Melanesian
Spearhead
Group

CLIMATE FINANCE STRATEGY

2019–2021

ANNEX: TECHNICAL ASSESSMENT

Table of contents

Annex: Technical assessment for the MSG Climate Finance Strategy 2019 - 2021

1. Methodology

The MSG Climate Finance Strategy is primarily a desk-based assessment complemented by engagement with relevant stakeholders including national and regional experts. The strategy is guided by the MSG Secretariat and the UNFCCC secretariat.

The desk-based assessment was carried out on the basis of publicly available information generated by various national and international institutions, and inputs from national and regional experts. It included the review of official reports and documents such as national climate change plans, national development plans, national adaptation programmes of action, national adaptation plans, NDCs and national communications to identify climate finance priorities and needs in Melanesian countries.

Engagement with relevant stakeholders was organized in close collaboration with the MSG Secretariat and the UNFCCC secretariat. In a first step, a survey was prepared and disseminated to a list of stakeholders as identified by the MSG secretariat. Responses from the survey were incorporated in the climate finance strategy, where relevant.

(i) Limitations

Where possible, due diligence has been carried out to verify the sources of information provided. However, due to constraints in the availability and completeness of data, such as on methodologies for country needs assessments, there is no assessment of the methodologies applied. Similarly, it was not possible to aggregate the domestic climate finance flows as the time frames for the respective analyses vary among countries.

2. Domestic and international climate finance flows

Developing countries such as in the Melanesian subregion, are often among the countries with the smallest capacity for climate mitigation and adaptation and the greatest needs for finance. The Paris Agreement states that climate finance should come from the public sector and be supplemented by private sector finance. However, the Paris Agreement does not provide specific figures for climate finance nor a timetable for disbursement. It notes the "significant role of public funds" and specifies that developed countries should "take the lead in mobilizing climate finance".[1] Within this context, it is essential to focus on the financing mechanisms and instruments that best leverage available public sector finance, and de-risk investment environments for the private sector. It is also crucial to have a transparent understanding of climate finance sources and flows for Melanesia. The following sections are based on publicly available data sources for the subregion, at the domestic and international levels.

2.(1). Domestic climate finance

Accounting for domestic climate finance in developing countries (including the Melanesian countries) is still a challenge, as transparent and harmonized data are not readily available. The Climate Public Expenditure and Institutional Review (CPEIR), of the United Nations Development Programme puts forward a methodology for accounting for climate change-related domestic budget expenditure. The CPEIR examines how public expenditures related to climate change and disaster risk management are integrated into national budgetary key processes. This analytical tool helps countries to identify and mobilize financial resources, improve budget systems, manage and scale up climate finance and carry out monitoring and evaluations.[2]

The Pacific Islands Forum Secretariat launched the Pacific Climate Change Finance Assessment Framework (PCCFAF), which expands on the CPEIR. The methodology is aligned with the specific circumstances of the Pacific island countries and has already been applied in some of the countries. Under this methodology, domestic public expenditures related to climate change are classified as climate change mitigation (reducing greenhouse gas emissions), and climate change adaptation, (increasing resilience to climate change and enabling activities such as

1 UNFCCC Paris Agreement, Article 9.3.

2 United Nations Development Programme. 2015. *A Methodological Guidebook: Climate Public Expenditure and Institutional Review.*

strengthening capacities).[3] In addition, expenditures related to disaster risk management are classified as disaster management, disaster risk reduction and enabling. [4,5] While the focus of the assessment is on climate change-related expenditure, most country analyses incorporate disaster risk reduction into climate change adaptation since, in most cases the two are inextricably linked.

There are seven thematic areas under the key pillars of the PCCFAF.[6] The two most relevant pillars for climate-related finance flows are the "Funding Source Analysis" and "Expenditure Analysis".[7] This report focuses on public expenditure related to climate change and disaster risk management taken from the Expenditure Analysis part of the PCCFAF assessment. Generally, the PCCFAF country assessment analyses data for a set period of time, indicating public expenditure related to climate change as a percentage of the total public expenditure. Absolute amounts disaggregated by year are not readily available.

Fiji and Vanuatu completed their CPEIRs in 2015, as a first national review on climate-relevant expenditures and institutional arrangements. Vanuatu recently published its 2018 Climate Change Finance Review report, which included a PCCFAF assessment on actions undertaken since the CPEIR was completed. The Solomon Islands conducted the PCCFAF assessment in its 2017 Climate Change and Disaster Risk Finance Assessment. The main outcomes of these assessments are provided below. Papua New Guinea has not yet conducted an CPEIR or an PCCFAF assessment.

(i) Fiji

Fiji's CPEIR, conducted in 2015, reports that the Fijian Government's expenditure related to domestic climate change[8] was approximately 3.6% of the total budget expenditure in 2014 (compared with 3.4% in 2009). The CPEIR considers expenditure over 2009–2014 during which the share of expenditure related to climate change varied considerably. This estimation is primarily based on expenditure data provided by the Ministry of Finance from its Financial Management Information System. Fiji's figure on domestic climate change-related expenditure is at the low end of the range of similar ratios in other countries.[9] However, data coverage, which varies greatly by country, has a significant impact on the level of such ratios. For example, if data on the local governments are included, the ratio of public expenditure related to climate change related expenditure to total expenditure will be higher.

Total public expenditure related to climate change rose from USD 65 million in 2009 to USD 104.1 million in 2014.[10] The distribution of expenditures related to climate change is heavily directed at adaptation, reflecting the national focus in this area. Spending relate to climate change mitigation remained low. Expenditure related to adaptation rose from USD 64 million in 2009 to USD 98 million in 2014. Most adaptation-relatedprojects took place in primary industries and environmental projects. Expenditure related to mitigation waslargely in the energy sector reflecting the Government's focus on promoting renewable energy as a substitute for fossil fuel.[11]

Following the completion of the CPEIR, the Fiji Development Bank was accredited as a Direct Access Entity to the GCF in 2017. This is indicative of the Fiji Government's commitment to prioritizing building a more robust public finance management system, which has helped raise the confidence of the international community and has facilitated access to international climate finance, in this instance through accreditation to the GCF.

