

2016

Annual Report

SPC-GIZ Coping with
Climate Change in the
Pacific Island Region
(CCCPIR)

VANUATU



SPC/GIZ programme

**“Coping with Climate Change in the Pacific Island Region”
(CCCPIR)**

Annual Report

**Vanuatu Programme
2016**



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I. Executive Summary

The Coping with Climate Change in the Pacific Island Region (CCCPIR) Program Programme aims to strengthen the capacities of regional organisations in the Pacific Islands region and its member states to adapt to climate change and mitigate its causes. The programme in Vanuatu (which has been operational for 8 years) was structured in 3 components in 2016: (1) Mainstreaming climate considerations and adaptation strategies; (2) Implementing adaptation and mitigation measures; (3) Climate change and education. The Vanuatu interventions are part of a regional program that cooperates closely with a range of climate change initiatives by the Pacific Community (SPC), the Secretariat of the Pacific Regional Environment Programme (SPREP) the University of the South Pacific (USP) the Pacific Island Forum Secretariat (PIFS), the Melanesian Spearhead Group (MSG), the Australian Government, the United States Government and the European Union.

In 2016, the CCCPIR Program provided long-term technical advisors to the Ministry of Climate Change and the Ministry of Agriculture, who in turn supported a range of institutional strengthening and capacity transfer activities with the National Advisory Board on Climate Change & Disaster Risk Reduction (NAB), the Risk and Resilience Unit (RRU), and a range of other Government and Civil Society agencies.

The CCCPIR program supported implementation of the National Climate Change & Disaster Risk reduction Policy, by further mainstreaming climate change into a range of national and local-level policies and planning documents, notably the National Sustainable Development Plan (for which GIZ was the lead writer of the Environment Pillar), the TORBA Provincial Climate & Disaster Plan and the National Food Security Standard Operating Procedure (SOP). Additionally, the CCCPIR was the primary facilitator of the National Climate Finance Forum and the National Loss & Damage Forum.

The CCCPIR program strongly supported the preparation of the Vanuatu delegation to the UNFCCC's 22nd Conference of the Parties in Morocco, including the training and capacity building of delegates, acquisition of travel finance, and drafting of negotiating positions and formal submissions. Over 100 teachers in 6 provinces were trained in how to teach the new national curriculum, and specifically how to utilize CCCPIR-produced climate change teaching materials.

In local communities, the CCCPIR successfully supported the Department of Agriculture, Department of Livestock, Department of Cooperatives and SHEFA Province to implement 400 backyard gardens and poultry coupes in 22 villages on the highly vulnerable islands of Emau, Pele and Nguna. A further 30 remote bungalows were supported to procure and install renewable energy systems for lighting and cooling.

With a total Vanuatu program budget of only ~44 million vatu in 2016, the CCCPIR Program remains one of the most successful and productive in Vanuatu. It is largely due to the excellent ongoing cooperation among SPC, GIZ, the Government of Vanuatu and a range of other agencies that this program serves as a model climate change initiative that flexibly and responsively meets Vanuatu's national priorities, needs and gaps and shares and disseminates best practices across the Pacific. Gender issues are considered in all areas of planning and implementation. CCCPIR builds on,

complements and closely collaborates with existing and proposed initiatives at the regional and national levels.

I. The Climate Change Context in Vanuatu

A 2016 United Nations report assessed Vanuatu as the most highly vulnerable country to climate and disaster risks in the worldⁱ. Vanuatu is vulnerable to a range of climate and geological hazards including volcanic eruptions, earthquakes, tsunamis, cyclones, climate variability, storm surge, landslides, droughts and flooding. A profile of risks from climate change and geo-hazards in Vanuatu has been developed including the following findings on current and future climate risks:

- by 2040 daily temperatures will increase from 1995 levels by 1.2 degrees Celsius;
- sea level rise will continue and accelerate;
- ocean acidification will degrade 80 percent of coral reefs within 20 years;
- extreme temperatures will reach higher levels and become more frequent;
- extreme weather events including cyclones and storms will increase in intensity, but not necessarily in frequency;
- dry periods will have a longer duration; and
- extreme rainfall will be more frequent and intense.

Current climate impacts on Vanuatu's agriculture, fisheries, forestry, tourism, health, transport and infrastructure sectors were considered. Projected consequences of climate change include; reduced availability of fresh water; shifts in crop seasonality of harvest, planting and fruiting; more pests and diseases for animals, crops and trees; salt water inundation and intrusion of coastal land and groundwater; compromised food security; coral reef deterioration; reduced fisheries' productivity, increased risk of human disease and health problems including vector borne disease transmission and heat related illness; damage to infrastructure; loss of coastal land; and reduced economic growth and revenue generation.

Vanuatu Climate Change Profile¹²

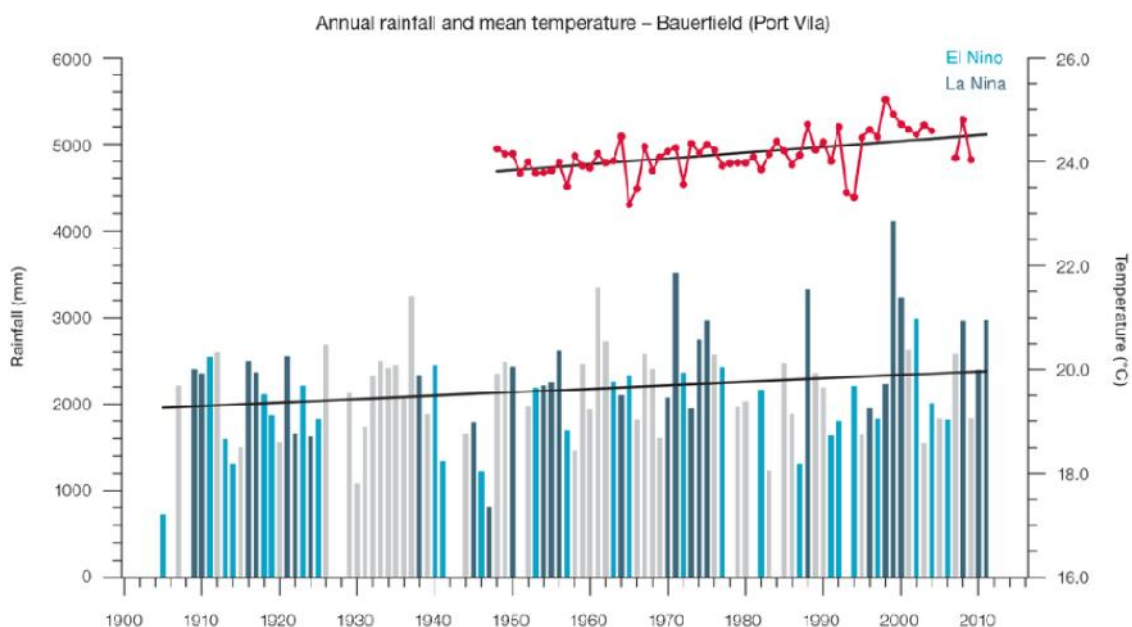
According to the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC),

“Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased”

1.1 Temperature

According to the IPCC’s AR5, “Each of the last three decades has been successively warmer at the Earth’s surface than any preceding decade since 1850.” According to recent independent analysis by the US National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA)³, the Earth’s 2016 surface temperatures were the warmest since modern recordkeeping began in 1880.

These trends have also been confirmed in Vanuatu by the Pacific Climate Change Science Programme (PCCSP). Over the period 1948–2011, maximum and minimum temperatures at Bauerfield Airport (Port Vila) increased as did November–April and May–October maximum temperatures at Aneityum. These temperature trends are statistically significant at the 5% level.



¹ From the Australian Government’s Pacific Climate Change Science Programme: *Climate Variability, Extremes and Change in the Western Tropical Pacific: New Science and Updated Country Reports 2014*.

http://www.pacificclimatechangescience.org/wp-content/uploads/2014/07/PACCSAP_CountryReports2014_Ch16Vanuatu_WEB_140710.pdf

² From the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC): *Climate Change 2013: The Physical Science Basis*; http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf

³ <https://www.nasa.gov/press-release/nasa-noaa-data-show-2016-warmest-year-on-record-globally>

Above Figure from the Australian Government's Pacific Climate Change Science Programme: Climate Variability, Extremes and Change in the Western Tropical Pacific: New Science and Updated Country Reports 2014. Observed time series of annual average values of mean air temperature (red dots and line) and total rainfall (bars) at Bauerfield Airport (Port Vila). Light blue bars denote El Nino, Dark blue La Nina, and Grey normal years. Solid black trend line indicates a least squares fit.

There is *very high confidence* that temperatures will rise into the future. Under all climate model projections, the warming is up to 1.0°C by 2030, relative to 1995. Thereafter warming projections are diverse across various models, for example by 2090, a warming of 1.9–4.0°C is projected for Representative Climate Pathway (RCP) 8.5 while a warming of 0.3–1.2°C is projected for RCP2.6. While relatively warm and cool years and decades will still occur due to natural variability, there is projected to be more warm years and decades on average in a warmer climate. Dynamical downscaling of climate models from the Australian Bureau of Meteorology suggests that temperature rises may be about 0.3°C greater over land than over ocean in Vanuatu.

1.2 Rainfall

According to the IPCC's AR5, It is likely that anthropogenic influences have affected the global water cycle since 1960. Anthropogenic influences have contributed to observed increases in atmospheric moisture content in the atmosphere (medium confidence), to global- scale changes in precipitation patterns over land (medium confidence), to intensification of heavy precipitation over land regions where data are sufficient (medium confidence), and to changes in surface and sub-surface ocean salinity (very likely).

In Vanuatu, the PCCSP found that notable inter-annual variability associated with the ENSO is evident in the observed rainfall records for Bauerfield Airport since 1907, and annual and half-year rainfall trends show little change at Bauerfield Airport. Due to large year-to-year variability, there are no significant trends in the daily rainfall indices.

One example of the catastrophic variability is the 2015/2016 El Nino event, considered to be one of the strongest El Nino Southern Oscillation (ENSO) events ever recorded. This recent El Nino caused humanitarian disasters around the world⁴, and extreme prolonged drought Vanuatu.

