Increasing Resilience to Climate Change and Natural Hazards (IRCCNH) Project 2013-2018

Funded by GEF, GFDRR and EU through the World Bank

And implemented by the Government of the Republic of Vanuatu

Abbreviations

A-M	Aide Memoire
CCDRR	Climate Change and Disaster Risk Reduction
CDC	Community Disaster Committee
CSO	Civil Society Organization
DARD	Department of Agriculture and Rural Development
DLA	Department of Local Authorities
DoCC	Department of Climate Change
DoWR	Department of Water Resources
DSPPAC	Department of Strategic Policy Planning and Aid Coordination
ESMF	Environmental Social Management Framework
EU	European Union
EWS	Early Warning systems
FCPF	Forest Carbon Partnership Facility
FM	Financial Management
FSB	Financial Services Bureau
GCCA	Global Climate Change Alliance
GCF	Green Climate Fund
GEF	Global Environment Facility
GFDRR	Global Facility for Disaster Risk Reduction
GFS	Gravity Fed Water Systems
GoV	Government of the Republic of Vanuatu
IFR	Internal Financial Review
IRCCNH	Increasing Resilience to Climate Change and Natural Hazards
LPO	Local Purchase Order
MDRR	Mainstreaming Disaster Risk Reduction
MoCCA	Ministry of Climate Change, Meteorology and geo-hazards, Environment, Energy and Disaster Management
MPC (s)	Multi- Purpose Center (s)
MTR	Mid Term Review
NAB	National Advisory Board on climate Change and Disaster Risk Reduction

NDC	National Disaster Committee
NDMO	National Disaster Management Office
NGOs	Non-Government Organization
NOL	No Objections Letter
OGCIO	Office of the Government Chief Information Office
PDN	Pacific Disaster Net
PDC	Provincial Disaster Center
PDO	Provincial Disaster Officer
PE	Programme Estimate
PMO	Prime Minister's Office
PMU	Project Management Unit
RSDP	Regional Sustainable Development Plan
SIDS	Small Island Developing States
SPC	Secretariat of the Pacific Community
TA(s)	Technical Advisor (s)
TC	Tropical Cyclone
UNDP	United Nations Development Programme
VARTC	Vanuatu Agriculture Research Technical Center
VMC	Vatu Mauri Consortium
VMGD	Vanuatu Meteorology and Geo-Hazards Department
WB	World Bank

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Project Information

Project ID	P112611
Project Name	Increasing Resilience to Climate Change and Natural Hazards
Executing Organisation	World Bank Group
Donors	Global Environment Facility (GEF), Global Fund for Disaster Risk Reduction (GFDRR) and European Union (EU)
Original Grant Amount: US$ 2.73m **Revised Amount: US$ 2.73m**	**Total Confirmed Funding: US$ 11.520m** **Disbursed Amount: US$ 2.38m**
Executing Organization	The Ministry of Climate Change as umbrella body and initially through Vanuatu Meteorology and Geo-Hazards Department (VMGD) and later shifted to Department of Climate Change (DoCC) on September 2018
Project Management Site and Relevant National Office	Project Management Unit (PMU), Department of Climate Change (DoCC)
Project Period and Overall Duration	December 2012 – June 2019
Geographical Coverage	Tanna, Tongoa, Shepherds (Tongariki & Buninga), Efate, Emau, Epi, Ambae, Ambrym, Santo, Malo, Malekula, Ambae, Maewo, Lopevi and Vanualava in the Banks group and more widely through all the six provinces after devastating TC Pam in 2015
Project Beneficiaries	National government institutions and workers, provincial government workers, Vatu Mauri Consortium (VMC), Farmers on the islands mentioned, IsraAID, and community people on selected villages of Tanna, Tongoa, Shepherds and Ambrym islands.
Multi-lateral Partners	The World Bank Group
National Project Stakeholders	Vanuatu Meteorology and Geo-Hazards Department (VMGD), National Disaster Management Office (NDMO), Department of Agriculture and Rural Development (DARD), Vanuatu Agriculture Research Technical Center (VARTC), Department of Local Authorities (DLA),

	Department of Geology, Mines and Water Resources (DGMWR), The World Bank Group (WBG), Department of Climate Change (DoCC), Ministry of Climate Change (MoCC), The National Advisory Board (NAB) for Climate Change & Disaster Risk Reduction.
Provincial Project Stakeholders	Tafea Provincial Government (TPG), Shefa Provincial Government (SPG) and Torba Provincial Government (ToPG)
Area Council Stakeholders	Tanna: Northeast Tanna, Southeast Tanna, Southwest Tanna, Central Tanna and West Tanna. Shepherds: Buninga and Tongariki islands Tongoa: Lupalea, Pele, Mangarisu, Purau, Kurumambe, Matangi/Itakoma, Woraviu. Banks Group: Sola- Vanua Lava and Gaua islands
Reporting Period:	December 2012 – June 2019
Date of Submission:	Draft 29 June 2019