(ii) Solomon Islands

As reported in Solomon Island's Climate Change and Disaster Risk Finance Assessment (guided by PCCFAF), the country's expenditure related to domestic climate change was approximately 5.4% of the Government's total budget expenditure between 2013 and 2016, which amounts to approximately

3 Pacific Islands Forum Secretariat. 2013. *PCCFAF Final Report*.

4 UNDPUnited Nations Development Programme. 2015., A Methodological Guidebook: Climate Public Expenditure and Institutional Review (CPEIR), 2015.

5 "Enabling" generally refers to climate-related actions that support government policy, planning and administrative processes associated with climate change activities.

6 The seven thematic areas of the PCCFAF are (i) Policies and Plans; (ii) Funding Sources; (iii) Public Financial Management and Expenditure; (iv) Institutions; (v) Human Capacity; (vi) Gender and Social Inclusion; and (vii) Development Effectiveness; Government of Vanuatu. 2018. Climate Change Finance Review.

7 Funding source data are mostly obtained from approved project documents, national development budget reports, project matrices/lists from donors/development partners, projects available on the Pacific Climate Change Portal, information on the Climate Funds Update website, and projects listed on the websites of climate funds. Information on the Expenditure Analysis is primarily extracted from national recurrent and development budget estimates and actuals. The Expenditure Analysis reviews the recurrent and development budgets, recording on-budget support, whereas the Funding Source Analysis records support that is both on-budget and off-budget, such as climate finance accessed directly by non-governmental organizations or line ministries but not recorded or tracked in the budget; Pacific Islands Forum Secretariat. 2013. *PCCFAF Final Report*.

8 Using the CPEIR methodology, climate change-related expenditure was classified as climate change mitigation (reducing greenhouse gas emissions) and climate change adaptation (increasing resilience to climate change and enabling such as strengthening capacities). Likewise, expenditure related to disaster risk management was classified as disaster management, disaster risk reduction and enabling.

9 Government of Fiji. 2015. *CPEIR*.

10 Government of Fiji. 2015. *CPEIR*.

11 Government of Fiji. 2015. *CPEIR*.

SDS 650,000,000 (USD 81 million).[12] This estimation is based on expenditure data provided by the Ministry of Finance and Treasury. This expenditure is to the lower end of the regional range of between 4% and 10% observed in other Pacific island country assessments, but comparisons should be treated with caution due to variations in methodologies and the quality of data.[13]

The share of climate change related expenditure remained relatively stable over the four-year period. The expenditure was primarily used for adaptation (79%), with the remaining proportion attributed to disaster risk management (14%), mitigation (6%) and enabling (1%)[14].

(iii) Vanuatu

As reported in Vanuatu's Climate Change Finance Review report, expenditure related to domesticclimate change was approximately 7.6% of the Government's total budget expenditure between 2012and 2016, which amounts to approximately VUV 1,500,000,000 (USD 54 million).[15] This estimation is based on expenditure data provided by Ministry of Finance and Economic Management[16]. Vanuatu's climate change related expenditure is at the upper end of the average range of between 5 and 8%[17] observed in other Pacific island countries.[18] This likely reflects the emphasis placed on climate change matters in Vanuatu due to its high vulnerability.

This climate change-related expenditure was primarily used for climate change adaptation (90.5%), with only minor amounts attributed to mitigation (2.5%) and enabling (7%). It includes expenditures on sectors such as energy, adaptation, agriculture and food security, water, fisheries and infrastructure, while non-climate change expenditure relates to social sectors such as education and health. The total adaptation expenditure also includesexpenditure related to disaster risk management and disaster risk reduction.

The share of recurrent expenditure remained relatively stable over the period under analysis. The Climate Change Finance Review report for Vanuatu states that this trend is surprising[19] given that Tropical Cyclone Pam occurred in 2015 and was expected to impact the share of recurrent spending related to climate change (including disaster risk management). The explanations that have been offered are (1) it takes time for recurrent spending to change (2) the money spent onaddress the impacts of Tropical Cyclone Pam was spread evenly across the Government because its impacts were cross-cutting; and (3) there was no specific need to increase the share of climate change and disaster risk management since the allocation share was already at an appropriate level.

It is essential to build robust public financial management (PFM) systems to provide more detailed informationand improve accountability in funding related to domestic climate. To enable this, commitment are needed from government ministries and other relevant stakeholders. In addition, such systems will allow Vanuatu to pursue further opportunities to mobilize domestic and international climate finance such as through multilateral climate funds and, regional and bilateral financial institutions.

2.(2). International climate finance

The information used for tracking and reporting international climate finance from bilateral and multilateral contributors to developing countries is publicly available, with the Creditor Reporting System database of the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD DAC) being the most comprehensive source of information.

This section presents information on climate finance committed to Melanesian countries for 2010–2017. Climate finance flows have been compiled from published data reported by bilateral and multilateral contributors to the OECD DAC database.[20] The OECD DAC database refers to reported climate finance flows as "committed" finance, defined as follows: "a commitment is a firm written obligation, backed by the appropriation or availability of the necessary funds, to provide resources of a specified amount under specified financial terms and conditions and for specified purposes for the benefit of a recipient country. Commitments are considered to be made at the date a loan or grant agreement is signed or the obligation is otherwise made known to the recipient." This can lead to artificial spikes in financing in those years when the commitment was made. The actual disbursement of the committed finance would be expected to occur

12 The analysis replicates analyses undertaken in other PCCFAF assessments and will not be directly comparable to the 2014 CPEIR figures.

