Drua Account to a 19% from the Bank of South Pacific and to 25% at Microfinance West.

#### **Papua New Guinea**

The wider financial sector is emerging, with Bank of South Pacific dominating 50% of all assets and cash-based society. Microfinance is thus a little further back in development, though there is an uptick in supply side innovation and delivery.

Only a small number of finance companies or banks are regulated to provide microfinance in PNG. These providers are estimated to hold around 0.7% of all deposits by value in the financial sector. Around 280 business provide microfinance via deductions from salaries. Interest rates tend to range from 30-36% per year or 3.5% per fortnight. Established in 2004, PNG Microfinance Limited (PML) was the first MFI in PNG. The Asian Development Bank is currently partnered with 11 financial institutions to expand the formal provision of microfinance.

Lending in PNG is primarily serviced by unofficial *wanktoks*, who charge interest rates in excess of 20-50% per fortnight.

### ***Climate risk analytics and transfer***

The Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI) has provided 15 Pacific Island Countries (PICs) with disaster risk modeling and assessment tools to help them better understand, model, and assess their exposure to natural disasters. Probabilistic assessments of major perils, as well as raw geo-referenced data is available for these countries, including satellite imagery, topographic maps, bathymetry maps, surface geology maps, surface soil maps, land cover / land use maps, and historical catalogues of tropical cyclones. PCRAFI has also engaged the PICs in a dialogue on integrated financial solutions for the reduction of their financial vulnerability to natural disasters and to climate change. Both Fiji and PNG are part of this initiative and the project can access the data and risk analytics available, which will contribute to risk analysis, product design, and structuring of the novel financial tools, which can be deployed to build climate resilience.

Additionally, the Government of Fiji is currently actively engaged on the deployment of livelihood protection insurance at the sovereign level, which would be complemented by the proposed project for small-scale fishers. This will provide important baseline for the development and deployment of new products for additional segments of the population and will support the development of the long-term premium financing strategy.

### ***Insurance markets***

An outcome of PCRAFI is the Pacific Catastrophe Risk Insurance Company (PCRIC), a regional public-good risk pooling facility in the Pacific, which offers insurance coverage to PICs for Tropical Cyclone, Earthquake, and Tsunami. It is a captive insurer based in the Cook Islands and backed by a multi-donor trust fund (MDTF) supported by the governments of Germany, Japan, US and UK. By virtue of diversification and concessional capitalization finance from the MDTF, the insurance premium cost for each country is much lower than it would otherwise be, and underwriting profits are held within the pool itself, to the further benefit of its members.

PCRIC's policies are offered on a parametric modelled loss basis, using AIR Worldwide's custom-built model. The insurance policies are currently issued against emergency response cost, which varies between 16% and 23% of modelled ground up property losses. PCRIC is currently exploring the development of additional insurance products for PICs. PCRIC is a potential public-private regional institution to underwrite the proposed insurance programme and is already actively exploring such opportunities.

PCRIC provides baseline for the potential deployment of the proposed project, since it is a special purpose insurer, created to mutualize risk between its member states and would therefore offer a platform for the proposed programme to benefit from diversification of risk across the region and access to the global risk markets at scale. Additionally, PCRIC's profits benefit the resilience of the pool, which benefits each member country.

In Fiji, the private insurance market comprises five non-life insurers (Sun Insurance, Tower, QBE (Fiji), New India, and Capital Insurance) and two specialist health insurers as well as two life insurers. In PNG (in 2018), the private non-life insurance market consisted of 12 locally incorporated insurance companies (Capital General Insurance Company Ltd., Motor Vehicles Insurance Ltd. (MVIL), National Teachers Insurance Ltd. (NTIL), QBE Insurance (PNG) Ltd., Pacific MMI Insurance Ltd., Tower Insurance (PNG) Ltd., INSPAC (PNG) Ltd., Century Insurance (PNG) Ltd., Southern Cross Assurance Ltd., Trans Pacific Assurance Ltd., Alpha Insurance Ltd., and Western Pacific Insurance Ltd.). There is also one reinsurance company, Pacific Reinsurance Company Ltd. The project may work with any of these partners to build their capacity to offer climate risk insurance products and ultimately distribute and administer the financial products in the deployment phase.

### ***Financial products and incentives for resilience***

Willis Towers Watson (WTW), a risk advisor and intermediary and the third largest insurance broker globally, provides a strong foundation of expertise and experience in developing insurance products, especially in the

development space and in support of ecosystem resilience. The proposed project will leverage WTW's extensive expertise in disaster risk finance and insurance programme design and implementation to yield community adaptation benefits.

WTW has a strong presence within the Pacific and are experts in the design and implementation of innovative regional, national, and provincial catastrophe risk financing solutions. This proposed project will build off WTW's work in Small Island Developing States and on ocean risk, coastal adaptation finance, and ecosystem resilience, and their work with both local Pacific insurance companies and the regional risk pool, the Pacific Catastrophe Risk Insurance Company (PCRIC). WTW are linked into ongoing insurance initiatives across the Pacific region, which will be leveraged for the proposed project. Work to date, which provides a foundation for this proposed project in Fiji and PNG, includes:

- WTW are leading the insurance workstream of the Pacific Ocean Finance Programme – Insurance workstream. This consultancy is focused on the feasibility and design of insurance instruments to support Pacific Ocean health and thereby increase the resilience of Pacific communities. As part of this project, WTW conducted a Pacific-wide ocean risk assessment and feasibility analysis for the use of insurance instruments and developed 3 novel insurance concepts with initial product design in Fiji, Palau, and Vanuatu. These concepts include index-based insurance coverage for blue infrastructure (e.g. coral reefs and mangroves) from climate shock events, including acute threats (such as storms) and chronic threats (such as increasing ocean temperatures), and the design of a livelihood protection product to support fisherfolk resilience and incentivise improved fisheries management. The outcomes and lessons learned will be directly applicable to the development of financial adaptation strategies for coastal communities in Fiji and PNG.

- WTW is the sole broker, and project team members have been instrumental in the design, analytics, and placement, of all three of the existing regional catastrophe emergency response schemes: CCRIF SPC in the Caribbean / Central America, ARC in Africa, and PCRIC in the Pacific (where WTW also provides captive management and strategic advisory services). WTW's work with PCRIC is invaluable to the development and deployment of any insurance in Fiji and PNG as WTW is currently PCRIC's sole reinsurance broker, as well as captive manager and strategic advisor. As the regional risk pool, there is a huge potential that implementation of the Fiji and PNG programmes can leverage PCRIC. WTW are familiar with AIR Worldwide's custom-built model, which PCRIC uses to offer insurance on a parametric modelled loss basis, and are consulting on the development and design (including the definition, modelling, and ultimately, the retrocession protection placement) of additional insurance products to compliment the current PCRIC offering, to provide additional coverage to Pacific countries. In particular, WTW consulted on the design of a fixed-benefit household insurance product for "bronze" category (compliant with certain minimum resilience features) households in Fiji. This engagement on additional potential products will be relevant to the proposed product development in Fiji and PNG, as they could benefit from leveraging PCRIC, as the internationally supported regional institution for the management of climate risk.

- WTW are leading the delivery of a consultancy project for the IFC on the development of a index-based insurance product providing livelihood protection for low-income households in Fiji, which includes the engagement and management of a data and IT platform provider for the project, in addition to the modelling, structuring and ultimate placement of risk transfer for the scheme. The risk analytics and modelling, the fundamental product design, and the local engagement through this project will be directly applicable to the Fiji product design and implementation and will provide a template for the PNG work.

- WTW are broker to Tower Insurance (a key insurer in Fiji and PNG and active in 6 other Pacific island markets), where there is significant interest in opportunities at the micro-level, with a dependence on development actors to facilitate penetration.

### **3) Proposed Alternative Scenario**

The project theory of change is that:

- If the target communities and practitioners can collaboratively identify risk management solutions to specific climate hazards; e.g. coral reef bleaching impacts fishing, a potential solution is diversified income through sea cucumber farming or shifting fishing off reefs by introducing inshore Fish Aggregating devices (iFADs));

- If financial products can be developed to provide risk management solutions for climate adaptation; (e.g. barriers to entry removed through de-risking of investment or index-based insurance which pays out on a climate shock event);

- If financial literacy training on the proposed financial products can be offered to households to enable engagement in the financial products;
- If sustainable, long-term community coverage for financial products can be secured (e.g. through pooling of risk by establishing a cooperative or government contributing);
- Then communities will have access to the liquidity (capital via insurance) required to enable rapid recovery from major climate shock events as well as be incentivized towards resource stewardship (e.g. conditions of insurance could require best practice sea cucumber farming or on payout of index-based insurance, the community is required to spend X% on installing iFADs and committing not to fish on the reef for a set period to allow for recovery)

Overall, this will contribute to the improved climate resiliency of local coastal small-scale fishing communities.

### ***Project Target Areas***

The project will work in two key regions: The North coasts of Viti Levu and Vanua Levu in Fiji, and Madang province in PNG.

**Fiji:** In Fiji, the provinces of Ba, Ra, Bua, and Macuata host 40% of Fiji's population. According to a 2011 World Bank report on the poverty profile of Fiji, poverty incidence is above 50% in the provinces of Ra and Macuata, between 40 and 50% in Bua, and 37% in Ba. These provinces are at significant risk to the impacts of tropical cyclones and are even more vulnerable to climate impacts as they have low financial resilience. According to Fiji's Climate Vulnerability Assessment, 25,700 people are pushed into poverty each year due to the impacts from tropical cyclones and floods. Climate change models suggest tropical cyclones in the country will intensify, and is expected to push 48,000 people into poverty over the next 100 years ([Climate Vulnerability Assessment](#)).