Background Information *(adapted from the PAD)*

Vanuatu, with a population of 260,000, comprises about 80 islands with a total land area of 12,336 sq. km spread over 1,300 km from north to south in the Western Pacific Ocean. Geographically it is located in the "ring of fire" and at the center of the Pacific "cyclone belt". This results in a relatively high frequency of volcanic eruptions, cyclones, earthquakes, tsunamis, storm surges, coastal and river flooding and landslides. For example, in 1987 – 88 three cyclones resulted in 50 deaths and over US$152 million in property damage, cyclone Dani in 1999 caused over $8 million in damage to heavy infrastructure and cocoa exports declined by 50% in 2004 as a result of damages caused by cyclone Ivy that year. More recently in 2015, the country suffered from devastating category 5 Tropical cyclone Pam in 2015 which badly affected the central and southern islands of the group. Tropical cyclone Pam resulted in eleven (11) deaths caused major damages to infrastructure, food and security, water and livelihoods valued at USD$ 300 million. In addition, the country suffers from extreme events associated with ENSO-related climate variability, including sea level rise, temperature extremes, and droughts. The most recent ENSO event was a long drought from year 2015 to 2016 that resulted in water shortage in the central and southern islands badly affecting the food security sector causing food shortage, water shortages and loss of livestock and livelihood initiatives related to the productive sector.

These characteristics, together with limited financial and technical capacity, mean that Vanuatu is the world's most vulnerable country, based on the ranking of 111 countries using the Commonwealth Vulnerability Index. The economic base is narrow, with some 65% of GDP coming from small-scale agriculture. Around 80% of the population is rural and dependent on agriculture, where productivity is relatively low. In 2010

Vanuatu's exports were worth $191 million and included copra, timber, beef, cocoa and kava root extract. Vanuatu's imports were worth USD$465.8 million and included machines, transport equipment, food, live animals and mineral fuels.

Climate variability and change are likely to impact all sectors, but especially agriculture, water, coastal and marine resources, infrastructure and tourism while the effects of climate variability are already being felt. Stock-taking exercises undertaken in support of preparing Vanuatu's National Adaptation Program of Action (NAPA) and a GFDRR/CCA assessment identified numerous on-the-ground activities which simultaneously address the country's immediate adaptation needs and while also tackling risks posed by natural disasters. Given the country's limited capacity for implementation, it was realistic to target only a few of these priorities for implementation under this adaptation project. Thus the project supported three of these priorities.

Vanuatu is already experiencing the consequences of climate variability and change, including sea level rise, increased intensity of extreme events, and changes to agricultural productivity and water availability. Such impacts are likely to increase in the future. Based on the A1F1 high emissions scenario (CLIMsystems 2011) some of the more significant changes suggested for Vanuatu by 2050 will be:

- A 1.6 to 2.2°C increase in the average maximum temperature for January through March, relative to the long term normal;
- The current most extreme temperature of 33.4°C averaged over 3 consecutive days now occurs once in every 39 years; it will occur every 2 years;
- Dry season rainfall is likely to increase in the northern half of the country, and decrease in the southern half, but in each case by only a few per cent; however, wet season rainfall is likely to increase across the entire country, by at least 10%;
- The current highest 3-day total precipitation is 716 mm, occurring once every 168 years; by 2050 the return period will have shortened to around 70 years;
- A 10% decrease in the annual rainfall is associated with a 1:20 year drought event increasing from 19 days to 35 days, while a 1:150-year drought event (24.7 days without rain) becomes a 1:5-year event;
- Relative sea-level rise will increase from the current value of 5.5mm/yr., to 49.7 and 124.2mm/yr. in 2050 and 2100, respectively; thus projected overall sea level rise by 2050 is 49.9mm and 124.5mm by 2100 (excluding vertical land movement);
- Ocean acidification will likely cause the aragonite saturation rate in the ocean surrounding Vanuatu to be around half its optimal level; when combined with increased coral bleaching, this will impact the growth rate of coral reefs and coastal sedimentation/erosion dynamics, contributing to increased coastal erosion.

Agriculture in Vanuatu is entirely rain-fed and is therefore susceptible to changes in rainfall patterns. Intense and prolonged rainfall damages seedlings and causes greater run-off and soil erosion. Higher temperatures cause crop heat stress, wilting and increased incidence of pests

and diseases, often resulting in crop failure. Drought combined with higher temperatures stresses seedlings as well as more mature crops. These climate-related stresses could exacerbate the already declining land productivity due to decreased fallow periods.

Communities in Vanuatu are already experiencing reduced crop yields as a result of warmer temperatures and increased rainfall. With warmer temperatures farmers are forced to work only in the early morning and late afternoon. In drought periods fires can spread rapidly beyond garden boundaries, exposing bare soil to heavy rainfall in the following wet season. Sheet erosion removes the shallow layer of fertile soil, exposing more erodible subsoil. As the eroded areas are not suitable for agriculture, farmers are forced to cultivate less desirable land. Yields decline even further, putting greater pressure on the garden rotations. This vicious cycle results in considerable soil erosion in the longer term, reducing crop productivity.

Coastal communities are already being impacted by salt water intruding into ground-water supplies, by coastal erosion and by changes in rainfall patterns. Some communities have already been forced to abandon their villages and relocate elsewhere. Since these changes will likely accelerate, it is becoming increasingly difficult to ensure the security of both water and food supplies. The increased intensity and frequency of cyclones, and coastal erosion, are placing coastal infrastructure at increasing risk. Coastal erosion is now severe in many of the islands throughout the country, and will only worsen with the anticipated rise in sea level as well as with an increase in storm intensity. The most vulnerable areas are the low-lying islands and those that lack the natural protection of coral reefs and mangrove forests.