1.3 Tropical Cyclones

According to the IPCC AR5, precipitation will likely be more extreme near the centres of tropical cyclones making landfall in North and Central America, East Africa, West, East, South and Southeast Asia as well as in Australia and many Pacific islands... and the frequency of the most intense storms will more likely than not increase substantially in some basins. In 2015, Australia's Climate Council⁵ issued a briefing statement that concluded "The damage caused by Cyclone Pam through widespread flooding was exacerbated by climate change"

Tropical cyclones affect Vanuatu most commonly between November and April. Between the 1969/70 and 2010/11 seasons, 101 tropical cyclones developed within or crossed the Vanuatu EEZ.

⁴ <http://reliefweb.int/topics/el-ni-o-2015-16>

⁵ <http://www.climatecouncil.org.au/uploads/417d45f46cc04249d55d59be3da6281c.pdf>

This represents an average of 24 cyclones per decade, although the interannual variability in the number of tropical cyclones in the Vanuatu EEZ is large, ranging from zero in 2001/02 to six in 1991/92. Twenty-nine of the 71 tropical cyclones (41%) between the 1981/82 and 2010/11 seasons were severe events (Category 3 or stronger) in the Vanuatu EEZ. Category 5 Cyclone Pam devastated much of the country in March 2015, including all SPC/GIZ CCCPIR programme pilot site activities on Pele and Teouma. According to the PCCSP, Vanuatu is projected to experience a decrease in the frequency of cyclone genesis (formation), with a medium confidence level.

1.4 Ocean Acidification

According to the IPCC's AR5, the atmospheric concentrations of carbon dioxide, methane, and nitrous oxide have increased to levels unprecedented in at least the last 800,000 years. Carbon dioxide concentrations have increased by 40% since pre-industrial times, primarily from fossil fuel emissions and secondarily from net land use change emissions. The ocean has absorbed about 30% of the emitted anthropogenic carbon dioxide, causing ocean acidification.

The PCCSP concludes that as atmospheric CO₂ concentrations continue to rise, Vanuatu's ocean will warm and continue to acidify. These changes will impact the health and viability of marine ecosystems, including coral reefs that provide many key ecosystem services (*high confidence*). These impacts are also likely to be compounded by other stressors such as storm damage, fishing pressure and other human impacts. In Vanuatu the aragonite saturation state has declined from about 4.5 in the late 18th century to an observed value of about 3.9±0.1 in the year 2000. All models show that the aragonite saturation state, a proxy for coral reef growth rate, will continue to decrease as atmospheric CO₂ concentrations increase (*very high confidence*).

1.5 Coral Bleaching

According to the IPCC's AR5, ocean warming dominates the increase in energy stored in the climate system. It is virtually certain that the upper ocean warmed from 1971 to 2010.

Coral reefs in Vanuatu provide critical ecosystem services including coastal protection, food security, tourism revenue among other things. When sea water is too warm, living corals will expel the algae (zooxanthellae) living in their tissues causing the coral to turn completely white. This is called coral bleaching

The PCCSP concluded that as the ocean warms, the risk of coral bleaching increases (*very high confidence*). There is *medium confidence* in the projected rate of change for Vanuatu because there is *medium confidence* in the rate of change of sea surface temperature. Overall there is expected to be a decrease in the time between two periods of elevated bleaching risk and an increase in the duration of the elevated bleaching risk in the future. If severe bleaching events occur more often than once every five years, the long-term viability of Vanuatu's coral reef ecosystems becomes threatened.

1.6 Sea Level Rise

According to the IPCC's AR5, the rate of sea level rise since the mid-19th century has been larger than the mean rate during the previous two millennia (high confidence). Over the period 1901 to 2010, global mean sea level rose by 0.19 m

The PCCSP concluded that mean sea level is projected to continue to rise in Vanuatu over the course of the 21st century. There is *very high confidence* in the direction of change. The CMIP5 models simulate a rise of between approximately 8–19cm by 2030 with increases of 42–89 cm by 2090. This could change substantially depending on the sea level rise contribution from the Antarctic ice sheet. Recently a large area of the West Antarctic ice sheet (over 5000 square kilometers in size) has cracked and is at immediate risk of breaking off⁶. Inter-annual variability of sea level will lead to periods of lower and higher sea levels in Vanuatu, with variability up to about 18 cm.

II. Climate Adaptation Context

Adaptation to climate change and risk management of natural hazards is one of the core development issues for Vanuatu.

According to the recently launched National Sustainable Development Plan (The People's Plan 2030), the highest policy of the Government of Vanuatu, the nation "seeks to ensure we maintain a pristine natural environment on land and at sea that continues to serve our food, cultural, economic and ecological needs, and ensure enhanced resilience and adaptive capacity to climate change and natural disasters." In addition to mainstreaming climate resilience throughout Vanuatu's development goals, a unique NSDP policy priority on climate change & disaster risk aims to achieve a strong and resilient nation in the face of climate change and disaster risks posed by natural and man-made hazards.

Vanuatu's National Climate Change & Disaster Risk Reduction Policy aims to "integrate and strengthen climate change adaptation and disaster risk reduction initiatives across national, provincial and local levels, and across all sectors." It identifies seven focal priorities including Governance, Finance, Knowledge & Information, Adaptation & Disaster Risk Reduction, Low Carbon Development, Response & Recovery and a range of Cross Cutting Issues including gender.

There have been incredible successes in Vanuatu's climate change adaptation goals and implementation, largely since the SPC/GIZ Coping with Climate Change in the Pacific Island Region commenced operations in 2009, and as outlined in this annual report. Traditional knowledge and cultural practices are an essential element of Vanuatu's high resilience and successful adaptation activities to date. In addition to traditional practices, other climate change and disaster risk reduction interventions are relatively new and rapidly growing areas requiring increasing levels of planning and coordination. This is particularly evident given the large number of actors involved in

⁶ <https://phys.org/news/2017-01-massive-antarctic-ice-shelf-ready.html>

this work in Vanuatu, including; government at all levels, sectors, donors, regional bodies, academic institutions, CSOs and communities. As a country highly vulnerable to climate and disaster risks, with limited resources and competing needs, it is crucial to use existing and potential resources more strategically and effectively. Agencies commonly have climate and/or disaster human resources now in their structure as well as dedicated sectoral units, for example the Ministry of Agriculture's Risk and Resilience Unitⁱⁱ.

Vanuatu has also seen great success mainstreaming climate change and disaster risk reduction into sector policiesⁱⁱⁱ including the Agriculture Sector Policy, Overarching Productive Sector Policy, National Forest Policy, Agriculture Sector Policy, National Curriculum Statement, National Environment Policy, Tourism Strategic Action Plan, National Land Use Planning Policy and the National Livestock Policy. Vanuatu's Disaster Risk Reduction and Disaster Management National Action Plan 2006-2016 (DMNAP) maps out priorities and a pathway for disaster risk reduction and management, although it has not yet been recently revised to fully address newly emerging climate change considerations.

Despite the resounding successes, several development challenges continue to limit the country's ability to respond effectively to climate variability and change such as (i) political instability and weak institutions, (ii) unequal distribution of economic benefits gained from existing policies, (iii) disparities in income distribution and access to basic services, (iv) increased urban migration into temporary and makeshift settlements, and limited employment opportunities in urban centers, (v) limited and poor infrastructure, and (vi) increased environmental degradation including deforestation, loss of topsoil, and deterioration of the quantity and quality of water supplies.

III. Programme Background and Objective

Quick facts

- Project duration: 01/2009 - 12/2018
- Total programme budget: EUR 19.2 million; funded by the German Federal Ministry for Economic Cooperation and Development (BMZ)
- Co-fundings:
 - European Union under the programme 'Adapting to Climate Change and Sustainable Energy (ACSE)' EUR 18,64 million including EUR 1 million for Vanuatu
 - GIZ-DEZA Cyclone Pam & El Nino Programs 2015-2018 funding of EUR 630,000
 - German Embassy Emergency Cyclone Pam funding of EUR 240,000
 - IKI-IRENA-GIZ finance for Renewable Energy Awareness EUR 12,000
 - GIZ Global Program on Loss and Damage and UNFCCC Negotiation Support EUR 120,000
 - DFAT-GIZ Climate Finance Readiness for the Pacific (CFRP) 2016-2018 Eur 1.5 million for 5 countries including Vanuatu
 - GIZ Development Worker Program 220,000Euro 2016-2017 TA at MALFFB Fisheries
- Implementation Partner: Pacific Community(SPC) in close collaboration with Secretariat of the Pacific Regional Environment Programme (SPREP) the University of the South Pacific (USP) the Pacific Island Forum Secretariat (PIFS) and the Melanesian Spearhead Group (MSG)

- Project Countries: Federated States of Micronesia, Fiji, Kiribati, Republic of the Marshall Islands, Nauru, Palau, Papua New Guinea, Samoa, the Solomon Islands, Tonga, Tuvalu, Timor Leste and Vanuatu

Overall German Engagement in Vanuatu

In addition to the SPC/GIZ CCCPIR Core Program, there are several other German Initiatives ongoing in Vanuatu.

The **Adapting to Climate Change and Sustainable Energy (ACSE) program** is providing 1 million Euros to the Government of Vanuatu (GoV), for a range of adaptation/energy projects. An off-grid solar installation project will support four fishing-villages of Waisisi on Tanna Island, each receiving a solar power system that operates a central deep freezing facility. This technology will strengthen the community's food security by enhancing their ability to access markets and sell their fish. A second project will install two automatic weather stations as part of the national Climate Early Warning Systems (CLEWS), that will transmit real-time information to enhance the Energy sector's ability to respond to adverse climate events and assist with national energy planning and renewable energy resource mapping (of solar, hydro and wind). A third project will install pilot Biogas systems for cooking in two technical colleges on the islands of Santo and Efate. The Biogas system will be combined with vocational education that will educate students at the college in the principals for the construction of low-tech, small-scale biogas systems. An aquaculture project will support major upgrades at the national hatchery as well as pilot designs of new Tilapia pond systems for community-based farmers.

German-Swiss Cyclone Pam and El Nino Food Security Programs (DEZA 2015-2016)

On 13th March 2015, Category 5 Cyclone Pam struck the Republic of Vanuatu with 270km/h winds, torrential rains and deadly storm surges. Shefa, Malampa and Tafea were the most heavily affected provinces although Pam affected an estimated 207,000 people on 26 islands, destroyed critical infrastructure, displaced thousands and severely affected food security and productive sectors including agriculture, livestock, fisheries, forestry and biosecurity. In the immediate aftermath of Cyclone Pam, the Swiss Agency for Development and Cooperation (Direktion für Entwicklung und Zusammenarbeit (DEZA)) and GIZ cooperatively agreed to commit an additional funding envelop of EUR 388.000 to support emergency relief in the form of vegetables, seeds, tools, farming equipment for over 3000 people in the Shefa province. The programme also strengthened food security response coordination at the national level. SPC/GIZ CCCPIR has managed the financial contribution.