13 Pacific Islands Forum Secretariat. 2017. *Solomon Islands Climate Change and Disaster Risk Finance Assessment.*

14

15 Pacific Islands Forum Secretariat. 2017. *Solomon Islands Climate Change and Disaster Risk Finance Assessment.*

16 Ministry of Finance and Economic Management of Vanuatu. 2017. *Public Financial Management Reform Roadmap, 2017–2021.*

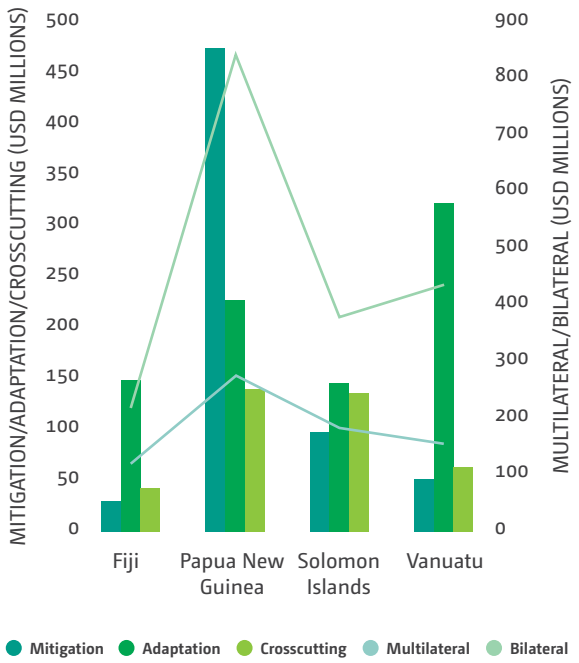
17 Note that ranges indicated specifically in a country report are referred to – these ranges might differ as reported by individual countries.

18 Pacific Islands Forum Secretariat. 2018. *Vanuatu Climate Change Finance Review Report.*

19 Pacific Islands Forum Secretariat. 2018. *Vanuatu Climate Change Finance Review Report.*

20 Data on international public financial support to developing countries are reported to the Creditor Reporting System by all OECD countries, some non-OECD countries on a voluntary basis, and some multilateral institutions and climate funds.

Figure 1:
Total climate finance committed to Melanesian countries in 2010–2017:
Allocations of bilateral/multilateral and mitigation/adaptation/cross-cutting funding per country.



over an implementation period defined for the project or programme. Due to data limitations, private sector climate finance flows have not been presented.

Melanesian countries received USD 1.9 billion[21] (53%) of the total climate finance committed to the Pacific region[22] (USD 3.6 billion) between 2010 and2017. Of the total committed climate finance to the subregion (refer to figure 1 below):

- Fiji received USD 222 million, Papua New Guinea received USD 844 million, the Solomon Islands received USD 381 million and Vanuatu received USD 439 million.
- USD 656 million was used for mitigation activities, USD 846 million for adaptation activities and USD 384 million for activities that have both mitigation and adaptation attributes.
- USD 742 million was committed by multilateral sources and USD 1.1 billion was committed by bilateral sources.
  - The main multilateral institutions that channel committed climate finance are the Asian Development Bank (ADB) (31%), the World Bank (26%), the Green Climate Fund (GCF) (18%), the Global Environment Facility (GEF) (9%), Climate Investment Funds (CIF) (7%) and other channels (9%);
  - The main bilateral contributors of committed climate finance for Melanesian countries are Japan (41%), Australia (36%), the European Union (EU) excluding the European Investment Bank (EIB) (9%), New Zealand (7%), the Republic of Korea (3%) and other contributors (4%).
- USD 948 million was financed through debt instruments and USD 938 million through grant funding.

Climate finance committed to adaptation activities for 2010–2017 was greater than climate finance committed to mitigation activities for all countries except Papua New Guinea. The higher mitigation climate finance flows for Papua New Guinea are attributed to the increase in commitments from Japan in 2013 (allocated to the energy distribution sector) and 2015 (allocated to the transport and storage sector). Other than for Vanuatu, adaptation activities in the water supply and sanitation sector received the largest climate finance flows across the Melanesian countries. In Vanuatu, the emergency response, reconstruction relief and rehabilitation, and disaster prevention and preparedness sectors received the largest adaptation related climate finance flows.

Climate finance committed by the GCF caused spikes in both the adaptation and mitigation flows in years when project proposals were approved. Between 2010–2017, the GCF approved USD 31 million of grant funding for water supply and sanitation in Fiji (2015), USD 18.1 million of grant funding for climate information services in Vanuatu (2016) and USD 84 million of loan and grant funding for the Tina River hydropower initiative in Solomon Islands (2017). In 2017, funding of USD 265 million from the GCF was approved as a part of a multi-country proposal for energy generation and access, of which Papua New Guinea is a part (this finance is not reported in the OECD DAC database).

21 The above figures exclude the UNFCCC fast-start finance committed between 2009–2012 to Melanesian countries, which totaled USD 121 million, of which USD 15 million to Fiji, USD 65 million to Papua New Guinea, USD 32 million to the Solomon Islands, and USD 9 million to Vanuatu.

22 The Cook Islands, Fiji, Kiribati, the Marshall Islands, Micronesia, Nauru, Niue, Oceania (regional), Palau, Papua New Guinea, Samoa, the Solomon Islands, Tonga, Tuvalu, Vanuatu, Tokelau; OECD DAC External Development Finance Statistics.