Water resources are already under stress from growing demand and inefficiencies in use. They will be further affected by changes in temperature and precipitation as well as by sea-level rise, coastal storms and salt water intrusion. Since wet season rainfall provides the majority of water supplies to the smaller islands on Vanuatu, floods and droughts have particularly devastating impacts on both food and water security. Droughts are especially damaging in the more remote islands that lack sufficient rainwater harvesting and storage capacity to withstand dry periods, as is the case with most of the southern islands.

Projected increases in sea surface temperatures, combined with increased ocean acidification, are a particular concern. In addition to exacerbating coastal erosion, these changes will disrupt the marine food chain, thus threatening parts of the marine food supply, and hence impacting livelihoods, especially for those living in coastal communities.

Key stakeholders in Vanuatu have a high level of awareness of recent and anticipated variations and changes in the climate. Vanuatu is the only Pacific Island Country to have completed both a NAPA and a National Action Plan (NAP) for Disaster Risk Reduction. Together these identify the country's immediate priorities for managing climate-related risks.

Vanuatu already has a strong enabling environment for undertaking disaster risk management and adaptation initiatives, though it could be further strengthened. The Priorities and Action Agenda (PAA) (2006-15) was revised in late 2011, including the addition of a section on managing climate change and disaster risks. The Land Sector Framework (2009-2018) includes strategies and activities directly or indirectly relevant to adaptation. The recently revised National Forest Policy includes extensive directives on climate change mitigation and adaptation.

A National Land Use Planning Policy is currently under development. Only in the last five years has compulsory acquisition been considered as a way for government to obtain land for its development initiatives. Physical planning is undertaken for government land in urban areas, but there is no mechanism to control land use on customary land, except through the environmental impact assessment (EIA) process. EIAs apply to all development, with exemptions for single residential/traditional homes that are not in ecologically sensitive areas (e.g. near creeks or the coast). The Ministry of Works grants permits for foreshore development. It is important that this permitting process be linked to the Environmental Management and Conservation Act provisions, especially the EIA requirements. A review of the Public Works Policy will include ensuring that climate change considerations are included in the Policy. This has already been achieved for the Department of Public Works annual work programme and for its corporate plan.

All inshore marine resources are under customary ownership. However, the Fisheries Regulations of 2009 control size limits, harvesting seasons, fishing gear requirements and other considerations such as exporting regulations. The regulations also establish marine reserves and fishing licenses. An integrated coastal zone management framework for Vanuatu is now under development and is at the final draft stage. The framework should be approved by mid-2012. An aquaculture development plan is currently under preparation. An aquaculture association has also been formed.

Recently the Government of Vanuatu has recognized that a closer integration of climate change adaptation and disaster risk reduction is essential. It has decided to combine the National Advisory Committee on Climate Change (NACCC) and the National Task Force for Disaster Risk Reduction and Disaster Management into one joint committee for disaster risk management and climate change adaptation, called the National Advisory Board for Disaster Risk Management and Climate Change (NAB). NAB is to be supported by a secretariat/project management unit located in the Vanuatu Meteorological and Geo-Hazards Department (VMGD). Government will provide some funding for the secretariat, with the remainder being sourced through projects.

Project Development Objective

The project development objective is to *increase the resilience of communities in Vanuatu to the impacts of climate variability and change, and geological hazards, on food and water security, as well as livelihoods*. The main project outcomes would be:

(a) institutional strengthening of the NAB-Secretariat/PMU to support the policy and planning functions of the NAB, while also building oversight and management capabilities for climate adaptation and disaster management projects/programs;

(b) Enhanced access/uptake by farmers of improved technologies and plant material providing for more sustainable and climate resilient agricultural production;

(c) Increased fresh water availability for rural communities through greater rainwater harvesting and storage capacity; and

(d) For at least two pilot coastal sites and two volcanic sites, increased community capacity to plan and implement disaster risk management and climate adaptation sub-projects/activities.

Project Closure Report Objectives

This Project Closure Report is the final document produced for the project and will be used by senior management of MoCCA through DoCC, VMGD and NDMO to assess the successes of the project, identify best practices for future projects, resolve all open issues, and formally close the project. This report aims to highlight the recommendations and post-project tasks that will be undertaken by the Vanuatu government through the Ministry of Climate Change to formally dispatch all assets procured under the project as well as resources incurred. This report also highlights the accomplishments of this project and discusses the outputs and outcomes and whether they have positively or negatively impacted people's lives on the islands and villages where the project intervened.

This Project Closure Report is created to accomplish the following Objectives:

- Review and validate the milestones and successes of the project through their outputs and outcomes;
- Confirm outstanding issues, risks, and recommendations;
- Outline tasks and activities required to be completed after the official closing of the project where necessary;
- Identify project highlights and best practices for future projects and;
- Outline lessons learned and recommendations for similar potential initiatives related to post project tasks.