SPC/ KfW PAM Recovery Project in Vanuatu

In December 2015, the Government of the Federal Republic of Germany through the Kreditanstalt für Wiederaufbau (KfW) signed an agreement with The Pacific Community (SPC) for the implementation of 42 support packages due to cyclone Pam, for a total amount of EUR 6 million, to be implemented by 6 different Divisions in SPC. The project is a mix of advisory services, field activities and investments for recovery activities in Cyclone Pam affected parts of Vanuatu, Tuvalu, Kiribati and Solomon Islands. Areas supported in Vanuatu are amongst others livestock, fisheries (deployment of FADs), aquaculture, and water supply.

Climate Finance Readiness for the Pacific (CFRP)

Since 2016, GIZ is implementing a climate finance project on behalf of the Australian Department of Foreign Affairs and Trade (DFAT). The objective is to strengthen the capacity of Pacific Island countries to access climate finance through Public Finance Management (PFM) reforms and the development of a pipeline of ready-to-fund projects. The project is implemented in five Pacific Island countries, amongst others Vanuatu. Here, CFRP and the SPC/USAID programme on 'Institutional Strengthening in Pacific Island Countries to adapt to Climate Change (ISACC)' jointly organised and financed the Climate Change Finance Forum for Vanuatu, which was hosted by the Vanuatu Government from 30 November – 01 December 2016. Over 80 participants from Vanuatu public and private sector, civil society and development partners discussed the way forward concerning climate finance activities for Vanuatu. The workshop report also entails a Vanuatu Draft Climate Finance Action Plan 2016-2020, which provides the basis for CFRP's support to Vanuatu.

Climate Protection through Forest Conservation in Pacific Island Countries (REDD II)

The "REDD+ – Forest Conservation in Pacific Island Countries II" project is jointly implemented by GIZ with its project partner "The Pacific Community" (SPC). SPC is the political responsible partner institution for project implementation and the coordination of activities with other implementing organizations in the four Melanesian target countries, amongst others in Vanuatu. In Vanuatu, the project is currently supporting the forestry department and other relevant stakeholders in the following key areas (1) Planning and implementation of a national forest inventory; (2) Training of trainers in REDD+ awareness; (3) Implementation of a REDD+ pilot site (Santo Island); (4) Exchange visits with other REDD+ countries; (5) Participation in international and regional workshops on climate change; and (6) REDD+ trainings on a national and regional (Melanesian) level.

Marine and coastal biodiversity management in the Pacific Island Countries and atolls (MACBIO)

Through the project on Marine and Coastal Marine Biodiversity Management in Pacific Island Countries (MACBIO), GIZ aims to strengthen institutional and individual capacities for the conservation of biological diversity associated with marine and coastal ecosystems in Fiji, Kiribati, the Solomon Islands, Tonga and Vanuatu. MACBIO assists these countries in their efforts to meet the Aichi biodiversity targets under the Strategic Plan for Biodiversity from 2011 – 2020, as well as SDG 14 on Oceans. In Vanuatu, the MACBIO project has carried out national studies on the value of marine ecosystem services, as well as a legislative analysis aiming at improved marine resource management. As a basis for EEZ-wide marine spatial planning the MACBIO project compiled 117 nationally and internationally available datasets on marine resources, accessible through an open source and license free GIS database, and established a set of preliminary marine bioregions. Supported by the project Vanuatu celebrated in 2016 the development of the country's first comprehensive Ocean Policy that sets the framework for the coordinated inter-sectoral management of Vanuatu's marine resources.

Further related information is available under <http://macbio-pacific.info>.

CCCPIR Programme objective and structure

The overall aim of the program is that the capacities of regional organisations in the Pacific Islands region and its member states to adapt to climate change and mitigate its causes are strengthened.

The programme in Vanuatu for 2016 was structured in 3 components:

- (1) Mainstreaming climate considerations and adaptation strategies;
- (2) Implementing adaptation and mitigation measures;
- (3) Climate change and education.

Focal areas and specific activities are determined by Vanuatu's national priorities based on identified needs and gaps, which differ among other CCCPIR countries. Information and knowledge sharing among countries is supported to maximize benefits and disseminate best practices across the Pacific. Gender issues are considered in all areas of planning and implementation. CCCPIR builds on, complements and closely collaborates with existing and proposed initiatives at the regional and national levels.

CCCPIR enabling implementation of Pacific Regional Policies

The CCCPIR program is directly supporting Vanuatu's local implementation of International Pacific Regional policies and frameworks, including

- The United Nations Framework Convention on Climate Change (UNFCCC)
- The UN Sendai Framework for Disaster Risk Reduction
- The UN SDGs, including SDG #2 of Food Security, SDG#5 on Gender, SDG# 7 on Sustainable Energy, SDG#13 on Climate Action, SDG#14 on Oceans, SDG#15 on Terrestrial Resources, & SDG#17 on Partnerships
- The Melanesian Spearhead Group (MSG) Leaders' Declaration on Environment and Climate Change
- The Framework for Resilient Development in the Pacific (FRDP)

CCCPIR enabling implementation of Vanuatu Policies

In Vanuatu, The CCCPIR programme aims to fit into and enhance the existing matrix of donors and adaptation initiatives in Vanuatu, rather than duplicate and/or compete with them. CCCPIR has been able to immediately and flexibly enable members of the National Advisory Board on Climate Change and Disaster Risk Reduction (NAB) to trial and make an initial start on urgent climate adaptation activities while also preparing for major climate funding from the Green Climate Fund (GCF) under the United Nations Framework Convention on Climate Change (UNFCCC).

The programme is directly aligned with the policy priorities of the Government of Vanuatu, specifically towards implementing the **National Sustainable Development Plans Environment Goal #3 on Climate Change & Disaster Risk**. The programme has helped shape much sectoral policy and continues to aid in policy implementation, specifically the **Vanuatu Agriculture Sector Policy theme #12 on Climate Variability, Climate Change and Disaster Risk Reduction, the Overarching Productive Sector Policy's Area #5 on Resilience, the National Forest Policy's Directive #4 on**

Climate Change, the National Land Use Planning Policy's area #13 on Risk and Vulnerability and a host of others at the national, provincial and local level.

In addition to those mentioned above, and as an example, the CCCPIR program is directly implementing the following Laws and Policies

- The Constitution of the Republic of Vanuatu that every person has a fundamental responsibility “to protect the Republic of Vanuatu and to safeguard the national wealth, resources and environment in the interests of the present generation and of future generations”.
- Vanuatu Agriculture Sector Policy (VASP) food-security policy directives to increase the production of and access to sufficient and nutritionally adequate foods as well as the promotion of local food preservation technologies.
- Vanuatu’s Overarching Productive Sector Policy (OPSP) directives on open-pollinated, GMO-free seed distribution, soil preservation and pest/weed/disease management, and staple food production.
- Vanuatu Aquaculture Development Plan including the roll-out of backyard aquaculture to provide an alternative to wild harvested protein
- Vanuatu’s National Forest Policy (NFP) around community-based integrated forestry that includes fruit and nut food production.
- The National Livestock Sector Policy directives outline the importance of support productive sector in rural to areas.
- The Vanuatu Trade Policy Framework (VTPF) directives to expanding food technology
- Vanuatu’s National Environment Policy (VEP) which mandates that green growth shall foster economic development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies.
- The Vanuatu Energy Roadmap (VERM) and its directives on sustainable energy including by access to electricity for all, low cost energy services, energy security, and climate change mitigation through renewable energy and energy efficiency.
- The Vanuatu’s National Waste Management Strategy Action Plan and Vanuatu National Water Strategy and their directives to expand the technology and use of composting toilets for groundwater protection
- The Vanuatu National Tourism Product Classification and Standards system and the special Eco minimum standards applied to those wishing to market the niche area of sustainability.
- The Vanuatu National Land Use Planning Policy and its directives on local level sustainable land use planning approaches for resource management

CCCPIR Components and Outcomes in Vanuatu

To achieve the overall objective, the six project components have been collaboratively developed with leaders in Vanuatu and other countries, under which national programme activities have been aligned. The first component is cross-sectoral and regional in nature, focusing on organizational, strategic and technical advice. The aim here is to improve the capability and coordination of the regional organizations in the interaction between, in the donor community and in cooperation with the countries. Component 2 predominantly supports national policies relating to the management of natural resources. Component 3 is closely linked with component 2 and aims to support the implementation of specific adaptation and mitigation measures and technologies, particularly at local and national level. Components 4 and 5 relate to tourism and energy management in a

sectoral, multi-level manner. Component 6 supports mainly educational institutions (teacher training, schools, providers of non-formal training) and works closely with relevant regional organizations (USP, SPBEA).