Fiji is a good candidate in the Pacific to develop and deploy household / community-level insurance because it has a relatively developed insurance market in the region, and the government is already actively engaged in insurance initiatives, including livelihood protection.

**Papua New Guinea:** Coastal communities of Madang province experience frequent flooding during monsoon season, which they are relatively well adapted to cope with. However, extreme rainfall events, flash flooding and landslides threaten lives and livelihoods, causing fatalities and widespread destruction.[2]. A WWF Study (2017) found that fish catch in Madang is decreasing, and communities are looking beyond fisheries and at alternative income sources. While there is access to financial services in urban areas, rural areas face limited access to these same products and services. 60.2 percent of men and 81 percent of women reported owning no financial product in Madang.[3]<sup>2</sup>

### ***Project Strategy***

The project objective is to improve resilience to the adverse impacts of climate change, including major shock events, in vulnerable coastal small-scale fisher communities in Fiji and PNG. This objective will be achieved through three components:

#### ***Component 1: Enabling environment for financial products to improve resilience for small-scale fisher communities in Fiji and PNG (Northern Viti Levu and Vanua Levu coasts and Madang)***

The project will select a group of communities to work with from the baseline of 109 communities that WWF works with in Fiji and the 15 communities WWF works with in Madang, PNG. The project will finance a desktop study and surveys of the selected communities to define the climate risks and the potential adaptation and resilience solutions, and to engage the community members in financial literacy training, specific to the financial products that will be developed and delivered under Component 2.

#### ***Outcome 1.1 Identification of climate adaptation and resilience solutions for targeted small-scale fishing reliant communities***

Under this outcome, a desktop analysis and consultative process will define adaptation and resilience solutions, based on evidence-based risk understanding. This approach will use a combination of consultation with community leaders, fishers, and other members of the selected communities, as well as accessing information from national and international experts and the climate science community. This will provide a foundation for the project to inform

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short and long-term adaptation planning at the community level and will inform the development of climate risk financing products (i.e. insurance), specifically tailored to communities' needs, under Component 2.

#### Output 1.1.1 Desktop risk assessment, community surveys, and workshops to identify and prioritize critical climate hazards and associated impacts and risks facing targeted communities and risk management solutions

This output will generate a climate risk assessment, considering the threats of acute shock events (such as cyclones and extreme rainfall) and slow-onset, chronic pressures (such as those related to climate change like ocean warming and sea level rise) to inform effective adaptation strategies.

The assessment will include risk analysis and input from community consultations to understand climate shocks and pressures are households likely to face, what (and how much) they need to recover and adapt, and when they need it. The climate risk analysis will assess:

- Hazard: what are the key hazards that impact coastal communities? How likely are those hazards to occur?
- Exposure and vulnerability: where are the communities at risk? What is their socioeconomic profile, including key assets and livelihoods? How do these assets / livelihoods respond to climate hazards?

A desktop risk assessment will identify, collate, and validate available data. Understanding what data is available, the temporal qualities of this data (e.g. how far back datasets extend, whether there is data available immediately after acute shock events such as cyclones, etc.), and the source of this data is crucial. Data from governmental organizations, the UN, or academia will be reviewed by WTW.

The project proponents will aim to access existing quality hazard data sources, where:

- There is a good, homogeneous set of historical hazard data (which is used to understand and price risk);
- There is good, real-time hazard data to enable the estimation / quantification of a loss event, which is reliably available into the future and consistent with (or can at least be mapped to) available historical data; and
- The hazard data correlates well with on-the-ground community impacts and financial requirements, such as damage and / or livelihood interruption.

Tropical cyclone data will be sourced from the Fiji Meteorological Service and the Australian Bureau of Meteorology, the World Meteorological Organization's designated centers of south-west Pacific tropical cyclone data. Appropriate data sets to estimate wind fields for historical events, and also reference estimates for future events, will be identified. If reliable data is available, local measured weather data can also be incorporated.

Rainfall data will be accessed through the Global Precipitation Measurement (GPM)[4]. Other data sources, both remotely sensed and in situ will also be identified and utilized where appropriate.

Major chronic climate threats, including increases in air and ocean temperatures, ocean acidification, and rising sea levels, will also be assessed. It is critical to look beyond current community risk profiles to inform climate adaptation strategies. Under this output, the project will identify the risks that coastal communities face under various future climate scenarios and propose solutions that have relevance over the next 20-50 years, not just the next 5. Therefore, the project team will conduct desk research, including a thorough literature review, examining the effects of slow-onset, chronic climate pressures and the risks they pose to coastal communities as stand-alone threats as well as modifiers and multipliers of acute climate risk.

To assess exposure and vulnerability, geolocation data is required in order to complete a community-level climate risk analysis and to inform the development of climate risk insurance products. This output will include financing for mapping of the location of individuals / households to defined locations to build up an exposure database. Census data may also be valuable to give context and/or provide proxies should individual / household location

•data prove insufficient. The following information will be collected through existing data sources and community surveys, to compile an exposure and vulnerability database:

- Household-level geolocation data;
- Household-level socioeconomic information, including livelihood profile;
- Community level socio-economic information, including economic aggregators in the community, current risk-sharing arrangements, and qualitative information on historic shock events; and
- Land-use information.

The project will also host workshops with communities to identify and prioritize critical climate hazards, as well as identify potential risk management solutions.

Based on the results of the data review and community surveys, WTW will engage in full risk modelling to quantify the key climate hazards and their impacts on households. This will be used under Outcome 1.2 to develop financial literacy, and under Component 2 to develop financial product blueprints. Ultimately, the project will develop a feasibility matrix to identify and determine the high-impact solutions for further development, which have the highest potential for long-term use and widespread uptake.

*Outcome 1.2 Improved financial literacy to engage with financial products for climate resilience among vulnerable coastal small-scale fisher community members*

Output 1.2.1 Best practice guide (in local language(s), with visuals) and training manual for financial literacy for the products developed in 2.1.1

WTW and WWF will develop a best practice guide and a training manual specific to the results of the analysis of adaptation and resilience solutions (Output 1.1.1) and the financial products that will be developed by WTW under Component 2 (Output 2.1.1). Training materials will be in local language and make use of visual aids and other locally appropriate methods. The guide will build on financial literacy guides already developed in the Pacific and focus on filling the critical gaps identified in outcome 1.1 and by focusing on training communities on the products that are developed under 2.1.1, so that communities are able to engage in deployment of the products. The training manual will guide the facilitator on how to train community members to implement the best practice guide.

Output 1.2.2 Community Facilitators trained to deliver 1.2.1 and to strengthen peer to peer financial literacy networks

Community facilitators already identified by local communities and working with local government and WWF (see baseline) will be trained based on the materials developed in 1.1.1 and provided training materials. Community facilitators play a critical role in the on-going sustainability of this project, therefore their capacity and ability to support the community is key. WWF will host workshops for community facilitators to meet and share common challenges in order to strengthen their networks and facilitate cross learning.

Output 1.2.3 Financial literacy training on financial products (developed in 2.1.1) in the targeted communities

With the support of WWF and WTW, the community facilitators will conduct training on the specific financial products developed under 2.1.1 in the selected communities to strengthen the understanding of financial products developed and deployed under Component 2, to facilitate community engagement in product deployment. The GEF finances will fund the costs of travel and workshops associated with this targeted training as well as the costs of the community facilitators.

***Component 2: Financial products and incentives for small-scale fisher communities***

Under this component, Willis Towers Watson (WTW) will design tailored financial products to address the climate risk to coastal fishing communities and support the climate adaptation of these communities. The project will also explore the link between financial risk management and risk reduction through the integration of incentives for responsible and proactive stewardship in exchange for preferential / concessional access to these financial products; insurance can act as a reward for stewardship *and* a financial risk management tool. In this scenario, premium subsidization may be offered in exchange for adherence to sustainable policies. For example, access to livelihood protection (which would build community resilience to climate shock events by providing rapid pay-outs to smooth household income and facilitate recovery / rebuilding) could be offered in conjunction with fishing licenses in order to incentivize their uptake or could be subsidized in exchange for the agreement to more sustainable practices and the monitoring of those practices (e.g. through vessel trackers). Additionally, for example, insurance contracts and the implementation of pay-outs can be structured to cover tropical cyclone or extreme rainfall risk and mitigate the risk of over-fishing during times of increased pressure on the reef through the exchange of pay-outs for a temporary instatement of a protected area / agreement not to fish. The project will also explore the coverage of coral bleaching risk, protecting coastal communities through the smoothing of this financial risk and the support of the long-term health of their valuable natural infrastructure (again, by using pay-outs to implement a temporary protected area – and provide alternative livelihood to coastal fishers through pay-outs – to reduce anthropogenic pressure during times of environmental stress).

Through increasing the resilience of the ecosystems on which coastal fishing communities rely for livelihoods and risk reduction, the proposed preferential access will build resilience to the impacts of long-term chronic stressors like sea level rise, temperature increases, and acidification, since healthier ecosystems are more able to cope with these

slow-onset climate pressures. These products would then protect stakeholders against risk factors they cannot control (e.g. cyclones, extreme rain, and coral bleaching) as a ‘reward’ for agreements regarding those they can control (e.g. responsible fisheries management, and conservation activities), through subsidization of coverage.