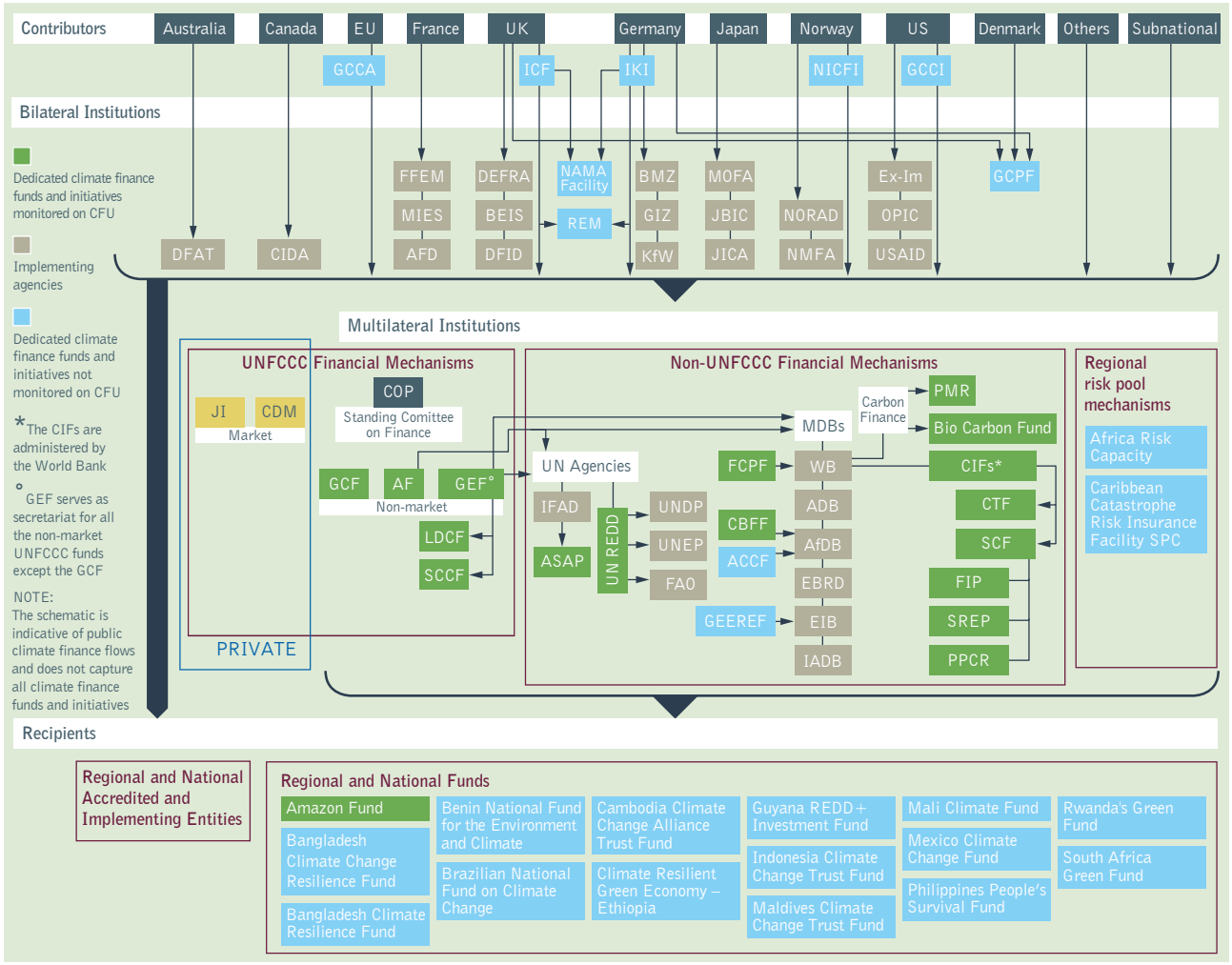
Of the total climate finance committed to Melanesian countries for 2010–2017, bilateral contributors accounted for the majority of the flows (61%). This trend is seen across all Melanesian countries except Vanuatu, where climate finance from multilateral institutions was marginally higher than from bilateral contributors.

For 2010–2017, 53% of the total climate finance committed to Melanesian countries was through grant funding, with the remainder through debt instruments. At a country level, Papua New Guinea has been more successful in attracting debt versus grant funding (USD 539 million from debt instruments versus USD 305 million from grants). For other countries, most committed climate finance was provided as grants.

2.(3). Sources of climate finance

The sources of international climate finance for the Melanesian countries were structured in the same way asfor global climate finance (see figure 1). Bilateral contributors committed the largest share of climate finance to Melanesian countries, at a total of USD 1.1 billion, with multilateral institutions channeling USD 742 million.

Figure 2: Global climate finance architecture[23]



23 Source: https://climatefundsupdate.org/about-climate-finance/global-climate-finance-architecture/

(i) Bilateral contributions

The bilateral climate finance contributors[24] to the Melanesian countries are as follows: Australia, Canada, EU institutions (excluding the EIB), Finland, France, Germany, Italy, Japan, the Republic of Korea, New Zealand, Norway, Poland, Spain, Sweden, Switzerland, the United Arab Emirates, the United Kingdom and the United States. Climate finance contributed bilaterally is administered primarily through existing development agencies, although some countries have bilateral funds. Not all committed finance has been attributed by contributors to a specified sector category of the OECD DAC database. A significant amount of funds is attributed to the "other multisector" category of the OECD DAC database.