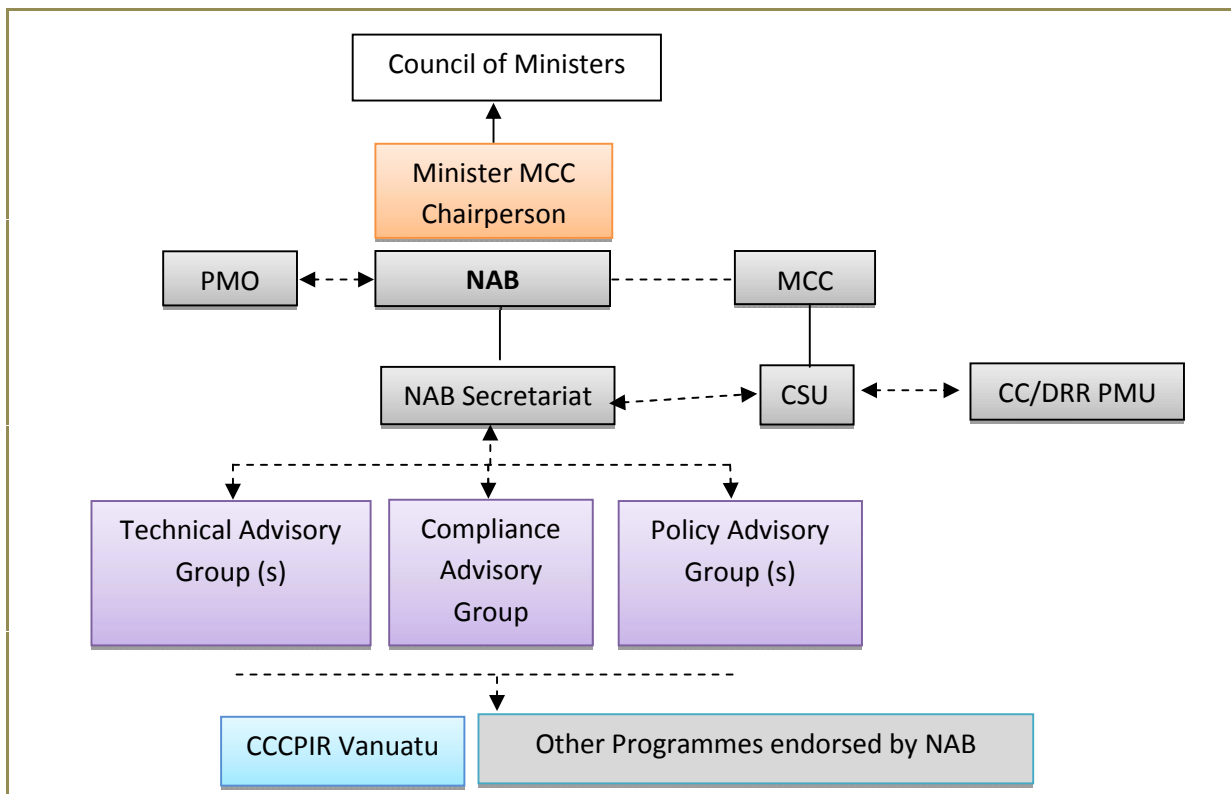
National implementation and steering structures

CCCPIR Vanuatu has been heavily engaged in supporting Vanuatu to improve and strengthen the governance of climate change projects and programme at a national level. As of 2016, the CCCPIR programme is broadly governed under oversight of a National Steering Committee, chaired by the Director General of the Ministry of Climate Change and made up of representatives from the Prime Minister's Office, the NAB, the Meteorology & Geohazards Department, the Ministry of Agriculture, and the Ministry of Education.

CCCPIR daily operational decisions are taken in consultation with relevant Department Heads, departmental technical staff, and officers according to the nature of the project or activity. For example, the major 2016 food security interventions were designed and implemented under the oversight of the Ministry of Agriculture, the Department of Cooperatives, and SHEFA Province. This decentralized sectoral governance approach has ensured that sectors fully own adaptation action, and that technical support is targeted, relevant and flexible to local needs.

CCCPIR programme results are then presented back to NAB through sectoral heads, meaning that nearly all of CCCPIR's support is fully owned by Government of Vanuatu departments and agencies themselves rather than by SPC or GIZ.

In 2012, the Government of Vanuatu established, with the support of CCCPIR, new institutional arrangements for joint governance of climate change and disaster risk reduction through the National Advisory Board on Climate Change & Disaster Risk Reduction (NAB) and a Climate Change/Disaster Risk Reduction Project Management Unit (CC/DRR PMU) within the Vanuatu Meteorology and Geo-Hazards Department (VMGD). This represented a proactive approach to integration in key governance structures at national level. Dedicated NAB Secretariat positions have now been established, and the CCCPIR program provides ongoing technical expertise to support NAB oversight of climate change and disaster risk reduction initiatives across Vanuatu. Representation of a broad range of agencies, together with CSOs on the NAB, provides a framework for CCCPIR mainstreaming across sectors and inclusive planning and decision-making. CCCPIR has a standing invitation by the chair to participate in and contribute to all NAB meetings.



GIZ services provided

CCCPIR in Vanuatu pursues a multi-level approach (regional, national, and sub-national/local), and works jointly with multiple government sectors and civil society actors. In view of the limited human and financial capacities of local agencies, a regional approach has vital to achieve planned results. Exchanging experiences and South-South knowledge transfer about local, gender specific impacts of climate change and adaptation options is only possible as part of the CCCPIR's regional approach. Experience gained at local level and by private actors has percolated up to provincial, national and regional levels and is used to develop additional conditions and services for adapting to climate change and reducing greenhouse gases.

The German input to CCCPIR in Vanuatu has primarily involved: expert, organizational, process, strategy and policy advice by international, regional and national short- and long-term experts, basic and more advanced training, and the supply of materials and equipment.

CCCPIR Vanuatu takes a proactive approach towards capacity development, moving beyond the old model of "expert + local counterpart." The CCCPIR Vanuatu programme works with dozens of counterparts at different times and levels to ensure that capacity of strengthened in a holistic and targeted way. The goal is to strengthen the skills of local partners and local institutions so they themselves can respond to the various areas of need. In this regard, CCCPIR has undertaken and supported a number of trainings and training of trainers for government and non-governmental agencies, local communities and civil society groups. Most trainings are ongoing over a period of

years (e.g. Climate Zone Quiz) with practical applications. Through CCCPIR Vanuatu's work, the nation now has a pool of high capacity local experts from most Government agencies, as well as from local communities who can plan, implement and evaluate adaptation at all levels. CCCPIR has a strong internship programme, now having trained and built the professional capacity of over 20 ni-Vanuatu youth. CCCPIR recognizes the various expertise and skills existing in government agencies and strives to enhance these skills by - exposing local experts to new developments in their areas of expertise (e.g. participation in regional and international workshops like the UNFCCC climate negotiations in 2014, 2015 and 2016).

To ensure that GIZ organizational and project management capacity is transferred to Vanuatu, the expatriate technical advisor daily guides and provides feedback on the work of 3 program coordinators for CCCPIR, GCF Readiness and ACSE.

IV. Key achievements of CCCPIR

Mainstreaming climate considerations & adaptation strategies

From 2011-2016, Vanuatu's Ministries and national stakeholders responsible for climate change have been supported by CCCPIR to undertake climate analyses, strengthen knowledge management, broaden adaptation processes, utilize a variety of tools and refine climate change adaptation strategies. In essence, much of CCCPIR Vanuatu's work has been geared towards mainstreaming climate considerations into everyday development.

Cyclone Pam in 2015 reinforced to the nation of Vanuatu the critical need to mainstream climate change planning into its development pathways. The CCCPIR programme was immediately available to support Government and communities in the lead up, response to and long-term recovery from Cyclone Pam primarily through the **Food Security & Agriculture Cluster** and the **Ministry of Agriculture's new Risk and Resilience Unit**. Both of these institutions were established with substantial support from CCCPIR's DEZA Food Security Program, which continued throughout 2016. Specifically in 2016, CCCPIR provided a **long-term expert reporting directly to the Director General** of the Ministry of Agriculture and who facilitated a restructure of the RRU, policy, capacity building and reporting to mainstream multi-hazard strategies and planning for the RRU. A major milestone was reached in 2016, as with the support of CCCPIR, the RRU was able to submit its first approved **RRU Operations Budget (2017)** to the Director General, Executive Officer and Finance Manager in the MALFFB Corporate Services Unit. This budget now showcases the sustainability of the CCCPIR interventions as RRU becomes fiscally independent and able to carry out its activities more professionally and without the full support of development partners.

In the CCCPIR-supported restructured MALFFB Corporate Services Unit, RRU now works in partnership with a newly established (26th August 2016) **Project Management Unit (PMU)**. These two units liaise with the Director General of MALFFB, MALFFB Directorate and sector stakeholders to develop, implement and coordinate initiatives to improve food security, value chain programs, resilience and sustainability through harmonized planning, design, resourcing (donors & GoV), implementation, monitoring and reporting. CCCPIR's provision of **MALFFB office running costs**, covering furniture, equipment, communication and transport expenses, enabled the Ministry to

fulfill its mandate throughout the year. Key initiatives in 2016 included continuation of the **National Food Security Monitoring System** which collected and analyzed data from Extension Officers throughout the country each month through MALFFB's 34 Extension Officers as well as via mobile phone applications.

In 2016, CCCPIR provided technical assistance to the Risk & Resilience Unit to develop a **National Food Security Standard Operating Procedure (SOP)** which is multi hazard, and multi-stage across the entire Ministry of Agriculture (MALFFB) and includes actions for disaster and climate Planning, Preparedness, Response & Recovery. This SOP is a Pacific first, and is already being replicated in other Pacific countries. Also in 2016, CCCPIR supported the Risk and Resilience Unit to develop a **Business Resilience Implementation Plan 2016-2018**, which outlines its medium and long-term activities to respond in an effective and systematic way to food security issues throughout Vanuatu. The Plan was already operationalized with 2016 targets being met on a **MALFFB CSU/RRU restructure** approved 20/10/16, Preparedness Activities (Provincial Awareness and Advocacy training), Media and Public Awareness (Newsletter, and Media Releases, advocacy & awareness workshops, MALFFB Website).

In 2016, GIZ CCCPIR, through its German Development Worker Program, provided an **aquaculture expert to the Fisheries Department Northern Office in Luganville** at the request of the Ministry of Agriculture. The TA has supported strengthening of aquaculture technologies, nursery techniques and annual planning and budgeting within the Department. The TA works closely with the Aquaculture Officer and other Fisheries staff to improve departmental processes. In addition, the TA has provided an additional vehicle for departmental aquaculture work, as well as aquaculture equipment.

A key area of CCCPIR programme support to the Vanuatu government has been the restructuring and institutional reform of national climate change and disaster risk reduction governance. In 2016 CCCPIR has continued to support Government to implement and strengthen the **National Advisory Board on Climate Change and Disaster Risk Reduction (NAB)**, the supreme policy making and coordination body on these issues. Specifically, CCCPIR has worked alongside and built the capacity of staff, volunteers and technical advisors to reform the **NAB Secretariat**. The technical advisor of CCCPIR Vanuatu was invited in 2015 & 2016 on the **NAB's UNFCCC Taskforce**, as well as the **NAB's Climate Finance Taskforce**.

For the fifth year in a row, CCCPIR in 2016 has technically supported the Vanuatu Government to prepare for and execute climate change negotiations under the UN Framework Convention on Climate Change (UNFCCC). In 2016 CCCPIR was again a member of the NAB's UNFCCC Taskforce, designing and supporting a national preparatory programme leading towards **COP22 in Marrakesh, Morocco**. CCCPIR supported the drafting of the 2016 **Vanuatu COP22 Positions Paper**, which was endorsed by the council of Ministers as well as support in drafting **submissions to UNFCCC on the Green Climate Fund, Climate Finance, Indigenous Knowledge, Gender and Adaptation**. With CCCPIR's support, the delegation has opened up national priority development to the public through civil society engagement at all levels.