It is worth noting that while the project will explore the offering of preferential access to these products in exchange for environmental stewardship, they also function as stand-alone climate adaptation instrument. The products designed will respond to climate events no matter how the access is granted (i.e. as an incentive or just as a climate-risk tool). So while the products are first and foremost to build the resilience of communities to climate events, and they will function as such climate adaptation tools regardless of any subsidization in exchange for environmental stewardship, the building of ecosystem resilience would be an innovative co-benefit of being able to structure blended finance to offer concessional finance in exchange for stewardship activities.

### *Outcome 2.1 Community access to appropriate financial climate risk management products*

#### Output 2.1.1 Suite of financial products to address critical climate risks to target communities (based on 1.1 results)

Under this output, financial climate risk management product blueprints will be developed based on available data and feasibility of risk modelling. The categories of products that will be considered include:

- **Index-based insurance**, including products structured to build the climate resilience of blue infrastructure and livelihood protection and business interruption products targeted at the individual, household, community, or cooperative level;
- **Bundled microinsurance** products directly linked to microfinance; and
- **Savings and pensions** products designed to increase the adaptation capacity of households and communities.

**Index-based insurance** has several potential applications to build the adaptation capacity and climate resilience of coastal fisher communities in Fiji and PNG. Based on the understanding of the needs of communities at the individual, household, enterprise, and community level developed in Component 1, WTW will develop product blueprints for those high-impact products identified with a high likelihood of take-up in the long-term. The potential list of products, to be developed at the individual, household, community, or cooperative level, depending on suitability and end-user requirements, includes, for example:

- Livelihood protection. This is a type of insurance product, which pays out to the policy holder in the event of a climate shock event like a cyclone or extreme rain. It provides immediate funds to covered households or communities to respond to climate impacts and replace lost income.
- Insurance of blue infrastructure. This is a type of insurance product, which pays out to provide emergency funds to respond to climate shock events which damage blue infrastructure such as reefs and mangroves. These funds can be used to restore ecosystems and/or fund post-event activities to reduce pressure on ecosystems (e.g. temporary suspension or modification of fishing activities) and provide alternative sources of income to fishing communities.
- Business interruption cover. This is a type of insurance product, which provides income replacement following climate shock events that impact on livelihood activities of individuals, communities, and/or enterprises.

**Bundled microinsurance** products directly linked to microfinance, which would be delivered in conjunction with local or international banks or other microfinance institutions, will be designed to increase the climate resilience of both lender and borrower. Typically, loans to fishers are extremely high risk due to the hazardous nature of fishing (often due to climate hazards) and lack of insurance coverage. Therefore, the bundling of insurance with microfinance products can allow low-income fishers to access credit where little financial history is present because the insurance de-risks a bank’s loan, allowing them to offer credit at more economical rates. Further, the incorporation of microinsurance into microfinance de-risks the lender’s portfolio while allowing them to extend financial inclusion to riskier borrowers.

In terms of **savings** products, WTW will explore the development of household and community level savings and **micro-pension** products, which will increase financial resilience in the long-term, building coping capacity to climate shock events. Collaborations with third party savings providers will be explored, to deliver a lifetime flexible savings plan (akin to a pension, but accessible if necessary) with savings protected under a managed fund. In line with other projects and initiatives being developed within Asia and Africa, WTW would be able to provide customized administration and delivery platform and eKYC onboarding. The savings component would be positioned as long-term, but with flexible pre-retirement access to funds to accommodate unique short-term requirements of target group (e.g. climate shock events).

A number of considerations will influence product design, including, for example:

- - Purpose (e.g. basic livelihood protection to smooth the immediate financial shocks of climate events, coverage against certain types of damage such as crop losses, vessel impairment, or property damage, coverage to finance community response to the damage and impairment of coastal ecosystems and the valuable services they provide, community emergency response and post-event restoration, etc.);
- Data (e.g. historical and probabilistic hazard data identification, collation and validation, and reporting agency / calculation agent identification);
- Structure / ownership (i.e. policy holder- different coverage options will depend on whether policy holders are individuals or aggregators);
- Fundamental product design (e.g. trigger design); and
- Premium payment considerations.

The structure of the products is important. Options may include standalone policies or joint procurement or risk pooling, depending on the type of entity seeking coverage (e.g. individuals / households, SMEs, community risk aggregators). For example, joint procurement could be leveraged where all - or most - individual members of a community group have similar exposure, either of fixed assets or livelihood, and could receive similar benefits for sharing the costs. Community risk aggregators who could facilitate joint procurement may include associations or credit unions. Additionally, if connected to existing financial services, such as lending, the cost might be shared between a borrowing individual and the lending institution itself (which gets a reduction in credit risk in return).

For index-based insurance, in practice there will be a number of components affecting the decision about what is brought within the ultimate product structure:

- The required attachment point;
- The minimum pay-out required at that point;
- The required exhaustion point;
- The maximum required pay-out at that point;
- The pay-out function between the two; and
- How triggers are geographically varied (e.g. whether one index calculation is used to trigger pay-outs across Fiji and / or PNG or if there are zonal sections to the product, each with its own triggers).

For example, the question of whether insurance limits are set by attachment and detachment probability (i.e. severity of event), or alternatively by attempting to generate monetary or other values (e.g. level of economic damage or impairment) from the index / model that have meaning to the potential policyholder, using these values to set the attachment / detachment levels, must be determined. The latter is a more complex approach, and can be less transparent since it requires an extra modelling step, but it is perhaps easier for the end-user (i.e. the policy holder) to relate to.

Further, the project team will consider ultimate affordability of the concept, where, to a degree there are two approaches: ‘what will the coverage I want cost?’ or ‘how much coverage can I afford?’

*Outcome 2.2 Markets developed in the target geographies to offer financial products for community level climate resilience and adaptation*

Output 2.2.1 Models for deployment of the financial products, including innovations in distribution tools and channels (e.g. mobile phone and internet app distribution)

The actual roll-out of the proposed risk financing products will include considerable local engagement, explaining the process and getting explicit input into the final product design and structure. This will build on the identification of beneficiaries / policy holders in the Climate Risk Analysis phase and consulting with these potential end-users. Importantly, it will involve the identifying of, and engagement on, any potential legal and regulatory issues that could impact the implementation of the proposed products.

Further, given the remote locations of some communities and the difficulties in accessing physical banking facilities, digital platforms and payment will be explored, integrating mobile phone apps and digital wallets to provide ease of access and distribution. Therefore, WTW will collaborate with partners exploring innovations in distribution tools and channels, using mobile phone and internet application technologies to coordinate and deliver financial products through existing mobile phone interfaces.

Output 2.2.2 Specific roll-out plan for local and markets willing to underwrite risk

Under this output, WTW will develop an implementation strategy and roadmap (i.e. a roll-out plan) for the proposed insurance products. The structure of the potential coverage as an insurance scheme also must be considered. It is possible that an insurance scheme will be fronted in the first instance by a local insurer and then reinsured by

international reinsurance markets. An appropriate fronting firm offering adequate security and service capability whilst minimizing fronting fee will be identified, or WTW may engage with a local insurer who is able to retain some of the risk themselves.

Issues to address in the development of an implementation strategy, which will provide a roadmap to the actual roll-out of the scheme, may include:

- Agreement / refinement of policy terms and financial plan;
- Engagement with local insurers; and
- Engagement with insurance regulators.

### *2.3 Improved financial security for small-scale fisher communities to major shock events*

#### Output 2.3.1 Strategy for short-term financing of community coverage for ‘proof of concept’ implementation, including identification of necessary institutional arrangements to extending coverage as an incentive for sustainable fishing practices

As the value of insurance does not become apparent until a covered event occurs and a pay-out is made, a ‘proof of concept’ stage is needed to demonstrate the value of insurance in providing increased adaptive capacity to communities in the event of a climate shock. Global experience with index insurance has shown that supporting take-up of insurance at launch greatly increases the chances that insurance will become broadly used. Therefore, project budget will be used to develop a strategy for the identification and acquisition of premium financing to cover the initial actual implementation of the financial products developed. This acquired financing will fund the coverage for communities for a limited amount of time. The initial premium subsidization (from non-GEF sources) will cover the beneficiary community against adverse climate impacts, directly contributing to their climate resilience, for a set period of time. Offering concessional insurance as a proof of concept will be beneficial to the uptake of the insurance in the long-term because it allows communities to gain familiarity with insurance as a mechanism, proves the process of administration and product roll-out, and (if a climate event occurs and a pay-out is made) proves how insurance works. Pay-outs not only demonstrate that insurance works in practice not just in theory, but will enable testing and refinement. Additionally, a subsidized proof of concept period will allow for the establishment of preferential access based on adherence to sustainable policies.

Therefore, this output includes engagement with donors to secure funding for a short-term ‘proof of concept’ implementation phase, to cover the initial deployment of the developed financial products in target communities.

Additionally, the institutional and other practical arrangements necessary for the offering of insurance as a reward for sustainable practices / environmental stewardship will be explored under this output. This will include a large component engaging with government as well as civil society to gauge support, consulting on the most effective and desired outcomes of incentives and understanding the process of reporting / tracking adherence to proposed sustainable practices, which would be required to access concessional finance, and the processes necessary to implement. The co-benefits of environmental sustainability will be an integral part of the short-term financing strategy, as this will present an additional benefit to organizations engaged to provide additional support at this ‘proof of concept’ phase of implementation.