Japan, the largest bilateral contributor of committed climate finance to the Melanesian countries, mainly supports the water supply and sanitation, disaster prevention and preparedness, transportation and storage, and energy and distribution sectors. Australia's bilateral share of committed climate finance to the subregion supports the education, water supply and sanitation, transportation and storage, and emergency response sectors.[25]

There are a few new bilateral partnerships and facilities of note that provide climate finance to the Melanesian countries. For example, the Australia Pacific Climate Partnership recently committed AUD 75 million between 2018/2019 to 2021/2022 to bring together a set of long-term programmes that connect high-quality climate data with decision-making for climate and disaster-resilient development across the Pacific region. A particular focus is on connecting these data with Australia's multi-sectoral aid programmes in the Pacific.

Germany and the United Kingdom have recently combined their funds to establish the Global Risk Financing Facility, a new USD 145 million facility with the aim piloting and scaling up support to strengthen the resilience of vulnerable countries to climate and disaster shocks. Pacific countries, which are highly vulnerable to climate change disasters, will be eligible to apply for this funding. The facility will scale up and strengthen existing risk financing initiatives and pilot approaches not yet explored by other programmes.

(ii) Multilateral contributions

The multilateral climate finance institutions[26] supporting Melanesian countries are the Adaptation Fund (AF), the ADB, CIF, the EIB, the GCF, the GEF, the Global Green Growth Institute, the International Fund for Agricultural Development, the International Finance Corporation and the World Bank.

The GCF is setup as a multilateral climate fund and became fully operational with its first projects approved at the end of 2015. Since then, countries in the subregion have successfully accessed climate finance through the fund. The GEF is also an operating entity of the Financial Mechanism of the UNFCCC, targeting multiple focal areas including climate change. The Least Developed Countries Fund and the Special Climate Change Fund are both administered by the GEF under the guidance of the Conference of the Parties to the UNFCCC. These funds support the development and implementation of national adaptation plans mainly through smaller-scale projects. The GCF is expected to become the primary channel through which international public climate finance will flow over time, leveraging both public and private sources of climate finance. The AF which serves under the Paris Agreement, has been operational since 2009. It pioneers direct access to climate finance for developing countries through accredited National Implementing Entities. Melanesian countries have low access to the AF with Vanuatu not having accessed AF funds to date.

Multilateral development banks play a prominent role in delivering multilateral climate finance to the subregion, with the ADB and the World Bank being the main channels. The ADB channels finance to activities in the transport and storage, energy distribution, and energy generation and renewable sources sectors. The World Bank channels finance to the transport and storage, energy generation and renewable sources, and reconstruction relief and rehabilitation sectors.[27]

CIF, established in 2008, is administered by the World Bank but operate in partnership with regional development banks including the African Development Bank, the ADB, the European Bank for Reconstruction and Development and the Inter-American Development Bank. CIF, which is listed as a separate source of multilateral funding in the OECD DAC, channels finance mainly towards energy generation and renewable sources and the general environmental protection sectors.

24 OECD DAC database.
25 OECD DAC database.
26 OECD DAC database.
27 OECD DAC database.

3. Climate finance priorities and needs

As discussed in the previous section, Melanesian countries face a complex international financing landscape with limited national capacities to access and disburse climate finance. At the same time, as climate risk rises, so do the adaptation and mitigation costs imposed on these countries. As climate change does not impact all Melanesian countries in the same way, specific country needs and corresponding investment costs should be considered carefully and aligned with mitigation and adaptation priorities as identified in country NDCs.

Aggregating climate finance needs for the subregion is challenging given the lack of harmonized data on mitigation and adaptation requirements across the subregion. Melanesian countries are still struggling to put together comprehensive quantitative and qualitative needs assessments, against which a detailed investment plan can then be prepared to fund those requirements.

Sections A, B, C and D outline Melanesian countries' mitigation and adaptation priorities and associated climate finance needs, where available.

All countries have detailed mitigation priorities with clear targets for increasingthe renewable energy share in electricity generation. Much of this ambition stems from national policies to increase energy security by decreasing dependence on fossil fuels. The costs of energy generation in Melanesia are the highest in the region due to steep transportation costs for fossil fuels. Off-grid energy generation is also a focus area for the sub-region.

The priorities for adaptation action vary across the subregion, and are summarized in the sections below. The Solomon Islands and Vanuatu submitted their national adaptation programme of action to the UNFCCC secretariat in 2008 and 2007 respectively. Fiji published its National Adaptation Plan Framework in 2017 and National Adaptation Plan in 2018. Papua New Guinea published a review of its current and planned adaptation action in 2011. The Climate Change and Development Authority in Papua New Guinea is in the process of developing a National Adaptation Plan (NAP).

3.(1). Fiji

(i) Mitigation

Fiji has an economy-wide reduction target of 30% of CO_2 from the energy sector by 2030 compared with the 2013 level, compared with the business-as-usual scenario. Of this total, 10% is an unconditional target to be achieved through the implementation of the Fiji Green Growth Framework[28], using national resources. The remaining target, which is conditional, of its dependent on external funding amounting to USD 500 million.[29] Additional quantifiable targets in Fiji's intended nationally determined contribution (INDC) are also in the energy sector:

- Improve energy efficiency by 10%;
- Increase the share of renewable energy in electricity generation: 67% by 2015, 81% by 2020 and 100% by 2030.

The INDC has additionally indicated the following priority areas:[30]

- Reducing the cost of imported fuels, equivalent to around 200 million litres of diesel and/or heavy fuel oil by 2030;
- Improving energy security and reducing dependence on imported fuel as a source of energy for electricity generation.
- Assessing the mitigation potential of the forestry sector via the REDD-plus programme.