In 2016, the CCCPIR program worked alongside NAB Secretariat staff to include new sections on climate negotiations and climate finance on the NAB website www.nab.vu, as provided substantial

input into the structural upgrades of the portal alongside the ICLIM Project⁷. CCCPIR financed and technical supported NAB-led training with the SANMA and TORBA provincial technical advisory groups on national climate policy and NAB portal utilization. The CCCPIR program in 2016 supported the Director General of the Ministry of Climate Change to write **speeches and briefing notes for the Minister**, as well as write project proposals and concept notes for national climate initiatives.

CCCPIR financially and technical supported two major NAB-hosted events in 2016 including the **Vanuatu Climate Finance Forum** which brought together over 80 decision-makers, technical officers, development partners and non-government stakeholders to learn about the complex global architecture of global finance, share lessons learned from climate finance in Vanuatu as well as chart a tangible way forward. This 1st climate finance forum considered key challenges to meeting national climate finance aspirations including programming and prioritization, coordination and monitoring & evaluation. Over the course of two days, high-level decision-makers set policy priorities and technical staff to devise short, medium and long-term milestones to meet these aspirations. An outcomes document, called the **Vanuatu Draft Climate Finance Roadmap 2016-2020**, which provides the basis for further climate finance support to Vanuatu.

In 2016 CCCPIR also financially and technically supported NAB's first ever **National Loss & Damage Forum & Training**. This forum was targeted at the decision-makers of the NAB, and provided explanations about concepts, approaches and measures to avert, minimise and address L&D – based on GIZ's own experience and that of others. The forum utilized the recently published report by GIZ entitled "**Post-Pam Lessons Learned for German development cooperation in Vanuatu**" report which outlines several recommendations to forward this critical issue in the Pacific. The two-day forum served as an opportunity to build technical capacities and initiate dialogue among Government, civil society and private sector partners working on the issue, in various communities (climate, disaster, development etc.), in different sectors and at various levels. This Forum and Training, developed by GIZ is the first world-wide to focus specifically on how to incorporate dealing with climate-related L&D in a comprehensive climate risk management approach.

In 2016, the CCCPIR Vanuatu program contributed substantial textual drafting and climate mainstreaming to finalize the new **National Sustainable Development Plan 2016-2030** including technical and financial support to the Prime Minister's Office and the Department of Environment, alongside the Melanesian Spearhead Group and IUCN. CCCPIR was the **lead drafting agency on the Environment Pillar of the NSDP**, incorporating resilience principles of climate change and disaster risk reduction and ensuring that the NSDP reflected the climate priorities already outlined in sector policies and plans, including the **National Climate Change and Disaster Risk Reduction Policy**. In 2016, CCCPIR ran informational sessions on the climate priorities of the NSDP with provincial secretary generals, university students, international volunteers and communities throughout Vanuatu.

At the sectoral level, CCCPIR has supported mainstreaming of climate change resilience throughout policy and planning documents at multiple levels in 2016, most recently providing substantial climate contributions to the endorsed **National Food Security Standard Operating Procedure (SOP)** and draft **Fruit and Vegetable Policy & Vanuatu Agri-Tourism Strategy** all being compiled by the

⁷ <https://www.griffith.edu.au/research/research-excellence/pacific-iclim>

Ministry of Agriculture. This mainstreaming work builds on that already completed by CCCPIR including policy support on the **National Environment Policy, National Forest Policy, Vanuatu Energy Roadmap, Foreshore Development Act, Physical Planning Act, National Land Use Planning Policy, and Overarching Productive Sector Policy, National Tourism Strategic Action Plan, Guideline on Traditional Knowledge related to Climate Change, National Gender Policy, Vanuatu REDD+ Policy, National Livestock Policy, Vanuatu Agriculture Sector Policy, and Guidelines for Community Conservation Areas**, which all now include climate risk considerations.

In 2016 CCCPIR continued to train Provincial Officers on climate change mainstreaming using the **TRACES Climate Mainstreaming Approach** for Vanuatu, working with Provincial secretary-generals and climate/disaster officers in SHEFA, SANMA and TORBA provinces. In 2016, the CCCPIR program supported TORBA province, alongside Red Cross, to draft its **TORBA Provincial Disaster & Climate Change Plan**, the first of its kind in Vanuatu and now the model being promoted by the National Disaster Management Office for all other provinces. In 2016, CCCPIR also worked with officers of SHEFA Province to organize and facilitate a workshop to launch the **Efate Land Management Area (ELMA)** which will enable ecosystem-based adaptation. The support to provinces builds on past work to develop the **MALAMPA Climate Change & Disaster Risk Directive** and **TAFEA Provincial Climate & Disaster Plan**.

In addition to supporting Government, the CCCPIR has continued to actively work with civil society stakeholders, and is a founding member of the **Vanuatu Climate Action Network (VCAN)** an association of climate non-government organizations, and the **Vanuatu Humanitarian Team (VHT)**. In 2016, CCCPIR participated actively in the working arm of these bodies under the NAB known as the **Climate Change Disaster Risk Reduction Working Group**. Beginning in 2016, staff of the CCCPIR program sit on the board of the **Pacific Island Climate Action Network (PICAN)**.

Climate change is now becoming more and more mainstreamed into sector activities, as evidenced by range of Bislama-language locally developed climate Guidebooks and Manuals developed by CCCPIR including a **Glyricidia Resilience Manual, Fuel Efficient Rocket Stove Manual, Rapid Area Council Vulnerability Tool, Tilapia-Poultry Adaptation Manual, Fish Aggregating Device Factsheet, Crown of Thorns Composting Guidelines, Citrus Grafting Manual, Yam Vine Cutting Manual, Taro Seed Collection Manual, Yam Miniset Manual, Alley Cropping Manual, Honey Bee Husbandry Manual, French/Samoan Banana Multiplication Guidebook, Vetiver Grass Manual, Marae Traditional Banana Preservation Manual, Coastal Erosion Factsheet, Gender and Climate Toolbox, Tilapia Manual, Forest Nursery Adaptation Guidebook, Livestock Husbandry and Climate Change Manual, Solar Fruit Drying Manual**. All CCCPIR Manuals and Factsheets are freely available and downloadable⁸ on the **NAB Portal** www.nab.vu.

Informed members and skilled trainers of the different sectors of the society are the basis for a sustainable change. Specific capacity building activities undertaken by CCCPIR in Vanuatu have included training with **University of the South Pacific students, ACTIV Women's Association, Musicians of Fes Napuan Music Festival, the Catholic Church, Cost-Benefit Analysis training, US Peace Corps Volunteers** and the Counterparts, the **Food Security and Agriculture Cluster, Members**

⁸ <http://www.nab.vu/projects/coping-climate-change-pacific-island-region-spc-qiz>

of Parliament, participants of the **National Climate and Youth Symposium** as well as the capacity development of **departmental directors and DGs**, training of **journalists**, training for **agriculture extension officers**, training of **lecturers and teachers at VITE** and a range of **secondary schools across Vanuatu**, and **practical training on CC adaptation with communities**, field school with **provincial area secretaries**, and **mainstreaming training with government sector officers**.

The CCCPIR programme has developed Vanuatu's first **Bislama-language DVD series on Climate Change** in Vanuatu including **Climate Change, El Nino and Agriculture, Climate Change Overview, Climate Change & Agriculture, Climate Change & Food Security, Climate Change and Marine Resource Management, and Climate Change and MPAs, Climate Change and Traditional Knowledge, Climate Change Adaptation on Pele, Climate Change & Gender, Climate Change & Coastal Erosion, COT online DVD, Coral Mariculture, Climate Tourism and Waste, Cloud Nasara Animation, Climate Solar Dryer and Climate Change & Vetiver** which have been disseminated to over 40 islands and over 800 communities in Vanuatu.

The CCCPIR programme has been a founding partner in the rollout of and upgrade (with ICLIM) and training activities on Vanuatu's first dedicated **Climate Change and Disaster Risk Reduction WebPortal**, www.nab.vu, which serves a national coordinating function with a project database, resource database, contact list, calendar of events, and adaptation strategy matrix. Equally important for ensuring climate mainstreaming in Vanuatu is the sustained presence of CCCPIR on the **Vanuatu Climate Change Facebook Page**⁹. As of 30 December 2016, CCCPIR's Facebook page had 4,730 followers.

Activity	Date	Description	Beneficiaries
Food Security & Agriculture Cluster meetings	Fortnightly	<ul style="list-style-type: none"> • Coordination of Food Security and Agriculture Cluster activities • Provision of information to key stakeholders. • Informing stakeholders on donor activities and processes • Review and feedback on assessments and recovery planning 	RRU staff, DARD officers, officers from the Fisheries, Bio-security, Livestock and Forestry Departments representatives from NGOs, donors, and the private sector
COP21 Debriefing	12/2/16	Debriefing session for all GoV delegates and stakeholders on COP21 outcomes	15 males, 17 females
VCAN stocktake	14/3/16	Supported all NGOs to take stock of CCDRR activities	9 males, 18 females
International Day of Forests	21/3/16	Supported DoF to launch National Reforestation Strategy	190 males, 143 females
NAB UNFCCC Taskforce Training	14/4/16,	Training to prepare for COP22 in Marrakesh negotiations	5 males, 3 males