#### Output 2.3.2 Financial products deployed for climate resilience and adaptation in target communities

With premium finance secured through the activities of Output 2.3.1, in order to deploy the proposed financial products in target communities, product marketing and the execution of risk transfer will be undertaken in this output, including:

- Preparation of policy terms and conditions;
- Pre-marketing activities / risk market engagement;
- Identification of local insurance carrier to administer policies, including support regarding risk-taking;
- Preparation of market information and analytics pack;
- Discussions with risk markets (local and international) to achieve price competition and full placement at best price;
- Program placement;

- Policy servicing, including claims management process and engagement on the development of a payment system, potentially through an online app, for product distribution and pay-out management.

### Output 2.3.3 Strategy for sustainable, long-term coverage of premiums

In addition to the short-term premium finance from additional organizations engaged to directly finance community coverage during a ‘proof of concept’ phase (i.e. from co-finance), in Output 2.3, **long-term premium finance** will be explored. GEF funds will be used to develop a long-term premium financing strategy, which will include community – at both the household and enterprise level – government, and donor engagement. This long-term premium financing strategy will address the sustainability of the insurance program.

WTW with communities and partners will explore the combination of multiple sources from government, business, and individuals to share the risk and contribute to the purchase of coverage that benefits multiple stakeholders. This kind of blended finance arrangement – combining finance at the community level with other sources with the ability to pay – will be the long-term sustainable option for this program. The building out of a long-term premium financing strategy (including elucidating the institutional arrangements required to execute a blended finance solution) will require an analysis of the potential sources of funding for the sustainability of the proposed insurance program, as well as an outline of suitable mechanism(s) for collection and aggregation of premiums, holding of an insurance contract, and management of pay-outs. By providing insurance and inviting the topping up of that insurance by individuals, governments can both bring discipline to their own management of natural catastrophe risk (and the duties of care and contingent liabilities they hold) and enable individuals, communities, and enterprises to pick up some of the risk burden themselves.

WTW will design and facilitate a workshop for donor and community engagement to develop a long-term, sustainable premium financing strategy. This includes two steps:

- Donor engagement on initial premium support for proof of concept pilots; and
- Technical support to build the consortium of actors likely to provide, either directly or indirectly, premium financing in the long term.

The ‘willingness to pay’ of potential beneficiaries will be assessed through surveys at the household and enterprise level, and project partners will also engage with donors and governments on potential blended finance arrangements.

## ***Component 3: KM and M&E***

### *Outcome 3.1 Effective project communications, knowledge management and adaptive management*

#### 3.1.1 KM products disseminated to share lessons and scale up similar private sector work internationally on financial products for climate resilience

Through this Output, the project will use lessons gained to develop knowledge products to disseminate and scale up the impact of the project and similar private sector work on financial products for climate resilience at an international level. The KM plan (to be elaborated during PPG phase) will include capture of challenges and how they were overcome as well as feedback and experiences from communities, including women’s perspectives.

#### Output 3.1.2 M&E reports used for adaptive project management and successful project delivery

The PMU and project partners will follow an M&E plan to monitor and report on project progress, and identify any areas where adaptive management is needed. Under this Output, the following reports will be drafted and delivered:

- A bi-annual Project Progress Report (PPR), including tracking against the results framework and work plan
- Annual Work Plan and Budget (AWP&B)
- Quarterly Financial Report
- Annual adaptive management meeting to review project results and discuss any necessary adjustments to the project strategy
- Terminal Evaluation (and optional mid-term evaluation).

## **4) Alignment with GEF Focal Area**

This project is closely aligned with the GEF Climate Change Adaptation Focal Area, specifically *Objective CCA-1: Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation.*

The project will develop financial products for small scale fishers in Fiji and PNG to increase their resilience against shock climate events such as cyclones, as well as long-term chronic stressors such as sea level rise, temperature increases, and acidification. The project will achieve this by developing targeted financial products that provide solution to specific climate impacts facing the target communities, provide financial literacy to encourage uptake within these same communities, and deploy the insurance products (paying for community coverage in a ‘proof of concept’ phase). Overall, this is expected to reduce the vulnerability and increase the resilience of small-scale fishers in Fiji and PNG to climate change impacts.

### **5) Incremental / Additional Cost Reasoning**

The project will build off a baseline of private sector, government, and NGO approaches to improve the resilience of small-scale coastal fishers to the impacts of climate change. This baseline includes:

- Ongoing efforts to ensure sustainable coastal management and community-based fisheries management in Fiji and PNG
- Strong community engagement, including support on financial literacy, fisheries management, and disaster risk reduction
- Existing climate risk analytics and insurance markets in the region, and
- Ongoing insurance risk initiatives, including on disaster risk finance to yield community adaptation benefits.

GEF finance allows the project to undertake new strategies to:

- Build an enabling environment for financial products that increase community resilience and adaptation – this includes identifying adaptation and resilience solutions and improving the financial literacy of communities to engage with climate resilient financial products, and
- Develop a suite of financial products that address specific climate risks to fishing households and deploy these products in target communities. The project will ensure sustainability through a strategy for sustainable sourcing of insurance premiums.

This baseline and additional proposed strategies will provide additional adaptation benefits above the business as usual scenario, through two main areas:

1. The project will encourage communities to implement climate-smart fisheries management regimes and adopt sustainable behavior. Improved fisheries management is expected to lead to more resilient ecosystems, which in turn provides long-term benefits (e.g. food sources) for communities.
2. In the case of an extreme climate event, the financial products will provide resources to communities to recover. This increases community resilience to climate shock events.

### **6) Adaptation benefits**

**Risk awareness and understanding within selected communities** – Component 1 will provide local communities, enterprises, and governments with risk metrics they can use to understand current and future climate risks, which will aid planning and adaptation strategies. The project will build the communities’ capacity to understand and use these metrics in a meaningful way.

**Risk quantification** – The development of an insurance product requires that the risk is measured and quantified, since technical insurance pricing is based on the probability of a certain event happening. Putting this price tag on risks by analysing the underlying exposure and vulnerability means that the value of the insurance process goes beyond the coverage itself. That price signal drives more informed choices about where and how communities may site and design infrastructure, housing, facilities, and even (alternative) livelihood activities. Insurance does not create the risk, but it does provide a more precise and actionable understanding of the full cost of climate risk.

**Coverage** – Coverage of communities against climate risk is extremely valuable as a financial adaptation tool in itself. Communities will have liquidity to respond to climate shock events, which allows for the development of contingency plans with predictable, pre-agreed funds arranged for implementation and event response.

**A new market** – This project will result in the creation of a climate micro-insurance market (through the design of the products and the implementation of risk transfer / actual placement), which facilitates access of communities to insurance markets that previously didn't cover climate risks, enabling these communities (and scalable to additional communities) to leverage private sector risk capital to build resilience.

**Incentives for environmental stewardship** – Concessional access to financial adaptation tools will be offered as an incentive for sustainable behaviours / adherence to management policies. This contributes to a virtuous cycle of more resilient communities and more resilient ecosystems.

## **7) Innovation, sustainability and potential for scaling up.**

**Innovation.** The proposed project is innovative in several respects. The project proposes to take the first household-level insurance product for climate risks all the way from the initial design and feasibility phase to implementation, including a proof of concept and a roadmap for long-term sustainability. Innovative aspects include:

1. Currently there is no climate micro-insurance products offered in the Pacific. The project will design and deploy such a product.
2. A novel blended finance micro-program that identifies the necessary institutional arrangements and mechanisms for governments, enterprises, and households to share risk.
3. Preferential access to insurance products in return for environmental stewardship, which is expected to improve resilience to climate change impacts at both the household level and the ecosystem level.

**Sustainability.** The project will integrate sustainability into two aspects of the insurance mechanism: the supply side and the demand side.

On the supply side, the project will support the development and deployment of low-cost insurance products for small scale fishers in Fiji and PNG, and provide the foundation for the long-term implementation of these products by the private sector. The project will provide the technical underwriting necessary to offer insurance at risk-based, actuarially sound, and, therefore, sustainable prices. Engagement with local insurers on the roll-out strategy (including guidance on low-cost product distribution and administration, likely through a mobile phone app) and international reinsurers (and the regional risk pool, PCRIC) on the placement of the risk will embed the insurance in the local and international risk markets. Ultimately, the deployment of the product during project implementation will embed these tools into private sector operations and allow these actors to administer the financial products into the future.

The project will also build the demand for insurance products through the following outputs:

1. Building financial literacy and risk understanding – this will increase understanding of the value of these insurance products to communities and ensures long-term buy in from the communities for these products
2. Providing concessional access to the insurance products (through premium subsidy) during a 'proof of concept' phase – based on global experience with index insurance, concessional access at initial launch greatly increases the chances of longer-term take-up, particularly if pay-outs are made across some of the communities during the project implementation phase. Further, an initial 'proof of concept' phase is beneficial to the sustainability of the insurance in the long-term because it allows communities to gain familiarity with insurance as a mechanism, proves the process of administration and product roll-out, and (if a climate event occurs and a pay-out is made) demonstrates the value of insurance.
3. Developing a long-term premium financing strategy – Insurance proves its value over time. As the target communities have little disposable income, long-term demand for insurance products will compete with other pressing expenditure needs. Therefore, the project will develop a premium financing strategy to engage potential sources of long-term premium finance, assessing risk ownership and their willingness to pay insurance premiums, and identifying mechanisms which the coastal communities and the governments of Fiji and PNG could employ to raise risk capital to cover their climate risk. The development of this long-term premium financing strategy will support the sustainability and ensure these premiums are covered into the future.