Executive Summary

The project financing agreement was signed in December 2012 between the World Bank and the Government of the Republic of Vanuatu (GoV) followed by a World Bank (WB) mission support in early 2013 where the WB provided training on their key processes to respective government agencies such as Department of Agriculture and Rural Development (DARD), Department of Local Authorities (DLA), Vanuatu Meteorology and Geo-Hazards Department (VMGD), National Disaster Management Office (NDMO), Department of Finance and the PMU-NAB. The project as stipulated in the objective statement above, focused mainly on institutional strengthening of the government services related to climate change adaptation and disaster risk management as well as focussing on enhancing capacities related to agricultural technologies, increased access and availability of fresh water and livelihood opportunities at the local community and village levels. This is clearly reflected in the project appraisals document through component two micro-investments at local village levels. In the beginning, all components were to be co-coordinated in collaboration with key sectors and the PMU however, two years after the signing agreement, implementations were still slow due to limited capacity in each sector to procure in line with both GoV and WB procurement processes therefore the project was fully returned to the PMU in 2015 to manage and implement.

After much discussions and planning at the national level, the project was finally lifted off the ground and field implementations started in late 2014. Years 2013 and part of 2014 were spent on recruitment and establishment of proper fiduciary processes to allow for project implementations to progress. This led to the development of the project operations manual which was finalised in 2014 with support from WB and technical advisors. IRCCNH was instrumental in completing the establishment of the NAB and PMU and further supported NAB's early discussions and meetings throughout 2012 – 2014 when Vanuatu started its journey into an integration of the two critical issues of climate change and disaster risk reduction (CCDRR). This early support also paved way forward for initial discussions on CCDRR policy development. The PMU under VMGD's oversight then took lead in project implementations in collaboration with key sectors such as the DLA, DARD and DoWR in early coordination and planning of the project activities in 2013 – 2014. The project supported VMGD to procure and complete installations of seismic equipment for the seven islands of Vanuatu with active volcanoes. These volcanic activities are monitored closely on a day to day basis and overseen by the operations of the national warning center under VMGD.

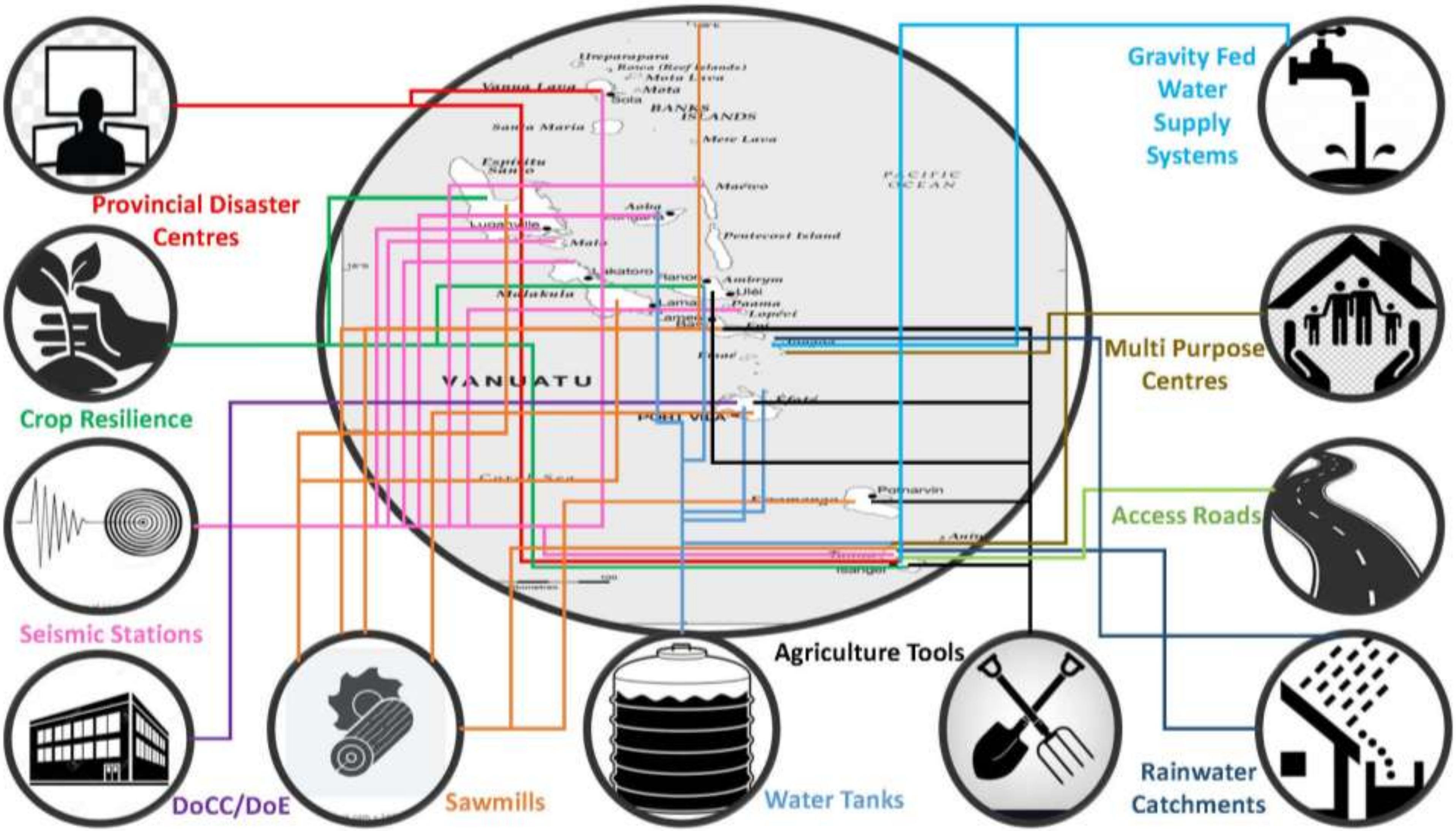
The project continued supporting the core PMU functions that were started by the EU-GCCA project in 2012 and ending on June 2014. These functions included; project manager, finance, procurement and M&E. In 2014, the project procured a total of fifteen consultants of which seven were international consultants along with a project advisor who supported the development of the Project operations manual for both