⁹ <https://www.facebook.com/climatechange.vanuatu>

SHEFA Province CC & Land Management Training	19-21/7/16	Climate mainstreaming and ecosystem-based adaptation into the Efate Land Management Area	77 males, 20 females
Food Security & Agriculture Contingency Response Plan Workshop	25/8-1/9/16	Stakeholders invited to review & contribute to the Contingency Plan and further expand it from a national overview focus to incorporate Contingency Plans for all six provinces, integrating CCDRR into Provincial Planning	40 males, 30 females
SANMA TAC NAB Training	31/8-2/9/16	Provide CCDRR Policy & NAB Portal Training to provincial decision-makers	18 males, 9 females
TORBA TAC NAB Training	14-21/9/16	Provide CCDRR Policy & NAB Portal Training to provincial decision-makers	12 males, 4 females
Food Security SOP Training	28/9/16	Validation and Training for all MALFFB stakeholders on multi-hazard SOPs	46 males, 29 females
USP Climate Finance & Adaptation Training	28/9/16	Series of lectures on CC Adaptation, Financing and use of Traditional Knowledge for USP postgraduate students	27 males, 32 females
UNFCCC COP22 Delegate Training	25-26/10/16	Training on key negotiation issues and finalization of Vanuatu Positions document	22 males, 15 females
UNFCCC COP22 Public Event	27/10/16	Public Protest hosted by Ministry of Infrastructure highlighting Vanuatu CC vulnerabilities and motivations for COP22	89 males, 77 females
Cyclone Season Briefing for Food Security	7/11/16	Brief Minister and stakeholders on RRU & MALFFB readiness for 2016/2017 Cyclone Season	21 males, 8 females
Vanuatu AgriTourism Festival	9-11/16	Festival supported by CCCPIR and other partners to highlight links between tourism and agriculture sectors, including CC & DRR resilience	720 males, 590 females
Vanuatu Climate Finance Forum	30/11-1/12/16	Forum on architecture of global finance, share lessons learned from climate finance in Vanuatu as well as chart a tangible way forward.	47 males, 45 females
COP22 Debriefing	14/12/16	Forum with members of the Vanuatu delegation on key COP22	12 males, 9 females

		outcomes and plans for COP23	
Vanuatu Loss & Damage Forum & Training	15-16/12/16	Training on concepts, approaches and measures to avert, minimise and address L&D – based on GIZ’s own experience of how to incorporate dealing with climate-related L&D in a comprehensive climate risk management approach.	55 males, 38 females
NAB UNFCCC Taskforce & COP22 Delegation	June 2016-December 2016.	Specialized Taskforce and Delegation established under the NAB that coordinated mainstreaming preparation and finance for UNFCCC COP22	22 females, 38 males
NAB Climate Finance Taskforce	Jan-Dec 2016	Specialized Taskforce to oversee NIE accreditation and GCF planning	8 females, 5 males

Implementing adaptation & mitigation measures

Throughout the life of the programme, CCCPIR has supported government and civil society actors responsible for climate change and adaptation in designing and carrying out suitable adaptation and mitigation demonstration and pilot measures. Advisers have supported communities in the participatory planning, implementation and reviewing of adaptation efforts.

In Vanuatu, Component 3 focuses on the implementation of adaptation and mitigation measures, particularly at the community level. Implementing model projects on climate change adaptation on pilot sites has been of crucial importance in order to gather experiences on the ground and feed them back into the national strategic and policy development processes and create success stories of concrete adaptation measures.

In 2016, at the request of the Ministry of Agriculture, CCCPIR focused its community activities on the islands of **Emao, Pele and Nguna**, three of the most severely affected islands by Cyclone Pam and the subsequent El Nino. The Swiss Agency for Development and Cooperation (Direktion für Entwicklung und Zusammenarbeit (DEZA)) has partnered with GIZ CCCPIR to implement food security response coordination at the national level and community-level interventions in these three islands. The support was channeled through the second phase of the **GIZ-DEZA Food Security Program**, which in 2016, concentrated its efforts on **400 private farmers** and strengthening their post-cyclone and drought interventions, including the provision of seeds, tools, irrigation materials and ongoing agricultural technical extension, as well as an expansion into small poultry livestock and backyard gardens for food security.

Working alongside The Ministry of Agriculture, the Department of Cooperatives, and the SHEFA Provincial Government, CCCPIR was able to achieve the following results as captured during pre and post-implementation assessments:

- In 2016, **22 communities have implemented 11 new and additional cyclone and drought coping measures for food security benefitting at least 104 households on 3 islands.** These measures have included: Poultry husbandry, Composting and mulching, Erosion control measures, Backyard gardens, Grey water use, Organic pesticides, Alternative planting methods, Mixed poultry breeds, Soil enrichment, Contour sloping
- **100% of the project participants** (of which at least 63% were women) in at least 22 supported rural communities on 3 islands that are particularly at risk **indicate that their food security status in the face of cyclone and droughts risks has increased verifiably.**
 - **The variety of vegetables being planted has increased:** The average number of different vegetable seeds planted by project participants has increased by 752% (401% for women), resulting in an average of 2.5 different vegetable seeds planted per participant.
 - **The variety of livestock being raised has increased:** The average number of different livestock raised by project participants has increased by 21% (44% for women), resulting in an average of 1.6 different livestock types raised per participant.
 - **The frequency of consumption of nutrient-rich food has increased:** The frequency in which vegetables, eggs and chicken meat are consumed by project participants has increased by 19% (16% for women).
- Project beneficiaries themselves indicated to independent reviewers that the 2016 community program has:
 - Increased inclusion of cyclone and drought food security coping strategies into current food production practices.
 - Increased knowledge of **gender-sensitive** cyclone and drought coping measures.
 - Led to **healthier diets** and eating habits, including a substantial rise in vegetable and egg consumption. Children in particular have responded positively to healthier and more varied school lunches.
 - **Reduced dependence on imported food** at stores, allowing for more-nutritious and affordable local alternatives.
 - Increased **income generation**, with local cooperatives purchasing excess chicken eggs from poultry farmers. Women focus groups report that the extra income derived from GIZ-DEZA II interventions help alleviate other household expenses, such as healthcare and educational expenses for children.
 - Increased levels of **sharing agricultural knowledge** within household and community, especially among youth and children.
 - Improved feelings of psychological satisfaction and empowerment, as the project has helped locals improve their own livelihoods and food security.
 - **Decreased overall workload** for farmers, resulting in more food production with less strenuous effort.

The GIZ-DEZA activities in 2016 function as trials for adaptation innovations, primarily intended to trial a huge range of potential interventions, and identify the few that could be realistically upscaled to other parts of the country. In this context the DEZA program has been a great success, with several partners including FAO, Department of Agriculture and Department of Trade utilizing the

results in other areas. In identifying both the technical and governance challenges and barriers to specific adaptation actions, through some failed initiatives, the CCCPIR programme has been able to provide a value-added service to all climate change programmes in Vanuatu through its production of manuals, and field schools to ensure that other programmes can learn and benefit from the GIZ-DEZA trials. Some of the successful initiatives of GIZ-DEZA are now becoming standard climate adaptation responses for all communities throughout Vanuatu.

An exciting community-based mitigation measure that CCCPIR implemented in 2016 was the **Piloting Subsidized Renewable Energy Lighting Models within Rural Private Tourism Sector Bungalow Owners as a Catalyst for Sustainable Economic Development in Vanuatu** activity. Support for this activity came from the GIZ Global Program on Renewable Energy for Islands project. The initiative, undertaken in partnership with the Department of Energy and Department of Tourism successfully piloted a subsidized 'Dealer Model' for distributing renewable energy technologies to the private sector, specifically in the high tourism area of North Efate and nearby islands of Nguna, Pele and Emae. The program successfully and sustainably increased the use of renewable energy and energy efficiency lighting systems among off-grid rural tourism operators. Furthermore, the pilot supported the Government of Vanuatu's National Energy Road Map (NERM), Green Growth Policy and priorities from the Vanuatu Strategic Tourism Action Plan (VSTAP) in promoting the use of renewable energy and energy efficiency in Vanuatu's tourism sector. Successful outcomes included:

- Increased access to sustainable and affordable energy for project participants through installation of renewable energy and energy efficient lighting systems. This includes approximately **30 direct beneficiaries and 2,000 indirect beneficiaries spread over 4 islands**. Approximately 1,800 tourists per year will be affected.
- Reduced dependency on expensive imported fossil fuels, which enhanced income generation and service delivery for project participants. More than 130 liters of benzene will be saved monthly.
- Successful demonstration of subsidized renewable energy initiative for tourism sector for replication and scaling-up. Specifically, the use of **subsidized 'plug and play' systems** from private vendors in conjunction with government partners. Successful partnership with the provincial Tourism office on data sharing and participant consultations has formed a foundation for future collaborations.
- Creation of an **educational/awareness poster**, highlighting the economic and environmental benefits of renewable energy to off-grid tourism operators. Constructive input was provided from focus groups with representation from the DoE, DoT, GIZ and private bungalow operators. 200 laminated color copies were provided to the DoE for use in future projects.
- Project participants' awareness of the substantial benefits of using renewable energy was increased, as well as technical capacity in operating RE equipment.

The GIZ-DEZA & Renewable Energy programs in 2016 builds on the already extensive demonstrations and trials conducted by CCCPIR in partnership with a range of Government and non-government stakeholders including: **Coastal & Hillside Erosion Control Measures through Forestry, Soil Enhancement & Composting, Crop Diversity Trials for Climate Resilience, Adapted Farming System designs for CC Resilience, Livestock Breeding Trials for CC Resilience, Integrated Agriculture & Livestock Systems, Community Gardening for Food Security, Water Saving Drip Irrigation,**

Tourism Sponsorship for Adaptation, Coral Mariculture, Crown of Thorns Starfish Composting, Marine Resource Management, Solar Fruit Drying and Food Preservation, Steam Cooking Systems, Silage Livestock Feed technologies, Citrus Grafting technologies, Fish Aggregating Devices, Banana and Yam multiplication technologies, Composting Toilet technology, Tilapia Backyard Urban Food Security, Honey Bee Husbandry enhancement, and Livestock Biogas technologies.