**Scaling Up.** The proof of concept established through this project and the lessons learnt can be rapidly scaled to other sites across the Pacific region and globally. The partnership of private sector actors such as WTW – and existing financial services partners such as Mastercard – support scaling via technical support and enhanced

platforms to communicate the work conducted and impacts delivered across the Melanesian region. The methodology proposed and objectives of this project are congruent with the strategies of these two companies. As such, success in this project would contribute to a template of locally relevant, globally applicable solutions. Discussions with various levels of Government in PNG suggests this project could be scaled up through incorporation into the Local Level Government Ward Development Planning Process (WDP's). WDP's are integrated planning processes where community members at the individual ward level can prioritize where the finances made available through the central government are prioritized across 12 sectors spanning all aspects of good local government including: policing, education, environment, women, and infrastructure.

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[1] IUCN, 2016: D. Laffoley and J.M. Baxter, (eds), "Explaining ocean warming: Causes, scale, effects and consequences", Gland, Switzerland: IUCN (2016). 456 pp: <http://dx.doi.org/10.2305/IUCN.CH.2016.08.en>

[2] <https://reliefweb.int/report/papua-new-guinea/flooding-kills-28-people-papua-new-guineas-madang-province>

[3] <http://documents.worldbank.org/curated/en/704801471496337675/pdf/105185-REVISED-WP-P145131-PUBLIC.pdf>

[4] Launched in 2014 after TRMM was turned off

## 1b. Project Map and Coordinates

**Please provide geo-referenced information and map where the project interventions will take place.**

Figure 1 Map of Project Area, Fiji, Shaded Area in Map Above shows Great Sea Reef



Figure 2 map of Project Provinces, Papua New Guinea



## 2. Stakeholders

**Select the stakeholders that have participated in consultations during the project identification phase:**

**Indigenous Peoples and Local Communities** Yes

**Civil Society Organizations** Yes

**Private Sector Entities** Yes

**If none of the above, please explain why:**

The following summarizes consultations in Madang, PNG during PIF development:

· Community facilitators were positive on the potential for insurance against climate change events and noted that discussions are needed at the community level (during project preparation). It was hard to differentiate the concept of climate change related insurance from other forms of insurance. These initial discussions suggested the insurance of a shared community asset may be more appropriate than individual insurance products.

· Ward Development Plan Coordinator (implementing the Ward planning process championed by the Madang region national government representative – Police Minister Brian Kramer) noted that the concept is “worth investigation” and will require considerable consultation at the community level. The Coordinator noted it “could be

a useful aspect of the ward planning process,” which prioritizes where national funding is allocated at the individual ward level.

· PNG World Vision’s National Manager, who is responsible for a broad range of national projects, including the rollout of TB and HIV AIDs projects, indicated the project is a “very innovative idea,” noted that “fishing is not all the communities use to generate money,” and suggested “you will get better buy-in on projects further away from the urban centers.” The manager recommended that the product should focus at the community or higher level.

· Outspan (Rainforest Alliance exporter of Cacao) PNG 2IC indicated the project “was a good idea,” “would need a lot of consultation with communities,” and “should look at landslides, flooding and fire and focus on things like bridges that provide access to markets”. During project preparation, partnership with Outspan will be assessed, for example, consideration of insurance of cacao processing equipment, such as solar driers, which produce a higher quality bean and prevent the need to use timber for the drying process.

**In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.**

Stakeholder Type	List of Stakeholders	Potential Role during Project Development
Government ministries (at central and provincial levels)	Fiji <ul style="list-style-type: none"> <li>· Ministry of Environment and Waterways</li> <li>· Ministry of Fisheries</li> <li>· National Disaster Management Office</li> <li>· Ministry of Finance</li> <li>· Fiji Climate Change Division</li> <li>· Ministry of iTaukei Affairs (Indigenous Peoples)</li> <li>· Provincial Governments (Ba, Ra, Bua, and Macuata)</li> </ul> PNG <ul style="list-style-type: none"> <li>· Conservation and Environment Protection Authority</li> <li>· National Fisheries Authority</li> <li>· PNG Forestry Authority</li> <li>· Department of Finance</li> <li>· Provincial Governments (Madang province)</li> <li>· Local Level Governments</li> <li>· Ward Planning Administration</li> </ul>	Key ministries and provincial-level government will be engaged through the project and invited to stakeholder workshops.
Community-level stakeholders, including indigenous people	Fiji <ul style="list-style-type: none"> <li>· Communities in Ba, Ra, Bua, and Macuata</li> </ul> PNG <ul style="list-style-type: none"> <li>· Communities in Madang province</li> </ul>	Communities will be closely engaged and consulted during project development. For indigenous people, the project will ensure compliance with the FPIC process.
NGO’s	<ul style="list-style-type: none"> <li>· WCS</li> <li>· World Vision</li> <li>· TNC</li> <li>· Conservation International</li> <li>· Fiji Locally Managed Marine Areas</li> <li>· Fiji Environmental Law Association (FELA)</li> <li>· Women in Fisheries Fiji</li> </ul>	Key NGOs and donors will be invited to stakeholder workshops during project preparation.
Private Sector	<ul style="list-style-type: none"> <li>· The Pacific Financial Inclusion Programme (PFIP)</li> <li>· Munich Climate Insurance Initiative (MCII)</li> <li>· PCRIC</li> <li>· Pacific Island Climate Change Insurance Facility (PICCIF)</li> <li>· Local insurance companies</li> </ul>	International insurance companies will be engaged to ensure willingness to take on the financial product risks.  Local insurance companies will be engaged on the project to ensure appropriate distribution/administration

Multilaterals and GEF Agencies	<ul style="list-style-type: none"> <li>· IFC</li> <li>· IUCN</li> <li>· UNDP</li> <li>· World Bank</li> <li>· ADB</li> <li>· FAO</li> </ul>	<p>IFC is working with the Government of Fiji to develop and implement a sovereign-level livelihood protection policy. ADB is also developing insurance for coral reef resources, in Fiji, Solomon Islands, Philippines and Indonesia. Proactive coordination and lesson sharing will be undertaken with ADB and their partner TNC.</p> <p>All of these GEF Agencies have strong roles in coastal management in PNG and Fiji. Multilaterals and GEF Agencies with in-country presence will be invited to stakeholder workshops during project preparation.</p>
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### 3. Gender Equality and Women's Empowerment

**Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).**

**Fiji.** In the past decade, the Fijian Government has enacted and introduced several critical pieces of legislation, policies and strategic initiatives that reference gender inclusion, including a national strategic planning document, the Roadmap for Democracy and Sustainable Socio-economic Development[1] and a national review on the progress in the implementation of the Sustainable Development Goals[2] that directs all sectors to share the responsibility for achieving gender equality. Despite these efforts, Fiji still reflects vast gender-based inequalities in three main dimensions: i) reproductive health, ii) empowerment, iii) economic activity[3]<sup>3</sup>. The gender gaps in labor force participation are significant; 81 % of men are employed or actively looking for work, while only 46% of women are employed or looking for work[4]<sup>4</sup>. Furthermore, there is a lack of gender analysis capacity across all the government ministries and the absence of sex-disaggregated data.

Gender relationships in Fiji vary by ethnicity and rural-urban contexts. The two main ethnicities are the i-Taukei and Fijians of Indian descent; the women from these two groups experience different labor force participation. 53% of i-Taukei women are in the labor force compared with one-third of Fijian women of Indian descent[5]<sup>5</sup>. Another important issue is the status of land ownership. The land is a key economic resource in Fiji. It has a traditional inheritance dimension that favors men in both ethnic groups[6]<sup>6</sup>. This aspect can also be found in the management of resources, while women and men in Fiji share the same views regarding the availability and importance of resources, women do not participate equally in community resources management in either community, though over the past 10 years a lot of effort had been invested in empowering women participation in decision making processes including natural resource management and there is an increasing trend in women's participation in Fiji[7]<sup>7</sup>. The lack of land ownership combined with patriarchal government structures has made Fijian women have few opportunities to participate in the decision making.

Fijian population is heavily dependent on inshore fisheries for subsistence and local economic needs. Women and men are both involved in fisheries, but with gendered divisions of labor. Women and men fulfill different roles, use different types of equipment, and often have different sets of knowledge and experience. Fishing outside of reefs tends to be a domain of men and fishing in the coastal areas and rivers is mainly a women's activity. In addition, men and women often fish for different species and with different types of techniques<sup>[8]</sup><sup>8</sup>. In the latest country gender assessment lead by FAO, it states that women generally fish with hand lines and collect shellfish, octopus, and freshwater mussels by hand or using rustic tools. The fishing methods used by men include fishing from bridges, hand lines, working from small boats using nets, wires, or wading with nets. The Secretariat of the Pacific Community (SPC)<sup>[9]</sup><sup>9</sup> in 2009 surveyed women's fisheries, finding that women working full-time are involved in fishing, marketing, and reselling the catch and usually operate in large markets as Lautoka, Nausori, and Suva. UN Women estimates that 75% to 90% of the market vendors in the Pacific are women.