IRCCNH and MDDRR projects and assisted PMU to form the project steering committee. Most of the international consultant contracts were output based therefore produced their outputs and then left the project in not more than a year span with exception to the Procurement Advisor, Financial Advisor and M&E Advisor whose contracts were longer. PMU managed IRCCNH commencing 2013 alongside two other World Bank projects namely; Mainstreaming Disaster Risk Reduction (MDRR) Project (closed in 2016) and Forest Carbon Partnership Facility (FCPF) project still implementing in collaboration with department of Forests. The project co-funded the national warning centre and the complementary emergency operations centre at NDMO. It further built two provincial disaster centres in Tafea and Torba provinces providing space for disaster and climate change initiatives at the provincial level. The project was initially housed at the VMGD but recently moved to the newly established Department of Climate Change (DoCC) in December 2018.

After TC Pam hit Vanuatu in March 2015, the government requested for the project to support the government's emergency and recovery efforts. IRCCNH then stepped in to support WASH cluster by providing a total of twenty (20) 10,000L water tanks that were distributed to badly hit areas of Efate, Epi and Tanna islands. It further supported the food and security cluster through a provision of agricultural tools worth VT32m that were distributed through the agriculture extension networks based in all the six provinces of Vanuatu. A total of 18,000 farmers and community people received these farming tools from the Area council secretaries on the main islands of each province to support them with their agricultural recovery efforts post TC Pam. Vanuatu Agriculture Research Technical Centre (VARTC) then started by testing Sweet potato, Manioc, Taro and Yam in order to test their resilience to different climatic conditions. Taro and Yam took more time to produce results whilst manioc and kumala took six months to see the results and was able to replicate the cuttings to the islands of Tanna, Santo, Efate and Tongoa/Shepherds after TC Pam in 2015. Similarly, at this stage, the department of water resources (DoWR) procured and built thirty rain water harvesting systems on the islands of Ambae, Malo, and Epi.

The project undertook a Mid Term Review (MTR) at the end of 2015 involving both the WB and the GoV including all the implementing agencies (VMDG, DARD, DLA, DoWR, NDMO and VARTC). This review also involved important Technical Advisors (TAs) internal to the WB group and other independent technical advisors for finance, procurement, M&E and Agriculture. The MTR focussed on reviewing the project achievements and re-planning. The MTR recommended for closure of components 3 and 4 and emphasised on community engagements through the implementation of component two (2) micro-investments (water and agriculture related investments) at community and local village levels. Year 2016 started with a direction to focus on component two (2) – the micro-investments component for the local community and villages levels. A national stakeholder workshop was held to stocktake all small grants initiatives within Vanuatu. It was discovered that there is no micro-project manual which is Vanuatu owned or such documents that would indicate how to manage any small grants therefore the project started working on a micro-project manual. This document exists in draft and lies with the DLA to develop it further to ensure it is used by government and its stakeholders. Despite initial delays in getting the micro-projects off the ground and challenges faced after devastating TC Pam in 2015, the project field implementations are now 100% completed and while some micro-projects have been smoothly

handed over to the local communities, some are still waiting hand over to the provincial government and the local communities. The micro-projects components have made massive impacts to the lives of people living at the community and villages within Tanna, Tongoa, Shepherds and Ambrym. This statement was confirmed through a community beneficiary survey that was conducted in March and April 2019 for Tongoa and Tanna project intervention areas. It emphasized community involvement (and participation by provincial authorities) through buying-in into the initiatives from different partners on the ground from village level to the provincial level which is the governing body. The strategy is to promote the integration of disaster risk reduction and climate change adaptation and to build on successful pilots and programs already tested by government and other agencies however at the time of the project commencement, all government agencies were just starting to integrate climate change and disaster risk reduction into their sector plans and policies. Overall, the focus of the project mainly focussed on building resilience in rural communities to climate change, extreme weather events and geo-hazards.


Provincial Disaster Centres
Crop Resilience
Seismic Stations
DoCC/DoE
Sawmills
Water Tanks
Agriculture Tools
Rainwater Catchments
Access Roads
Multi Purpose Centres
Gravity Fed Water Supply Systems
VANUATU
PORT VILA
Pentecost Island
Ambrym
Paama
Efate
Maewo
Santa Maria
Vanua Lava
BANKS ISLANDS
PACIFIC OCEAN
Malakula
Luganville
Lakatoro
Port Resolution
Isangel
Potnarvin

PROJECT HIGHLIGHTS AND ACHIEVEMENTS

This section summarizes the project outputs, outcomes and impacts and discusses some examples of good practices relevant for institutional strengthening at the national and provincial level as well as micro- interventions at community level.