To achieve these targets, Fiji's NDC implementation roadmap[31] estimates a total cost of USD 2.97 billion between 2017–2030.[32,33,34] This is broken down as follows:

- USD 1.671 billion to reach the goal of 100% renewable energy, mostly through waste to energy initiatives from biomass waste, hydro power plants and photovoltaicsprojects;
- USD 150 million to increase demand-side energy efficiency through energy labelling, standard-setting, and starting campaigns to improve energy efficiency in both the public and business sectors;
- USD 1.149 billion to decrease the use of diesel in the

28 Ministry of Strategic Planning, National Development and Statistics. 2014. *A Green Growth Framework for Fiji: Restoring the Balance in Development that is Sustainable for Our Future.*

29 INDC of Fiji, 2016.

30 A table of proposed mitigation projects for financing in Fiji is provided in Fiji's Second National Communication to the UNFCCC in 2013, p.135.

31 The Global Green Growth Institute. 2017. *Fiji's NDC implementation roadmap.*

32 Republic of Fiji, Talanoa Dialogue Submission "Where Are We?", 2018.

33 Republic of Fiji. 2018. *Talanoa Dialogue Submission "How do we get there?".*

34 Republic of Fiji. 2018. *Talanoa Dialogue Submission "Where do we want to go?".*

transport sector through vehicle replacement programmes, use of biofuels, improvement to the maintenance of sea vessels and promotion of the use of fuel-efficient outboard motors in sea vessels.

(ii) Adaptation

There are no quantifiable sector targets for adaptation in Fiji's INDC. Short, medium and long-term objectives are in place for the following:[35]

- Integrated approaches to policy at the national level; adding cyclone resistance in building codes in urban and rural areas;
- Capacity-building: at the divisional and community levels (both urban and rural);
- Facilities for accessing finance and climate change financing modalities.

According to a report published in 2017 by the Government of Fiji in collaboration with the World Bank and the Global Facility for Disaster Reduction and Recovery, an estimated USD 4.5 billion over 10 years is needed to build up resilience and the capacity to adapt to climate change in Fiji. This figure is equivalent to almost 100%of the country's gross domestic product for one year.[36] The assessment identifies 125 measures across five priority areas that aims to boost climate resilience in the country. The five areas are building inclusive and resilient towns and cities; improving infrastructure services; climate smart agriculture and fisheries; conserving ecosystems and building socioeconomic resilience. The report uses a cross-sectoral methodology.

3.(2). Papua New Guinea

(i) Mitigation

Papua New Guinea's 2015 INDC specified a reduction target of 90% of national greenhouse gas emissions by 2050, compared with the 1990 baseline. The only quantifiable targets in Papua New Guinea's INDC are in the energy sector as follows:

- 100% renewable energy by 2030;
- Carbon neutrality by 2050.

REDD-plus, forestry, energy efficiency and transport have been indicated as priority areas. Papua New Guinea's primary mitigation focus on reducing emissions from land-use change and forestry. To mitigate emissions from growth in fuel use, Papua New Guinea will make efforts to transition towards renewable energy. These mitigation priorities are specified in the country's medium-term development plan 2016-2017and Climate-Compatible Development Strategy[37], as follows:

- Reduce fossil fuel in energy systems;
- Reach 280 MW of gas generation capacity by 2017;
- Reach 250 MW of hydropower generation capacity by 2017;
- Reduce emissions from deforestation and forest degradation;[38]
- Implement land-use change and forestry initiatives.

Policies[39] are in place to support the implementation of these priorities; however, the corresponding cost estimations are not yet available.

(ii) Adaptation

There are no quantifiable sector targets for adaptation in Papua New Guinea's INDCs. The following are areas of priority:

- Food security;
- Coastal and inland flooding;
- Damage to coral reefs;
- Malaria and vector borne diseases;
- Water and sanitation;
- Climate induced migration;
- Climate resilience.

Papua New Guinea's Second National Communications to the UNFCCC (2014) contains initial cost estimates for these priority areas, shown in the table 1 below:

35 INDC of Fiji, 2016.

36 Government of Fiji, the World Bank and the Global Facility for Disaster Reduction and Recovery. 2017. *Climate Vulnerability Assessment: Making Fiji Climate Resilient.*

37 Government of Papua New Guinea. 2014. *National Climate Change Compatible Development Management Policy Climate Target.*

38 The abatement opportunities identified are described in table 3.1, p.46 of Papua New Guinea's Second National Communication to the UNFCCC, 2014.

39 Office of Climate Change & Development. 2014. *National Climate Compatible Development Management Policy.*

Table 1

SECTOR	COST ESTIMATE
Water	Management of coastal zones: measures for coastal flood-proofing: • Planting mangroves: USD 22 million between 2010 and 2030; • Building sea walls: investment of USD 95 million and annual maintenance costs of USD 1.4 million totalling USD 120 million between 2010 and 2030; • Setting up an early warning system: USD 2 million. Inland waters: measures for inland flooding: • Building levees: USD 88 million between 2010 and 2030, including an investment of USD 69 million and maintenance costs of USD 1.2 million annually; • Constructing drainage structures: USD 61 million; • Setting up an early warning system: USD 7 million over 20 years, including an investment of USD 1 million and maintenance costs of USD 300,000 annually.
Health	Micro insurance against malaria: • 2020: expected climate change-related loss of USD 16 million; annual funding of USD 3 million required; • 2025: expected climate-change related loss of USD 32 million; annual funding USD 6 million required; • 2030: expected climate-change related loss of USD 52 million; annual funding USD 11 million required.
Fisheries	Coral reef protection: • USD 1 million as an initial investment including USD 250,000 for a complete survey of current reef health and the rest for the subsequent planting of sea urchins through dead areas to clear away algae and accelerate reef recovery; • USD 40,000 for monitoring reef health.

3.(3). Solomon Islands

(i) Mitigation

Solomon Island's 2013 INDC[40] has the following greenhouse gas emissions reduction target, compared with a business-as-usual projection of: 12% from unconditional measures and up to 27% from conditional measures by 2025; 30% from unconditional measures and up to 45% from conditional measures by 2030; and more than 50% from conditional measures by 2050. Mitigation sectors prioritized in the INDC are off-grid renewable energy generation, hydropower (including mini hydro), solar, geothermal, and energy efficiency.