**Papua New Guinea.** In recent years, the Government of Papua New Guinea has introduced policies to promote gender equality<sup>[10]</sup><sup>10</sup>. However, gender equality still a massive challenge in PNG. In 2017, Papua New Guinea ranked 159 out of 160 countries of the Gender Inequality Index<sup>[11]</sup><sup>11</sup>. The main challenges focused on: i) access to health care, ii) access to education services, iii) domestic violence, and ii) lack of political representation. In PNG, culturally embedded patriarchal norms still represent gender constraints that prevent women from participating in political life, decisions making structures, and other leadership spaces.

Fisheries are the main contributor to household subsistence and livelihoods in PNG, making this industry the major contributor to the country's overall economy. Men and women participate in the sector actively but in different ways. Men engage in fishing for income generation, but women are more likely to fish for family meals. Women tend to have lower catches because they stop fishing once they have enough to feed their families or to exchange. Women play an essential role in selling in local markets, in fish processing, and in collecting seafood in coastal areas<sup>[12]</sup><sup>12</sup>.

Despite the strong matrilineal culture of PNG, men are perceived as the household heads and are, in the end, the primary decision-makers. Even though women are likely to have access to land, they have limited control, due to the traditional governance systems, which determine decisions about its use. The combination of a lack of land ownership and decision making for resource management puts PNG women in a disadvantaged position regarding economy autonomy and access to financial services<sup>[13]</sup><sup>13</sup>.

Papua New Guinea is vulnerable to several hazards, including floods, droughts, earthquakes, volcanic activity, tsunamis, and sea-level rise. Some of these are expected to increase in frequency, magnitude, and intensity due to climate change<sup>[14]</sup><sup>14</sup>. Nonetheless, there is a limited analysis of the gender-differentiated impacts of climate change in Papua New Guinea. Women are more exposed to the

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consequences of climate change and natural disasters because of the stable social and cultural structures that place women in disadvantaged positions[15].

**The proposed project will promote gender equality and the empowerment of women in several ways.**

Activities will be designed to take into account the context of these two countries and to address key gender imbalances that relate to the project: i) the majority of market vendors in the Pacific are women; ii) understanding the gendered division of labor iii) lack of participation in the decision making for the management of resources, and iv) lack of access to land ownership for women. This project has a training output, and the project team will seek to ensure the inclusion and involvement of women from each selected community. This will be assisted by the project's use of the model of Community Facilitators that operates with one male and one female representative per community. This, and other proactive measures to be determined during the Gender Action Plan in project development, will help with securing 50% of women trainers and aiming for 50% female trainees. The gender analysis and action plan developed in the project development phase will be used in project implementation to influence the development of the financial products to be proactively gender inclusive. Overall, gender issues will be included in the different outcomes, outputs, and activities of the project, and that will be identified in the gender action plan. This analysis and action plan will be used to refine the activities further and to develop gender-sensitive indicators for the proposed project. The GEF policy on gender equality will be applied throughout the development and implementation of the proposed project

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[1] Ministry of National Planning. 2009. Roadmap for Democracy and Sustainable Socio-economic Development 2010-20214. Available online at <https://www.fiji.gov.fj/getattachment/Govt--Publications/Peoples-Charter/RSSSED.pdf.aspx>

[2] Republic of Fiji. 2019. Voluntary National Review. Available online at [https://sustainabledevelopment.un.org/content/documents/25011Fiji\\_VNR\\_2019\\_final.pdf](https://sustainabledevelopment.un.org/content/documents/25011Fiji_VNR_2019_final.pdf)

[3] UNDP. 2017. The Gender Inequality Index (GII).

[4] the Asian Development Bank. 2015. Fiji: Country Gender Assessment, 2015. Available online at <https://www.adb.org/sites/default/files/institutional-document/210826/fiji-cga-2015.pdf>

[5] Asian Development Bank. 2015. Fiji: Country Gender Assessment, 2015. Available online at <https://www.adb.org/sites/default/files/institutional-document/210826/fiji-cga-2015.pdf>

[6] Government of Fiji, the Department of Town, and the Country Planning website. Planning and Land Tenure. Available online at: [www.townplanning.gov.fj/index.php/planning/planning-issues/land-tenure](http://www.townplanning.gov.fj/index.php/planning/planning-issues/land-tenure)

[7] Adventist Development and Relief Agency (ADRA). 2019. Community-based gender and food security analysis in Macuata Province, Fiji. Available online at <https://reliefweb.int/sites/reliefweb.int/files/resources/2019%20ADRA%20Fiji%20Final%20Gender%20and%20Food%20Security%20Assessment%20report.pdf>

[8] FAO. 2019. Country Gender Assessment of Agriculture and the rural sector in Fiji. Available online at <http://www.fao.org/3/ca6670en/ca6670en.pdf>

[9] SPC. 2009. The participation of women in fishing activities in Fiji. Available online at [SPC](#)

[10] SPC. 2012. A stocktake of the gender mainstreaming capacity of Pacific Island Governments, Papua New Guinea. Available online at [SPC](#)

[11] UNDP. 2017. Human Development Reports. Available online at <http://hdr.undp.org/en/composite/GII>

[12] FAO. 2019. Country Gender Assessment of Agriculture and the rural sector in PNG. Available online at <https://reliefweb.int/sites/reliefweb.int/files/resources/ca6308en.pdf>

[13] FAO. 2019. Country Gender Assessment of Agriculture and the rural sector in PNG. Available online at <https://reliefweb.int/sites/reliefweb.int/files/resources/ca6308en.pdf>

[14] World Bank. 2018. Papua New Guinea. Available online at <https://climateknowledgeportal.worldbank.org/country/papua-new-guinea/vulnerability>

[15] FAO. 2019. Country Gender Assessment of Agriculture and the rural sector in PNG. Available online at <https://reliefweb.int/sites/reliefweb.int/files/resources/ca6308en.pdf>

**Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes**

**closing gender gaps in access to and control over natural resources; Yes**

**improving women's participation and decision-making; and/or Yes**

**generating socio-economic benefits or services for women. Yes**

**Will the project's results framework or logical framework include gender-sensitive indicators?**

Yes

**4. Private sector engagement**

**Will there be private sector engagement in the project?**

Yes

**Please briefly explain the rationale behind your answer.**

Willis Towers Watson is a leading global advisory, broking and solutions company with expertise in developing and implementing innovative uses of risk management and insurance-related mechanisms to build resilient economies and societies around the world to support sustainable growth. WTW is the primary partner in the project.

This initiative aims to identify and support communities, linking a large private sector actor – WTW - and local domestic market players to facilitate the development of resilient economies and communities in the Pacific Islands region. Further private sector links will be explored during project preparation, for example, PIF stage consultation with Outspan indicated they would like to be involved in the project. Outspan promotes Rainforest Trade cacao which is an important income component for coastal communities (<https://www.thenational.com.pg/outspan-pays-out-k325000-to-mamose-growers/>).

**5. Risks**

**Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)**

For environmental and social safeguards purposes, the project has been preliminarily categorized as a C since it is technical support and there are no environmental or social impacts envisaged under the project (see categorization memo under ‘supporting documents’). A finalized Categorization memo will be disclosed once activities are well developed during the project development phase.

<b>Risk</b>	<b>Risk Level</b>	<b>Project Mitigation</b>
Communities lack interest in engagement to identify adaptation solutions and related financial products	L	The project will work with communities that have already been engaged in financial training from WWF, through SMEs and village saving schemes, so they already have some level of financial literacy and buy in to the project concept.
Culturally inappropriate project delivery will hamper relationships with communities, and such relationships and trust are key to project success	L	Working through local community facilitators, the project will 1) ensure appropriate community protocols are followed, 2) reduce the amount of staff time that needs to be spent in the field by providing a constant presence in the community, and 3) identify local issues with the team before they become problematic.
Insurance scheme developed at the wrong level (individual, community, ward, resource)	L	In depth community consultation during the project preparation will assess the appropriate level for insurance and other financial products.
Communities do not ultimately see the value of insurance; therefore take-up is limited and the financial products are not mainstreamed for long-term use	M/H	The project will ensure that (1) communities understand the climate risks and the benefits of financial tools to manage these risks – the business case; and (2) the financial tools will be sensitive to community needs and targeted to fit community. To encourage initial uptake and demonstrate the value of the insurance products, the project will fund a “proof of concept” with subsidized coverage. To ensure long-term sustainability of take-up, the project will develop a strategy for long-term sustainable premium financing arrangements.
Premium finance cannot be identified and acquired for the ‘proof of concept’ phase of initial product implementation	H	The project team is well connected to available sources of premium support and will leverage existing relationships to acquire this initial premium finance. WTW will begin engagement with potential supporting organizations at the PPG stage to ensure feedback is incorporated and addressed at the Component 1 and product design phase of Component 2 to make sure that product design is acceptable and already responsive to funders’ requirements.
Local insurers lack interest or capacity to offer a product as primary carrier and administrator	L	<p>The project will identify the best governance option for insurance product implementation. This could include local insurer participation, where the local insurer (1) acts as a fronting insurer, passing all risk-taking to international risk markets or ii) takes some risk themselves. Depending on the regulatory view, it is possible that this program could be placed directly on international markets. Additionally, it is possible that PCRIC could play a role either as a primary insurer or as a risk-taker. The project will engage local insurers to ensure</p> <p>The project will engage local carriers/insurers to ensure the project design and roll-out strategy takes into account the above risk. In addition, the project will support the local insurers’ ability to offer the product through technical materials that underwrite the products.</p>