A **short film** on DEZA adaptation activities was produced in 2016, which has been used by other programmes and communities to guide their strategic adaptation planning: <https://www.film4climate.net/fbapps/profiletab/?eid=1985045> and <https://www.youtube.com/watch?v=ABFHqloT3UU> other films by CCCPIR Vanuatu are also available online at <https://www.youtube.com/channel/UCK4y8N7yPwqwHJFiY61prqA>

A **poster** was developed in 2016 to support the uptake of renewable energies and solar technology among rural tourism operators: <http://www.nab.vu/document/poster-tourism-renewable-energy>

Sample of CCCPIR 2016 Media Coverage:

- http://dailypost.vu/news/first-vanuatu-climate-finance-forum/article_8135b0a0-0ee2-59a8-b0b1-4514c2b1a8f5.html
- http://dailypost.vu/news/training-on-climate-change-loss-and-damage/article_d533d468-7684-5e1c-988c-f26c6b6c4c67.html
- <http://reliefweb.int/report/vanuatu/vanuatu-farmers-get-ready-la-ni>
- <http://reliefweb.int/report/vanuatu/vanuatu-el-nino-drought-preparations-underway-nguna-pele-and-ema>
- <http://www.srf.ch/sendungen/kontext/vulkane-erdbeben-und-wirbelstuerme-der-klimaschwerpunkt-2-3>
- <https://www.giz.de/en/html/41741.html>
- <http://pacific.scoop.co.nz/2016/10/eu-giz-partnership-to-benefit-island-communities/>
- http://dailypost.vu/news/tourism-renewable-energy-climate-change-project-success-in-vanuatu/article_c435782c-3baa-51c4-a87b-97e4142e1fba.html
- <http://www.rural21.com/english/from-our-partners/detail/article/using-smartphones-to-combat-climate-change-00002187>

Activity	Date	Description	Beneficiaries
DEZA II Governance Training	20/1/16	Train Chiefs and community leaders from Nguna, Pele & Emao on GIZ governance arrangements and project objectives	48 males, 13 females
Crops & Chickens Training	15-20/2/16	Technical trainings on drought resilient agriculture & livestock approaches on Nguna, Pele and Emao Islands	184 males, 114 females
Agriculture Risk Assessment	7-11/3/2016	Vulnerability assessment with Dept of Agriculture and SHEFA province to	200 males, 175 females

		determine community adaptation options	
Marine Monitoring Training	9-11/5/16, 23-24/8/16, 29-30/8/16	Community-based resource assessment training for stakeholders from Nguna-Pele & TasiVanua Networks in partnership with SPC RESCCUE program	141 males, 117 females
Climate Risk Training with Farmers	13-17/6/16	Farmer practical trainings with DARD, DoL, Dept of Cooperatives and SHEFA on	306 males, 251 females
Farming Cooperatives Training	4/7/16	Training on establishment of farmer cooperatives in North Efate	45 males, 68 females
Backyard Gardening Training	11-16/7/16	Establishment, Maintenance, Harvest and Marketing Training for DEZA II stakeholders on Emao, Pele and Nguna Islands	220 males, 192 females
Backyard Poultry Training	1-6/8/16	Establishment, Maintenance, Harvest and Marketing Training for DEZA II stakeholders on Emao, Pele and Nguna Islands	315 males, 208 females
Solar & Tourism Training	15-21/8/16	For 29 bungalow and rural tourism businesses and communities on the islands of Efate, Emao, Pele, Nguna and Emae	390 males, 422 females
Farming Cooperative Training	17-21/10/16	Training by Dept of Cooperatives and CCCPIR on farming cooperative establishment and maintenance in food security context	480 males, 321 females
Agri-Tourism Island Training	11-12/11/16	Training for Nguna, Pele and Emao tourism operators on sustainable and resilient agricultural production	94 males, 77 females
Poultry and Livestock Training	14-18/11/16	Training on poultry husbandry and climate change adaptation strategies with Dept. of Livestock	284 males, 320 females
Community Resource Monitoring Toolkit Training	5-9/12/16	Evaluation of marine resource monitoring toolkit and validation	35 males, 7 females
Climate Adaptation and Solar Dryer Training for Peace Corps	13-14/12/16	Training for peace corps volunteers and counterparts on solar dryer construction and food drying techniques	27 males, 23 females
DEZA II Food Security Festival	12-15/12/16	Festival to showcase crops and livestock outcomes from the DEZA II program on Emao, Pele and Nguna	520 males, 460 females

Education

CCCPIR has focused heavily in 2016 on supporting the Government, including the Department of Education and the Curriculum Development Unit, **to train teachers on how to teach the climate change elements of K-13 new Vanuatu Curriculum**. Workshops were held by the CDU with CCCPIR technical and financial support in the provinces of Malampa, Torba, Sanma and Tafea to teach principals and provincial education officers on the new curriculum as well as specially developed climate change teaching resources which CCCPIR developed including the **Learning About Climate Change the Pacific Island Way** poster training, the **Pou & Miri Climate Change Books** and the **Cloud Nasara** animation on ENSO and training package.

CCCPIR worked closely in 2016 with the Ministry of Education, the Vanuatu Qualification Authority and its local experts, the Vanuatu Institute of Technology (VIT) and the EU PaCTVET programme, to finalize the region's first accredited **Certificate I Course on Climate Change & Disaster Risk Reduction**. Designed for men and women in rural areas who have a passion to help their communities adapt to climate change and reduce the impacts of disasters, the six-month course contains eleven units that impacts knowledge about climatic changes and disasters that have affected Vanuatu in the past and at present, and are likely to affect the nation in the future. The course covers activities available to reduce the impacts of climate change and natural hazards, both as individuals and in local communities, and to adapt to these changes in the future. Highly practical, course students will upgrade skills in interpreting and drawing maps and graphs and in processing statistical information, as well as demonstrate a number of adaptation measures to others and how to assess a community's level of risk to hazards and climate change.

V. Monitoring and Evaluation

From 2011-2016, the CCCPIR expanded geographically (from initially 3 to 12 PICs), received additional co-financings from EU (EU-GIZ ACSE) and USAID (for activities undertaken in Choiseul, Solomon Islands), and furthermore took over the EU-GCCA activities in Timor-Leste. In 2012 – GIZ Head Office introduced the result matrix to all programmes, which allows a more simplified monitoring and is recommended to apply instead of less results oriented logical frameworks. Results-based monitoring at GIZ is a management instrument for steering and accounting for complex projects and forms the basis for objectives-oriented project management and efficient use of resources. Results matrices examine the processes and intermediate steps and monitors the project throughout its entire duration.

Thus, CCCPIR's monitoring & evaluation processes consist of ongoing technical staff contribution to excel-based spreadsheets (staff update forms) detailing activities completed as well as planned that align with each component and its objectives. Current CCCPIR M&E processes include Results-based management programme framework matrix (including results matrix), Plans of Operation, & Team and steering committee meetings. Reporting is done annually national governments and steering structures as well as ongoing communications to SPC and divisional annual reports, Progress reports

to BMZ, GOM, EU, USAID, etc. and Staff update forms. Lessons and updates are available regularly through, press releases and articles, specific communication products (e.g. briefs, documentation of best practices), updating programme information on various websites (national websites, SPC, Pacific Climate Change Portal), and documents produced (e.g. policies, plans, legislation, workshop reports)

VI. Lessons Learnt

Many of the Lessons Learned by the CCCPIR program have been up-taken by other partners in the non-government sector and rolled out throughout the islands of Vanuatu. The CCCPIR program is well known as an innovator of adaptation technologies, sitting at the cutting edge of new approaches and techniques which become common practice once trialed and tested with the support of GIZ.

Below is a summary of some of the key CCCPIR-generated lessons learned, in addition to those contained within the dozens of manuals, guidebooks and DVDs already highlighted in this report

Ministry of Agriculture Risk & Resilience Initiatives

- **Perception of Role of RRU:** It is not merely awareness programs on CC/DRR and Food Security that needs to be undertaken but also a campaign to ensure sector partners and GoV better understand the role of the RRU and the need to provide RRU with appropriate resources.
- **RRU Operations & Salary Budget:** Although the new RRU structure and Job Descriptions have been approved, without a proper operations and staffing budget, the Unit's sustainability is at risk.
- **Human Resource Capacity & Skills Loss:** The RRU has been fortunate enough to secure three talented staff through short term contracts. Their knowledge and skills may be lost if budget is not available for their continuation.
- **RRU Office Procedures:** Although much has been done to improve the professional operations of the RRU (filing system, legal contracts with TORs, weekly Team Meetings with Actions Arising to track work done, Weekly Reports against contract deliverables), many HR procedures are not in place such as Time Sheets, tracking of leave, Performance Management Review).
- **Provincial Delivery:** With the revised Decentralisation Act and the very strong focus of the current Government on provincial delivery, the RRU's Implementation Plan/Business Plan for 2017 envisages a raft of advocacy, awareness and capacity building activities in all six provinces. However, provincial workshops/training is logistically challenging and expensive. The RRU will need to work closely with donors to identify jointly funded options.
- **Implementation Plan/Business Plan (2016 – 2018):** Although an achievement, the Implementation Plan/Business Plan also represents a risk as ambitious targets/activities are planned for 2017 and if staff or budget is not available, the plan is at risk. In addition, the GoV budget Cycle does not see budget ceilings confirmed until the First Parliamentary sitting in period February to April.

Community Food Security Programs

The GIZ-DEZA II program's many achievements should be built upon by strengthening the following areas:

- **Increase the number and variety of seeds** provided to vulnerable communities in disaster recovery projects. Endline results showcase a significant increase in vegetables being both planted and consumed, leading participants to recommend increasing the amount of support provided. The DEZA II program enabled farmers to access 1 packet of each of 8 varieties of vegetables. It is recommended that at least 3-5 packets of each type of vegetable should be made available to recovering communities.
- **Local cooperatives** enable greater sustainability by providing a coordination and support mechanism that lasts beyond a normal rehabilitation project duration. In order to establish cooperatives in-depth technical training should include 1) Supply-chain management, specifically how to reduce transportation costs 2) Marketing strategies, including assistance to identify potential new markets and 3) Collective bargaining, focusing on how local coops can improve their negotiating power with feed suppliers by acting as a unified group.
- **Recruit local community members** for technical staff positions, ideally providing full-time support in their community. This would benefit project sustainability by providing additional income for local community members as well as providing continuous on-site technical assistance.
- Include **income generating activities** as part of food security interventions. This will ensure that farmers are able to purchase future seeds and materials needed for maintenance or upscaling.
- Incorporate **water-saving interventions** into backyard vegetable gardens and poultry farms, possibly including the provision of small rain catchment tanks, ground water bores or other measures. Other interventions could include further technical assistance related to utilizing grey water, reducing water consumption and improving efficiency
- Keep vegetable gardens within close proximity of project participants' homes, ensuring accessibility for other members of the household and community to benefit from their presence. This includes not only direct beneficiaries consuming new vegetables, but also those receiving new knowledge and training
- The development of a locally sustainable, **nutrient-rich feed mix** should be prioritized. The Department of Livestock is currently exploring the use of mini-feed mills in 2017 to empower farmers to produce their own local feed mix.

Tourism and Renewable Energy Initiatives

These recommendations are intended to feed into the development of a bankable funding proposal for upscaling of renewable energy and energy efficiency access among private tourism operators throughout Vanuatu.