The Solomon Islands National Energy Policy 2014 contains the following quantified targets.

- 79% power generation from renewables by 2030;
- Energy efficiency and conservation increased by 10.7% by 2019, compared with the 2013 baseline.

The INDC includes activities proposed for off-grid electricity production, the cost of which is estimated at USD 170 million. Cost estimates for energy efficiency and geothermal activities are not available.

(ii) Adaptation

The Solomon Islands prioritized the following adaptation sectors in its INDC:

- Agriculture and food security;
- Water and sanitation;
- Marine resources and coastal protection;
- Human settlements;
- Infrastructure and tourism.

A detailed list of activities under each of these sectors is provided in the 2008 national adaptation programme of action for the Solomon Islands. On the basis of data provided in the World Bank NDC platform, the total adaptation cost for the Solomon Islands is estimated at USD 126 million.[41]

40 INDC of Solomon Islands, 2015.

41 World Bank NDC Platform. Available at http://spappssecext.worldbank.org/sites/indc/Pages/INDCHomeMore.aspx

3.(4). Vanuatu

(i) Mitigation

Vanuatu's INDC[42] has the following quantifiable targets for the energy sector:

- Commission the proposed first stage 4 MW geothermal plant by 2025; commission the second stage 4 MW geothermal plant by 2030;
- Install a 10 MW grid connected photovoltaics installation by 2025; add another 10 MW grid-connected photovoltaics installation by 2030;
- Double wind capacity to 5.5 MW by 2025;
- Achieve a 100% share of renewable energy in electricity generation (no year specified; however, Vanuatu's National Energy Roadmap of 2013 sets a target of 40% renewable energy generation by 2015 and 65% by 2020);
- Improve diesel efficiency: 10% by2015 and 20% by 2020, compared with 2013 baseline.[43]

To achieve these targets by the stipulated timelines, Vanuatu's INDC provides an estimate of USD 180 million in required international climate finance.

Vanuatu's INDC also mentions the following mitigation activities:

- Exploring intervention opportunities for substituting and replacingfossil fuels that use coconut oil for electricity generation;
- Implementing off-grid renewable energy projects under the existing programme Scaling Up Renewable Energy in Low Income Countries Program, the cost of which is estimated at USD 34.2 million.

(ii) Adaptation

Vanuatu's 2013 INDC prioritizes activities in the following sectors (no quantifiable targets are available):

- Agriculture and food security;
- Sustainable tourism development;
- Sustainable forest management;
- Integrated water resource management.

To adapt to the impacts of climate change, the annual cost for Vanuatu is estimated at USD 9.5 million per year.[44] The World Bank's NDC platform estimates the cost of adapting to climate change in Vanuatu at USD 100 million.[45]

4. Climate finance access

Although Melanesian countries received USD 1.9 billion in committed international climate finance between 2010 and 2017, this amount is insufficient for financing adaptation and mitigation commitments for the subregion. Issues related to accessing climate finance faced by Melanesian countries compound this issue. This section discusses three main challenges in accessing climate finance for the subregion.

4.(1). GCF accreditation

(i) Challenges

The AF and GCF are different from other climate funds because they allow developing countries to directly access climate finance funds through Accredited Entities. The GCF allows international, regional, national and subnational organizations, from both the public and private sectors, to apply for accreditation. This direct access provision enables countries to manage all aspects of their mitigation and adaptation programmes, from design and implementation to monitoring and evaluation. Meeting the accreditation requirements and complying with access modalities however is not easy for all countries.

Accreditation procedures require demonstration of an organization's ability to comply with the GCF's fiduciary standards, gender policy guidelines, and environmental and social safeguards. It is unlikely that these procedures will become less rigorous in the near future. Thus, countries need to focus on strengthening their national organizations at all levels of governance to be successful in their accreditation applications. Initiatives such as the CPEIR and PCCFAF assessments are moving potential NIE's such as finance ministries in the right direction; however, there is still a lack of appropriate systems, skill sets and capacity to administer and monitor climate finance.

(ii) Example solutions

Fiji, as the only country to have a national implementing entity with the GCF, could support other countries in the subregion by exchanging lessons learned from its experience. The Government of Vanuatu has practical experience in implementing both the CPEIR and PCCFAF assessments and can support other Melanesian countries that are keen to do the same.

42 INDC of Vanuatu, 2015.
43 Vanuatu National Energy Roadmap, 2013.
44 INDC of Vanuatu, 2015.
45 World Bank NDC Platform. Available at http://spappssecext.worldbank.org/sites/indc/Pages/INDCHomeMore.aspx

4.(2). Donor fragmentation

(i) Challenges

The landscape of climate finance is complex and overcrowded. While funds such as the GCF are making progress in aggregating and leveraging available finance, there are also various standalone initiatives, which heavily fragment the donor landscape. Japan and Australia account for 77% of the bilateral funding committed to Melanesian countries over 2010–2017. The remaining 23%, or USD 261 million, was committed by 11 separate bilateral contributors and is channeled to separate programmes. The landscape looks slightly better for multilaterals, with 76% of funding channeled by three institutions: the ADB, the World Bank, and the GCF. The remaining 24%, or USD 179 million, was channeled by seven separate multilateral institutions into separate programmes. This fragmentation could lead to an opportunity to combine and leverage funds for similar climate actions, allowingactivities to be scaled up. Coordinating of donor funding would not only provide benefits at the country level, but also at the subregional level where there are overlaps in mitigation and adaptation priorities. The inefficiencies caused by a fragmented donor landscape includes:

- Increased transaction costs;
- Additional requirements for the preparation, coordination and management of proposals;
- Difficulties in preparing proposals that have complex and different eligibility criteria;
- Challenges in capacity, in terms of the availability of both personnel and expertise, for managing proposals for multiple donors.