No insurance markets want to take the risk at an acceptable price	L	<p>By using the index-based form of insurance, and by utilising primary data sources for hazards, which are known to be acceptable to global climate risk transfer markets, the project will identify appropriate technical pricing. The scale of the project may be a barrier to achieving best possible pricing because (1) the administrative costs for the local insurer, associated with product distribution and policy management, will be relatively higher the smaller the scale of the programme. (2) Relatively few markets will be interested in underwriting small volumes of risk, particularly if there are no existing relationships between domestic insurer(s) and the global reinsurance market.</p> <p>Best pricing is therefore likely to be achieved by using a domestic insurer already connected to the global risk markets and / or involving the regional risk pool, PCRIC, in the transaction to bring scale and regional diversification.</p>
Legal and regulatory barriers	L	<p>Local legal and regulatory infrastructure in Fiji and PNG should be sufficient to enable this product to be made available relatively quickly.</p> <p>The project will engage regulators from an early stage to familiarize them with the proposed financial products. Insurance regulation in Fiji is undertaken by the Reserve Bank of Fiji (RBF), which has been very supportive of implementing innovative index-based insurance coverage in Fiji. Insurance regulation in PNG is undertaken by the Office of the Insurance Commissioner (OIC); as the legal system is based on English and Australian common law, standard legal concepts related to insurance are recognised and wordings are often derived from the UK and Australia.</p>
A natural (earthquake, tsunami) or anthropogenic (mine spill) event outside the scope of insurance policy occurs and impacts policy uptake	M	<p>The project will clearly identify what events are to be covered by the insurance products and provide training products to assist communities respond to a broad range of disaster events</p>

## 6. Coordination

**Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.**

### *Institutional Structure*

Willis Towers Watson (WTW) will be the lead Executing Agency for this project. WTW has extensive experience in developing and assessing risk management tools and risk transfer products, as a global risk advisor and re/insurance broker with close to 200 years of experience. WTW has had a strong presence in the Pacific dating back more than 25 years.

As the primary Executing Agency, and primary recipient of the project grant, WTW will be responsible for project administration, project management, reporting, monitoring and evaluation for the project and will coordinate with the WWF GEF Agency. WTW will host the Project Management Unit (PMU), which will be responsible for the day-to-day management of the project. The PMU functions will also be responsible for coordinating project partners, recruiting consultations as needed, issuing sub-grants, overall reporting, and monitoring and evaluation.

Project oversight and strategic guidance will be provided by a Project Steering Committee (PSC).

The majority of project activities will be executed by WTW:

WTW will:

- Lead the climate risk assessment and identification of resilience solutions for the two regions (output 1.1.1)
- Develop a best practice guide and training manual (output 1.2.1)
- Design a suite of financial products to address critical climate risks to fisher households (output 2.1.1)
- Develop models for deployment of the financial products (output 2.1.2)
- Deploy the suite of financial risk management products (output 2.1.3), and

- Develop a strategy for the sustainable sourcing of premiums (output 2.1.4).

WTW will make a small sub-grant to WWF Pacific, who will:

- Organize and facilitate the community consultations to identify climate risks and solutions (output 1.1.1)
- Provide direct inputs, review and translation of the manual and training materials (output 1.2.1) to ensure the materials are culturally appropriate and in local language,
- Organize and facilitate the training of Community Facilitators (output 1.2.2), and the Community Facilitators training of the selected communities on the financial products developed under component 2 (output 1.2.3).

WTW has expressed a dependency on WWF Pacific for efficiency and success in delivery of this proposed project. Specifically:

- WTW as an international private sector entity cannot go straight to local government and communities to implement the project. WWF Pacific has built strong relationships with communities in the proposed project sites and can facilitate linking WTW with local government and the communities.
- A base-level understanding of financial processes is required for WTW to be able to then discuss with communities potential financial products to assist overcoming specific climate shock events, to train communities on those products, and to work with communities to roll the products out, and this is why the communities in Great Sea Reef and Madang have been selected – because previous work by WWF and the Community Facilitators has provided that base-level financial literacy on which this project can build.
- WTW needs to work through trainers who can help get the technical information across to communities in a way that is locally-appropriate and in local language and also in a way that is not misleading, so that communities do not lose trust with the private sector. The community facilitators in Madang that have been working for years already with WWF will be critical for playing this role.

There are no alternative organizations that have created this base-level financial knowledge with communities, have existing community trainers to work with, and no alternative organizations that hold existing strong relationships with communities in the high climate risk areas of Fiji and PNG that can create an effective link to the global private sector company, WTW, in the time span of the project duration. As such, a small portion of the project activity-related budget would be sub-granted from WTW to WWF Pacific to facilitate relationships at the local level, to connect in the Community Facilitators, and to ensure a smooth and locally-appropriate implementation of the project on the ground.

### ***Coordination with other Relevant Initiatives***

WTW's work in other regions will also provide lessons for this proposed project:

- WTW has been involved in a number of innovative risk management solutions in the development space, including MiCRO, micro- and meso-level solutions for individuals and financial institutions in the Caribbean (the CCRIF / MCII CRAIC project), and R4, a farmer-level index-based weather insurance programme in Africa. Work in these projects can be leveraged, since experience in the design and implementation of index-based insurance programmes at the micro- and meso-level is directly applicable to the proposed project in Fiji and PNG.
- WTW is partnered with the Mesoamerican Reef Fund (MAR Fund) to develop a reef protection policy, which will be deployed in Mexico, Belize, Guatemala, and Honduras. This insurance programme will provide index-based insurance coverage to fund rapid reef response, including immediate clean-up and restoration activities, to build the resilience of the Mesoamerican Reef and beneficiary communities to storm impacts. We have already delivered two feasibility reports to the InsuResilience Solutions Fund, which provide an analysis of the socioeconomic profile of the beneficiaries of the proposed insurance programme and explore and present a strategy for long-term premium financing / programme sustainability, based on an analysis of the beneficiaries of reef ecosystem services at the household, enterprise, and government level. This template for developing long-term programme sustainability will be particularly relevant to the proposed work, as it will also entail the development of a strategy for long-term programme sustainability.

· WTW are currently engaged in multiple initiatives, with partners globally, to develop insurance products and payment frameworks to support financial inclusion, expanding access to insurance, micro-finance, and pension products through bundled financial products for communities and individuals most at need. Our development of partnerships across financial services providers and NGOs, currently focused on small-scale fisheries and the potential for insurance products to support access to the banking sector, will be particularly relevant to the need to form similar partnerships in Fiji and PNG.

· WTW's work with CCRIF is directly applicable to the type of product design proposed in the Pacific: a livelihood protection policy. WTW has experience in the design of the product, but also in the practical implementation, having participated from conception to the successful roll-out. Therefore, WTW is acutely aware of the challenges that may arise, the demands regarding community engagement for any micro-insurance products, and we have experience on the technical side of product implementation, including everything from policy wording to pay-out management, which will be directly applicable to the proposed livelihood protection products.

GEFID	Country / Location	Project Title	Project Summary
2665	Fiji	National Capacity Self-Assessment for Global Environmental Management	The primary objective relating to the CB catalyze domestic
4358	Fiji	Fiji Renewable Energy Power Project (FREPP)	Removal of major regulatory and im affordable and rel
5216	Fiji	Implementing a Ridge to Reef approach to Preserve Ecosystem Services, Sequester Carbon, Improve Climate Resilience and Sustain Livelihoods in Fiji	This R2R approach Negative impacts watersheds as we
3954	Papua New Guinea	Community-Based Forest and Coastal Conservation and Resource Management in PNG	To establish a system policies and capa
5569	Papua New Guinea	Facilitating Renewable Energy & Energy Efficiency Applications for Greenhouse Gas Emission Reduction	Government and
5261	Papua New Guinea	Strengthening the Management Effectiveness of the National System of Protected Areas	To strengthen nat
4283	Papua New Guinea	PNG Energy Sector Development Project	The proposed Pro The Global Envir