Successful operations of the National Advisory Board on Climate Change (CC) and Disaster Risk Reduction (DRR) (NAB) and its secretariat – the Project Management Unit (PMU)

NAB was launched on the same day as the signing of financing agreement for IRCCNH and MDRR projects on December 2012. IRCCNH project was instrumental in completing the establishment of the NAB and its secretariat the PMU and further supported most of NAB's early discussions and meetings throughout 2012 – 2014 as Vanuatu started its journey of integrating the two critical issues of climate change and disaster risk management. The project supported staff of PMU were heavily involved in the initial planning and mainstreaming of CC and DRR into key sector plans and policies while also advocating for NAB's national initiatives at regional and international conferences which resulted in a lot of interests attracted to Vanuatu from the international community. At the national level, key sectors managed to review sector plans and policies with the inclusion of CC and DRR into their sector plans and policies which include; Agriculture policy, Livestock policy, Area Council Strengthening policy, Public Works Department Policy, Energy Roadmap, Health Sector Strategy, Forests policy and review of NDMO and VMGD Acts. Not only did the PMU staff actively participated in the mainstreaming of CCDRR into national policies but also policies at the regional and international levels. One clear example is the development of the Regional Sustainable Development Plan (RSDP) coordinated by SPREP. Vanuatu was consulted through the PMU staff and NAB as well as other key national stakeholders relevant for drafting the RSDP. Foundational works related to the development of the national CCDRR policy was heavily coordinated by the IRCCNH project supported PMU staff from 2012 – 2014 prior to other projects taking it further until final stages and launching it in 2016. The project supported the PMU during set up stages by creating Standard Operating Procedures for the NAB and PMU and furnishing the PMU office with office operation items which are still in use today by the VMGD and DoCC. The IRCCNH project through the PMU supported over thirty NAB meetings from period 2012 - 2016 by providing secretariat services and endorsing CCDRR community related programmes and projects centred on climate change and disaster risk reduction (CC&DRR) also reflecting governance reform nationally in Vanuatu.

The Co-Chairs of the NAB Meetings – Mr. Shadrack Welegtabit former Director NDMO and Mr. Jotham Napat former DG MoCC

One of the many NAB meetings chaired by the then DG Mr. Napat held at the NEOC, NDMO

Members of the NAB, The EU Ambassador and The World Bank team leader and Government Ministers at the launching of the NAB in Port Vila

Increased capacity for Coordination of CC and DRR initiatives at the provincial government level

The project in partnership with NDMO and the provincial governments of Tafea and Torba provinces managed to erect two Provincial Disaster Centers (PDCs) on the island of Tanna in Tafea and Sola-Vanualava in Torba province. These laid essential foundations for CC&DRR coordination and support to the provincial governments and stakeholders at early stages of implementing CCDRR initiatives. The PDC on Tanna was timely in providing an office space for Port Vila based staff of the Ministry of climate change and natural disasters (MoCCA) traveling to do work on Tanna. Although the PDCs were only launched in 2016, they have been in use since mid-2015 by the provincial authorities. Most of the coordination meetings following TC Pam response and recovery in 2015 – 2017 were held in the PDC conference facility. The PDC is equipped with four office spaces, one conference facility, kitchen facility and washroom facilities and the compound provides storage space for building materials for Humanitarian activities for all sectors within government. From 2016 – 2018, the project supported NDMO to fund salaries for two Provincial Disaster Officers (PDOs) to manage the operations of the PDCs closely with the provincial governments. The government through NDMO has now adopted the PDOs into the government structure and pay roll and they have received permanent appointment letters from the Public Service Commission (PSC) for these positions. The PDC buildings are also equipped with internet connections to the OGCIO and teleconference facilities. The government through liaison with provincial governments of Sanma and

Malampa provinces have replicated this great initiative by building PDCs on Santo for Sanma province and on Malekula for Malampa province. The Sanma PDC was instrumental in providing space for disaster coordination for Manaro-Ambae volcano evacuation and while waiting repatriation of the Penama provincial office, the PDC on Sanma is temporarily used as the Penama provincial office.

The Provincial Disaster Office Building in Sola, Torba Province

The Provincial Disaster Office Building in Isangel, Tafea Province

Strengthened institutions through continuation of CCDRR related projects and programs

As mentioned above, the project's support to institutional strengthening within government includes the erection of the warning center (VMGD) and the emergency operations center (NDMO), the establishment and operations of the NAB and PMU, the installments of the seismic equipment for all seven volcanoes under the geo-hazards division within VMGD and the establishment of two PDCs in Sola and Tanna in collaboration with NDMO. As a result, all seven active volcanoes are now online whereby activities are monitored and data is obtained in real time compared to the past. This has made it easy for geo-hazards division staff to work more effectively and the department saves money spent on traveling to volcanic sites in the past to monitor and collect date related to volcanic activities. VMGD used the money saved to conduct quarterly site inspections. The project further co-funded the office of the department of climate change building along with UNDP

funded VCAP project that was launched in December 2018. The department of climate change has grown since December 2018 with a new director, a mitigation officer, an M&E officer, a community and outreach officer, an adaptation and DRR officer and a finance officer. The PMU was physically shifted to this new department in December 2018 and supported the department with their planning initiatives especially the business plans for 2019. The project staff supported the department in finalizing their business plans for 2019 and helped to ensure there was an inclusion of project activities into the business plans for 2019. This is something that is missed out most of the time due to oversight of projects within a department. The project supported staff along with the destiny to close IRCCNH supported the department which has a clear business plan that meets the requirements of the PSC with a complimentary budget for 2019.