- **Scale up** with new initiatives to research, analyze, and develop business models for increasing access to renewable energy and energy efficient models for small-scale tourism operators. Ideally, these initiatives would encourage profits to be reinvested into renewable energy over the long term. These may include:
 - Introduction of a renewable energy "fee" on the top of advertised room rates to help offset the high costs of solar lighting equipment.

- Introduction of a fossil fuel “fee” to be levied on overnight guests that require use of a generator, helping offset the high costs of benzene as well as discouraging future use.
 - Using a similar business model as under this GIZ pilot, whereby tourism operators outside of the main concession areas that meet particular standards become eligible for 50-60% subsidized RE lighting, charging and fan systems.
 - Provide private bungalows with access to “community-owned” solar lighting equipment, allowing operators to “pay as they go” based on demand whilst lowering costs per bungalow.
 - Construction of “mini-grids” within densely populated areas, using more robust and technically complicated solar lighting systems. This would move away from the piloted model of “plug and play” systems being provided to individual operators, and likely cut overall costs.
- **Focus on the accessibility** and affordability of renewable energy and energy efficient lighting systems. Most project participants demonstrated the ability to afford the subsidized price of the solar lighting equipment. However, past a price point of approximately 14,000vt (€ 115), the equipment quickly became unaffordable. This was a strong reason why the energy subsidy was increased from 50% (as under VREP) to 60%. This challenge was evident during installations on the islands of Nguna and Pele when a handful of operators, even with nearly a month of advance notice and regular followup, were unable meet the remaining 40% balance due. The larger challenge communicated by operators was the inaccessibility of such equipment. Specifically, operators stated that similar solar lighting equipment as provided under the pilot is only available at small number of stores in the capital city of Port Vila. Given the high cost of transport from nearby outer islands to Efate (up to 3,000vt / € 25 round trip), it can be a substantial financial burden. Improved outreach on outer islands by private vendors and government partners could help improve access to such technologies. Additionally, increased awareness of energy subsidies available to tourism operators outside of Vanuatu’s main concession areas, such as under this GIZ pilot, would help lower barriers to access.
 - **Increase visibility** of small-scale operators with improved marketing / branding, ideally with support and facilitation from provincial Tourism offices. Introduction of an “eco-accreditation” may be an effective way to increase interest of guests and support for operators. This could be facilitated by the DoE during the DoT’s annual operator permitting process. International trends¹³ in tourism indicate a majority of tourists prefer “eco-friendly” accommodations and activities, impacting their choice of service providers. Increasing the average number of customers would allow for revenue growth, leading to increased accessibility and affordability of renewable energy and energy efficient systems. As communicated by the majority of project participants, their largest business challenge is the small number and infrequency of customers. Citing difficulty to properly plan and budget for groups due to the last-minute nature of bookings, many participants are left with higher costs as food and supplies are often collected in Port Vila, a trip that can be prohibitively expensive.
 - **Maintain solar price subsidies between 50% - 60%**, as project participants responded very positively to this range. Given the previously discussed price point of 14,000vt (€ 115) per unit, staying within this subsidy range will ensure a greater number of future beneficiaries. Additionally, project participants under both VREP and the GIZ-support pilot projects have demonstrated the ability to pay the remaining balance due on solar lighting equipment. As solar panel technology continues to become cheaper and more of the world’s electricity comes from

solar, the need for energy subsidies will likely decline in the near future, lessening the reliance on donor inputs.

Climate Finance Support

- **Access and modalities:** Multiple modalities of access to climate finance should be endorsed, including support to Government to achieve accreditation to receive direct access; as well as consideration of other accredited entities and modalities from development partners, civil society and the private sector
- **Capacity building** (blending, mapping, matching): There is strong existing capacity within Government, Civil Society and Private Sector to expand access to climate finance. These climate finance capacities are to be mapped out, gaps identified and upskilling prioritized for all stakeholders
- **Prioritisation** (ranking): Finance flows must be prioritized and justified based on real vulnerabilities and transparent assessment frameworks; with a high priority placed on investments in women, youth and people with disabilities
- **Awareness** (including knowledge and information management): Knowledge and information on climate finance sources, modalities and access requirements must be summarized and communicated simply and appropriately
- **Coordination** (inclusion): Existing Climate Finance advisory and working groups must be strengthened including additional participation from high-level Government, CSO/NGO, private sector and development partner representation; The roles of key Government climate finance institutions (including the NAB, the Ministry of Finance, the Prime Minister's Office and the Ministry of Foreign Affairs) should be clarified and strengthened
- **Project management** (including PFM and monitoring and evaluation): Public finance management must be strengthened including adequate and effective human resourcing; Climate Finance M&E systems are to be improved to include robust frameworks to track climate finance access by all stakeholders, including an evaluation of the quality, impact and targeted-nature of finance flows

Program Challenges

Not all lessons derived from successful outcomes. As expected there were a ranged of challenges faced during the implementation of CCCPIR Programs in 2016.

- The CCCPIR Program has strongly supported reforms of climate change governance in Vanuatu. Some of these reforms have met with resistance, particularly by units within the Ministry of Climate Change that did not benefit from more transparent and open systems of governance. Institutional change has been difficult to navigate, although the benefits to stakeholders, especially the non-government sector and civil society has been immense. Steering Committee meetings have often been tense or not attended by some MCC colleagues.
- Convincing some individuals to participate in climate change adaptation in lieu of or in addition to work spent on individual farms and other livelihood activities has always been a challenge at the community level. Increasing integration into the market economy has long been eroding traditional practices around agriculture and food security. In the past, every

community would always work together to develop a disaster garden which would provide the necessary social safety net to support those in need. The communal gardening practice has slowly been dying out as individuals focus more on their own plots and more on economically viable non-food crops like high-value spices. The traditional chiefs played an important role in reminding communities of past practices in which communal gardening was essential to the social fabric of village life and provided a traditional mechanism for disaster food security.

- While each community in the GIZ community sites has received support during adaptation and mitigation programming, there have been challenges to ensure that all members of the community have access and share benefits. The CCCPIR program worked with the Nguna-Pele Council of Chiefs and SHEFA Province to resolve issues around equity, access and benefit sharing.
- Institutional challenges have been ongoing in regards to CC/DRR program development and implementation in Vanuatu. The CCCPIR program supported the Government of Vanuatu to establish a National Advisory Board on Climate Change & Disaster Risk Reduction. Unfortunately, many of the CC/DRR programs and projects operating in Vanuatu continue to bypass this system of coordination. For example, UNFCCC activities including attendance at international meetings are often delegated bilaterally by DGs, Directors, Managers without open and transparent communication with the members of the NAB. Results from the programs are not shared locally, and capacity is rarely transferred. As an agent of reform and transparency for the NAB, the CCCPIR program and its staff were often excluded from business-as-usual decision-making processes within some units.
- Monitoring & Evaluation of specific interventions has been ad hoc, while applying the high level results matrix framework to overall program goals and objectives. It is recommended to refine the CCCPIR M&E frameworks as the extended CCCPIR program is rolled out in 2017.

VII. Budget spent (in Vatu)

Items	1 st Year 2009	2 nd Year 2010	3 rd Year 2011	4 th Year 2012	5 th Year 2013	6 th Year 2014	7 th Year 2015*	8 th Year 2016	Total
Equipment		4,400,000	1,400,000	5,493,906	1,324,413	1,797,500	1,000,000	3,476,280	18,892,099
Trainings/Workshops	1,400,000	2,750,000	4,290,000	9,496,739	8,304,410	3,587,000	1,000,000	4,674,500	35,502,649
Technical Expertise	3,900,000	31,000,000	28,900,000	29,988,500	37,748,000	16,266,500	14,700,000	23,840,000	186,343,000
Pilot Site Activities		2,850,000	4,500,000	7,213,119	9,287,874	1,499,000	1,000,000	12,435,655	38,785,648
Total	5,300,000	41,000,000	39,090,000	52,192,264	56,664,697	23,150,000	17,700,000	44,426,435	279,523,396

As outlined in the GIZ-Vanuatu MOU, the German Government through CCCPIR provides Technical Assistance in different forms to the project (long term and short term expertise, equipment, training, financial support for community-based pilot projects etc.). The equivalent amount to provide these services since 2009 can be estimated at up to 279,523,396 Vatu. In 2016, the total expenditures derived from CCCPIR core funding from the German Ministry of Economic Cooperation (BMZ) of ~197,000 Euros and a co-financing arrangement with the Swiss Development Cooperation Agency (SDC) of ~180,000 Euros. The financing for the other GIZ programs (e.g. MACBIO, REDD+ and ACSE) are not included here, as they are reported via separate channels.

Note* The 2015 estimation does not include the over EUR 400,000 spent on Cyclone Pam related response and recovery (tools, materials, food aid, transportation) with funds from the German Embassy and the Swiss Government.

VIII. Acknowledgement

CCCPIR Vanuatu would like to acknowledge the commitment of the Government of Vanuatu in enabling and raising the profile of climate change adaptation to become a leader in the Pacific and among developing countries. In addition, CCCPIR gratefully recognises the contributions of partners from government agencies, regional institutions, non-governmental organisations, civil society groups, and local communities for providing their invaluable expertise, time, and agency resources. Special recognition is due to the climate change champions from within Government, in non-government organizations and at the community level, who have truly made adaptation the most important development issue in Vanuatu today. CCCPIR thanks the nation of Vanuatu, the Pacific Community and their wonderful people for their hospitality and genuine partnership with the German Government in 2016.

ⁱ *The World Risk Report 2016* was published by Alliance Development Works (Bündnis Entwicklung Hilft) in collaboration with the UN University Institute for Environment and Human Security (UNU-EHS) and utilizes The World Risk Index, calculated by the University of Stuttgart.

ⁱⁱ Mainstreaming climate change and disaster risk reduction into sector policies, plans and strategies has been supported by the SPC/GIZ Coping with Climate Change in the Pacific Islands programme.

ⁱⁱⁱ The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity (MALFFB), established the Risk and Resilience Unit under its corporate structure with 6 full time officers supported by SPC/GIZ and UNDP. The role of this unit is to liaise with the NAB and further strengthen climate change adaptation and risk reduction among its line departments through to the grass roots level, including coordinating the food security cluster's responsibilities in response to disasters.

¹³ TripAdvisor. 2012. "TripAdvisor Survey Reveals Travelers Growing Greener." press release. April 19, 2012. <http://www.multivu.com/mnr/49260-tripadvisor-eco-friendly-travel-survey-voluntourism-go-green>