(ii) Example solutions

Strengthening the coordination of donor fundingwould be most effective when initiated at the political level with the creation of targeted policy frameworks for donors. For example, countries could design funding windows for global funds aligned to the priority sectors that require financing. These guidelines could be integrated into appropriate policy frameworks. Melanesian countries could also consider setting up national financing vehicles, which act. as a government-led pooling mechanism of funds from different sources including bilateral contributors and multilateral channels, private sector investments and national budgets. National financing vehicles streamline implementation and monitoring procedures, improve coordination and decrease administrative costs.

The Government of Vanuatu is in the process of setting up a National Green Energy Fund that would finance, at scale, activities related to climate change and sustainable development. It is led by the Department of Energy and looks to consolidate existing financial mechanisms for electricity access within the Vanuatu Rural Electrification Project. Fiji, Papua New Guinea and the Solomon Islands have begun to consider setting up national financing vehicles, drawing on Vanuatu's experience to avoid a number of common design and development pitfalls.

4.(3). Financing arrangements

To ensure that mitigation and adaptation priorities are translated into bankable investment pipelines and appropriately matched to available climate finance, it is essential to have (1) expertise in conducting financial and technical assessments of mitigation and adaptation initiatives in accordance with environmental and social objectives, and (2) innovative financing mechanisms and instruments that match the risk-return appetites of investors.

Melanesian countries have limited financing arrangements for mitigation and adaptation initiatives that encourage the mobilization of additional finance and leverage existing climate finance sources. A range of innovative financing instruments is required to provide cost-effective solutions that cater to the different types and levels of risks associated with individual activities, and scale of required financing.

The Tina River Hydropower Development Project in the Solomon Islands is a good example of how a blended finance solution that uses a public-private partnership model for financing can be used to attract climate finance to large-scale infrastructure mitigation projects. It was designed primarily to help reduce electricity prices for consumers by increasing the amount of renewable energy in the Honiara national grid (by nearly 70%), while reducing reliance on expensive diesel power. The project is a result of ten years of preparatory work and three years of negotiations between the Solomon Islands Government, including the state-owned power utility Solomon Power and the private developers of the project, Korea Water Resources Corporation and Hyundai Engineering Corporation.

Appropriate financing solutions can also be applied to community-level adaptation and mitigation initiatives in Melanesian countries that have limited access to finance, even those that are technically and financially well designed. Available microfinance in the Pacific region can have interest rates up to 25 per

cent, which is prohibitive to small and medium-sized enterprises.[46] For climate finance to flow to these small and medium-scale climate initiatives, new funding models such as crowdlending, crowdfunding and impact investments are needed. For instance, the crowdfunding model allows organizations that provide small, low-risk loans to connect with individuals or groups in developing countries with poor access to finance. Such innovative financing instruments would allow potential investors to have access to predictable, long term financing.

Further examples of innovative financing structures from both within and outside of the subregion can be considered within the context of mitigation and adaptation financing needs in the subregion. These could include nature-based insurance schemes such as the Quintana Roo coral reef parametric insurance policy in Mexico, debt swaps aimed specifically at protecting natural ecosystems such as the ocean conservation and climate adaptation debt swap for the Seychelles, and sovereign green bonds such as the Fijian green bond which was the first to be issued in the Pacific region. The subregion can also consider expanding its use of carbon finance (CDM) in particular for projects in the renewable energy, waste, transport, cooling (refrigeration, A/C) and water sectors (as energy efficiency measure), where other island states (e.g. Caribbean) are making significant in-roads also in the area of programmes of activities. In many cases methods and baselines exist for these sectors. Papua New Guinea has initiated work in the cooling sector already.

5. Abbreviations and acronyms

ADB	Asian Development Bank
AF	Adaptation Fund
CCA	climate change adaptation
CCM	Climate Change Mitigation
CIF	Climate Investment Funds
COP	Conference of the Parties
CPEIR	Climate Public Expenditure and Institutional Review
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DRR	Disaster Risk Reduction
ECOPAS	European Consortium for Pacific Studies
EIB	European Investment Bank
EU	European Union
FDB	Fiji Development Bank
FTC	Finance, Technology and Capacity-building
FMIS	Financial Management Information System
GCF	Green Climate Fund
GEF	Global Environment Facility
IDFC	International Development Finance Club
IPCC	Intergovernmental Panel on Climate Change
INDC	intended nationally determined contribution
MSG	Melanesian Spearhead Group
NDC	nationally determined contribution
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OECD DAC	Development Assistance Committee of the Organisation for Economic Co-operation and Development
ODA	Overseas Development Assistance
PCCFAF	Pacific Climate Change Finance Assessment Framework
REDD-plus	reducing emissions from deforestation and forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks
PNG	Papua New Guinea
SIDS	Small Island Developing States
SYR	Synthesis Report
UNFCCC	United Nations Framework Convention on Climate Change

46 file:///C:/Users/Sumalee/AppData/Local/Microsoft/Windows/INetCache/IE/XXMHUPL0/innovative-ideas-pacific-smes-transition-aid-to-trade-20190304.pdf

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The preparation of this strategy is in response to the twenty-third Conference of Parties, requesting the UNFCCC secretariat, in collaboration with the operating entities of the Financial Mechanism, United Nations agencies and bilateral, regional and other multilateral channels, to explore ways of assisting developing country Parties in assessing their climate finance needs and priorities, in a country-driven manner, including technological and capacity-building needs, and in translating those needs into action (decision 6/CP.23, paragraph 10).