Support to the NAB portal through regular updates of CCDRR related initiatives both nationally and regionally

The project supported staff also took leading role in administrating the NAB portal, a new and first initiative of its kind in Vanuatu and the region. The whole aim of establishing the hub was to centralize all data and information related to CCDRR and advocate for decision makers to actively use and buy-in into the initiative. The NAB portal was developed in collaboration with the SPC and Pacific Disaster Net (PDN). The NAB portal initiative triggered the formation of a Portal reference working whereby two supported project officers of MDRR and IRCCNH in 2014-2016 were active members. The NAB portal was used by the reference group as the learning hub which took forward lessons learned and challenges to trigger other initiatives and support to CCDRR to country level. A clear example is the support of SPREP and Griffith University in Australia through Iclim project supported the NAB portal to conduct barrier's study and producing the barrier's report for Vanuatu. Through the Iclim project, stock take of all data and information related to climate change and DRR was also undertaken for three countries in the region including Vanuatu. Through NAB portal three other countries; Fiji, Samoa and Tonga learned from the NAB portal to develop their portals. The reference group was made up of key officers from PDN, SPC, SPREP, GIZ, Tongan Rep, Fiji Rep and Vanuatu. Vanuatu NAB portal was the only portal out of the three that grew very fast and uploading all their CCDRR data and information online. The project supported staff were then asked to represent Vanuatu to showcase the NAB portal at the 2014 Small Island Developing States (SIDS) meeting in Samoa. The panel at that time consisted of two Vanuatu ministers; the Minister of climate change honorable Jame Bule and Minister of Foreign Affairs honorable Ralph Regenvanu which was indeed a proud moment. In such a huge meeting, the two officers (Safeguards and M&E) presented the NAB portal to an audience of around one hundred (100) people who applauded Vanuatu for such and initiative mentioning how important it could be to replicate such important initiative to other small islands learning from Vanuatu and the Pacific reference group.

Basis for CCDRR related initiatives from project proposal to evaluations of completed projects and programs

This project was the first project of its kind at the national government level integrating climate change and disaster risk reduction also strengthening key government institutions such as the NDMO and the VMGD and decentralizing the idea to the provinces of Tafea and Torba by building two provincial disaster centers and equipping them with two provincial disaster officers prior to government taking over on these roles. This project has been a learning journey for NAB, PMU and MoCCA as a whole and is a clear reflection of NAB's initiatives and plans in integrating climate change and disaster risk reduction. The government through NDMO has replicated the idea started by the project and built two other provincial disaster centers on the islands of Santo and Malekula in Sanma and Malampa provinces respectively. IRCCNH was also a learning journey for the Ministry of climate change to learn and adapt strategies for project negotiations at proposal stages for the Green Climate Fund (GCF) initiative which in the end attracted the funding to Vanuatu government.

The initiatives put in place by IRCCNH will definitely be built upon by the GCF initiative and other upcoming projects at the MoCCA. The province of Tafea and DLA showed huge interest in the baseline data and methodology in creating village profiles for all provinces of Vanuatu. The Environmental Social Management Framework (ESMF) approaches of the project has attracted other initiatives within the MoCCA such as the BRANTV project under department of Energy which is currently utilizing the Safeguards officer's expertise to develop their ESMF. The whole project funded team at the PMU have represented Vanuatu at numerous CCDRR meetings and conferences between 2012 and 2019. IRCCNH project manager has also been instrumental in negotiating for future projects and has participated in international negotiations at the Conference of the Parties (COP) conferences and related meetings which is a huge support for the GoV. The Safeguards officer and the M&E officer presented the NAB portal at the SIDs in Samoa 2014. A huge stepping stone for Vanuatu in centralizing all data and information related to climate change and disaster risk reduction which was adopted by several countries including SPREP who have advanced and completed their portal with useful information accessed by individuals of all walks of life.

Successful operations of the national warning center and corresponding emergency operations center including enhanced forecast division operations

IRCCNH project worked in collaborations with the MDRR project to establish the warning centre operated by VMGD and the complementary Emergency Operations Centre operated by NDMO both launched in 2014. Through this initiative, Vanuatu now has an internationally recognised warning centre at VMGD and emergency operations centre at NDMO operated by highly trained ni-Vanuatu nationals within the Ministry of Climate change adaptation and natural disasters. The warning centre and the emergency operations centre were instrumental through the coordination of the devastating TC Pam in 2015, the 2016-2017 droughts and more actively, the recent coordination of the Ambae-Manaro volcano in 2016 which led to a mass evacuation of people from the island. In line with this setup, IRCCNH supported the review of the NDMO and VMGD Acts in order to legalise the operations of the warning centre in such a way that the warning centre speaks

directly to the Emergency operations centre during a disaster or extreme climatic event. This indeed is a huge improvement of the operations from some ten years back and with the technology advancement accurate data obtained in real time and communicated to widely compare to the past. More specifically the project funded a meteo equipment specific to Forecast Division operations that has added great value to the monitoring of TCs and daily weather forecast information produced for specific sectors such as the aviation companies. Officers within forecast division of VMGD are being trained and capacitated to continue to advance with the operations of the special equipment.