## 7. Consistency with National Priorities

**Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions**

Yes

**If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc**

Country	Title	Relevance to Project	Reference
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Fiji	Voluntary National Review Fiji's Progress in the Implementation of the SDG's.	Fiji's VNR is a comprehensive review of the implementation of the transformative 2030 Agenda and its 17 SDGs. As Fiji's first-ever national review of this nature, the Fijian government has made a special effort to ensure inclusivity throughout the exercise, underpinned by a commitment to leaving no Fijian behind.  The project is aligned to Fiji's implementation of the SDGs as it continues to encourage government to work with NGOs and Private enterprises to help advance socio-economic development by improving financial literacy of Fijians.	Government of Fiji / 2019
Fiji	5-year & 20 Year National Development Plan	The 20-Year Development Plan provides the forward-looking vision for "Transforming Fiji" towards an even more progressive, vibrant and inclusive society. It outlines a framework that encompasses strategic policy maneuvers, new approaches to development and the aspirations of all Fijians. The Fiji NDP highlights the underlying theme of inclusive socio-economic development, which ties into this project as communities, and especially women, will gain financial literacy and benefit from long term sustainable financing through Community Based Fisheries Management.	Ministry of Economy, Republic of Fiji / 2017
Fiji	National Adaptation Plan A pathway towards climate resilience	The NAP provides a clear vision for adaptation and identifies priorities to be addressed in partnership with academic institutions, development partners, and private sector entities over the next five years, and beyond. It addresses vulnerabilities identified by the Climate Vulnerability Assessment and adopts the values and principles of the NAP Framework. The Fiji NAP aims to improve climate change information management and increase Fijian's ability to predict and respond to climate events. This project will help achieve these goals through the Community Facilitator (CF) model, educating both male and female Fijians on disaster risk reduction and climate change resilience.	Government of the Republic of Fiji/ 2018
Fiji	Fiji NDC Implementation Roadmap 2017-2030	Fiji's current Nationally Determined Contribution (NDC) is specific to the energy sector both in terms of a GHG (greenhouse gas) baseline, with 2013 as the reference year, and in terms of potential mitigation actions. The goal of the NDC Implementation Roadmap 2017-2030 is to provide a temporal pathway with concrete mitigation actions and financing needs to achieve the transformational change called for under the NDC. The NDC Roadmap calls for new methods of financing which this project will introduce to Fijian communities to support adaptation in the form of risk mitigation, and insurance products.	Fiji's Ministry of Economy with support from the Global Green Growth Institute / 2018
Fiji	Climate Vulnerability Assessment	The Fiji Climate Vulnerability Assessment was implemented with the objective to carry out a climate vulnerability assessment for Fiji and develop recommendations to inform Fiji's investment planning process. The initiative helped inform the national development priorities, and its investment and development plan for the next 5, 10 and 20 years. The project might also strengthen Fiji's Nationally Determined Contribution (NDC). The Climate Vulnerability Assessment for Fiji highlights the likely increase in extreme weather events, which lead to a large loss in income and assets for vulnerable communities. This project will increase the ability to deal with extreme weather events and recover financially with the help of long-term sustainable financing.	Government of the Republic of Fiji, 2017.  Support of World Bank Group and GFDRR.

Fiji	Fiji's Intended Nationally Determined Contribution	<p>Fiji submitted their Intended nationally determined contributions (INDC) to the UNFCCC Secretariat on the 5th of November 2015.</p> <p>No further revisions were undertaken, and the same document was endorsed and submitted as the First nationally determined contributions on 22nd April 2016.</p> <p>Within the Adaptation goals in Fiji's NDCs are several key actions that this project will support such as increasing the understanding of impacts of climate change, help governments build resilience, and explore climate change financing modalities.</p>	Government of the Republic of Fiji Islands, 2015.
Fiji	National Biodiversity Strategy and Action Plan for Fiji 2017–2024	The Fiji National Biodiversity Strategy and Action Plan 2017–2024 (NBSAP) is a national policy document recognized under the Environment Act 2005. The NBSAP is also a requirement for all parties to the Convention on Biological Diversity and its 2020 Aichi Targets. This policy document prioritizes conserving biodiversity which will be achieved through this project by reducing pressures on inshore fisheries and reef systems rich in biodiversity. This project will also protect biodiversity by reducing runoff pollutants that damage the reef systems.	Government of Fiji, 2017
Fiji	National Adaptation Plan (2018)	· Outlines the overarching process for comprehensively addressing climate change over the next five years. This builds on the 2017 Climate Vulnerability Assessment also conducted by the Government of Fiji.	Government of Fiji, 2018
Fiji	Environment and Climate Adaptation Levy (ECAL)	· The Government of Fiji's source of tax revenue dedicated to climate resilience, which is a consortium of taxes on prescribed services, items and income. The ECAL is mandated to fund work across Fiji to support economic, community, and infrastructure adaptation to the worsening impacts of climate change, as well as protect the natural environment and reduce Fiji's carbon footprint.	Government of Fiji, 2019
PNG	National Climate Compatible Development Management Policy	<p>The National Climate Compatible Development Management Policy (NCCDMP) is the Government's blue print to achieve the vision in building a climate-resilient and carbon neutral pathway through sustainable economic development for Papua New Guinea.</p> <p>This policy emphasizes enhancing capacity in understanding climate change as well as targeting communities and sectors with the highest risk. This project targets sectors that are most vulnerable (small scale fisheries) and will enhance community understanding of climate change through education and outreach.</p>	Papua New Guinea Government / 2014

PNG	Papua New Guinea Vision 2050	<p>This document is the new long-term strategy to map out the future direction for Papua New Guinea. Vision 2050 is underpinned by seven Strategic Focus Areas, which are referred to as pillars:</p> <ul style="list-style-type: none"> <li>· Human Capital Development, Gender, Youth and People Empowerment;</li> <li>· Wealth Creation;</li> <li>· Institutional Development and Service Delivery;</li> <li>· Security and International Relations;</li> <li>· Environmental Sustainability and Climate Change;</li> <li>· Spiritual, Cultural and Community Development; and</li> <li>· Strategic Planning, Integration and Control.</li> </ul> <p>The project will help achieve the 2050 vision by supporting community adaptation to climate change impacts, as well as by creating sustainable financing mechanisms within PNG.</p>	The National Executive Council of Papua New Guinea / 2009
PNG	Papua New Guinea Development Strategic Plan 2010 to 2030.	<p>This long-term development framework is intended to promote and guide PNG onto a path of sustainable economic growth, achieving economic prosperity and a high quality of life for all Papua New Guineans.</p> <p>The PNG DSP embodies the principles of the Constitution of PNG and reinforces the fundamental directives required to advance PNG into a middle-income country by 2030.</p> <p>This project will help achieve the DSP goals of improving and expanding PNG's economy by offering new funding mechanisms to alleviate negative climate change effects on individual's income and assets.</p>	Department of National Planning and Monitoring of Papua New Guinea / 2010
PNG	Papua New Guinea Medium Term Development Plan 2011 to 2015	<p>The Medium-Term Development Plan 2011-2015 (MTDP) is a 5-year rolling development plan providing a clear, accountable plan for investment. It sets the sector strategies, targets, deliverables and their projected estimate cost to implement.</p> <p>Protecting and developing the fisheries sector in PNG is a goal cited in the MTDP. This project works to reduce pressures on fisheries and encourage community-based fisheries management for long-term sustainability.</p>	Department of National Planning and Monitoring / 2010
PNG	Papua New Guinea: Intended Nationally Determined Contribution (INDC)	<p>PNG is committed to assist in global mitigation efforts, but the country's effort will be contingent on external, adequate and predictable funding being made available. The NDCs include the need to address damage to coral reefs as well as food insecurity – this is being addressed in the project through incentives for community fishery management.</p>	Papua New Guinea Government / 2016
PNG	Fisheries Management Regulation 2016	<p>Updated regulation of the legal instrument for fisheries management in PNG.</p>	National Fisheries Authority of Papua New Guinea / 2016

PNG	Papua New Guinea National Food Security Policy 2016 to 2025	The policy sets the medium to long-term direction and signals priority areas to focus resources (financial and human) to build sustainable food security for all Papua New Guineans. This project will increase the adaptive capacity of communities to respond to climate change impacts, thereby reducing traditional overfishing (for food) in the wake of a natural disaster. This will improve long-term food security.	Papua New Guinea Government / 2015
PNG	The National Beche de mer Fishery Management Plan / 2003	Objectives: To manage the fishery to the maximum economic benefit of Papua New Guinea. To ensure that the development of the bêche-de-mer fishery benefits coastal communities, particularly customary fishers. To ensure use of the bêche-de-mer resource is sustainable and that bêche-de-mer fishing has minimal impact on the marine and coastal environment.  The project will provide reduced premiums for insurance in exchange for e.g. sustainable community fisheries management	Papua New Guinea Government / 2003
PNG	Papua New Guinea's Strategic Program for Climate Resilience	The overall outcome of the SPCR will be the enhancement of PNG's resilience to climate change through improved access to resources, knowledge, and tools and climate resilient infrastructure at the national, sectoral, district, and community levels.  This project will help support adaptation and PNG's ability to react and respond to climate events, increasing the resiliency of communities. The project will engage communities directly through village chiefs and public authorities, providing more accessible information to citizens.	Papua New Guinea Government / 2012

## 8. Knowledge Management

**Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.**

The project will develop a knowledge management and communications strategy through Output 3.1.1 to ensure lessons, methods and tools on financial instruments for resilient coastal communities are developed, stored and appropriately disseminated. Knowledge created will include:

- Climate risk and impact assessments at the community level, detailed climate related impacts and opportunities for adaptation and resilience
- Best practice guide and training manual to promote financial literacy at the community level
- A suite of financial products, including a description of each product and manuals/models for deployment
- Long-term premium financing strategy
- Regular reporting on lessons learned and guidance for replication, to be showcased through project-developed communications products.

The knowledge developed above will be packaged into communication products when relevant and shared with stakeholders as described in the stakeholder engagement plan, as well as on a project-developed website. This will ensure accessibility by both targeted stakeholders and interested parties, as well as by other interested parties who can use the information to increase financial literacy and provide financial products for adaptation to climate risks to additional communities in the region and globally

**Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)**

**A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).**

<b>Name</b>	<b>Position</b>	<b>Ministry</b>	<b>Date</b>
Gunther Joku	Managing Director	Conservation and Environment Protection Authority	11/25/2019
Joshua Wycliffe	Permanent Secretary	Ministry of Waterways & Environment	4/21/2020

**ANNEX A: Project Map and Geographic Coordinates**

Please provide geo-referenced information and map where the project intervention takes place

Included above