The National Emergency Operation Center (NEOC) at the NDMO Office

The National Warning Center at the VMGD Office

Creation of pathway for micro-projects planning and implementations at the provincial level for local villages and community benefits

The project drafted a micro-projects manual relevant for implementing micro-projects at the community and village levels which DLA intends to further develop for use at the area council level. The process began with a national stakeholder workshop to learn from initiatives being implemented by other stakeholders. The workshop discovered that this was the first project of its kind integrating climate change and disaster risks which meant that a manual outlining step by step implementations needed to be produced. Further to stakeholder consultations, the project needed to develop a site selection process to enable authorities and the NAB to select sites for IRCCNH as well as other future projects. As Tanna was already ear-marked for potential project sites, scientific data was needed to clarify and confirm the project sites to enable implementations of micro-projects to commence. The process then led to a massive baseline study implemented for East and West Tanna in 2016. The baseline study field data collection was sub-contracted to a local NGO known as the Vatu Mauri Consortium (VMC) and processed through the C2M software with support from the M&E advisor to produce village profiles for over two hundred and thirty (230) villages in East and West Tanna. A lot of comments were received when the village profiles were presented commenting the project and seeing it as a potential process that could be replicated to the whole of Vanuatu however it is also an expensive process of data collection and analysis. The project supported the Tafea provincial government to regroup with stakeholders and members of the TAC to select sites based on priorities pre-determined from the baseline findings and village profiles. Priority needs were ranked and selected randomly through the provincial TAC whom by local knowledge also verified the information to some extent. The provincial government spoke highly of this process explaining that this was the right way of doing projects in the provinces because most times in the past projects have bi-passed the provincial government which is why there is lack of support and buy-in from provincial government on initiatives started by projects. This consultation with the provincial government did not end there but continued throughout the life of the project. The province included the project key activities into its yearly business plans and obtained updates from missions to Tanna on a quarterly sometimes monthly basis.

Increased access to fresh and clean water for over one hundred and fourteen thousand people living in the remote villages of Ambae, Tanna, Tongoa and Ambrym islands

IRCCNH project component two (2) micro-investments primarily focused on micro-projects related to water access at the community and village levels. Other focus areas related to water include the installation of rain water harvesting systems, establishment of community Multi-purpose centers (MPCs) and building feeder roads.

Gravity Fed Water Systems (GFS)

The building and rehabilitation of water resources involved working with communities to upgrade, rehabilitate and extend their gravity fed water systems as well as installing rain water harvesting systems. All gravity fed water systems that were rehabilitated included water

systems that incurred damages before and mostly after TC Pam in 2015. This mostly involved increasing of water storage through installments of additional but larger tanks and replacement of damaged tanks while also increasing coverage and access from storage connections, through pipes and taps. Most of the systems on Tongoa and Tanna originally had only a maximum of 15 taps for a village with average population of 200-400 people in a community or village. This is quite small and baseline study indicated an average of seven (7) to ten (10) households assigned to one tap which is why the project increased coverage areas by providing more taps to ensure an average of three (3) households are accessing water from one tap and widening connections and providing additional storage to ensure the water pressure is not disturbed. The project sub contracted ISRA AID just three months after TC Pam to rehabilitate four (4) main gravity fed water systems and upgraded three rain water harvesting systems on the island of Tongoa. Similarly, the project rehabilitated nine (9) major gravity fed water systems on East and West Tanna covering a total of more than one hundred and ten thousand (110,000) people directly benefiting from these water systems.

A household beneficiary survey conducted for Tongoa and Tanna in March to April of 2019 shows that 99% of the beneficiaries of GFS water systems are satisfied with the product. Women shared their stories saying that they have managed to save time spent to collect water in the past. When specifically asked what the time save is now used for, they responded that they now use the time to spend more time with family do other things such as gardening or preparing items to sell at the market which economically means that they are now making more income enough to spend on their household items. Women on Tanna are selling more products at the market because they now have the time to do more and are also able to save little of their earnings for unforeseen circumstances. In a way the standard of living has improved for most of the families that were interviewed. For Tongoa, both women and men confirmed that they now use the time saved collecting water to prepare items to send to Vila to be sold at the Vila main market. Tongoa confirmed that they are now earning more from sales of products in Vila and are able to either extend their houses or save for future use.

Rain Water Harvesting systems

The water projects also involved installations of rain water harvesting systems also known as Rain Water Catchments (RWCs) which comprise a shelter and 10,000L water tank attached to the shelter. RWCs on Tongoa is an exception because it was completed only a few months after TC Pam involving quick fixes to support emergency responses that led on to rehabilitation which was quickly done. ISRA AID rehabilitated three rain water systems on Tongoa building on the existing infrastructure (buildings and tanks). These were built on three large villages of Pele, Woraviu and Purau on the island of Tongoa. All Tongoa projects were completed and handed over to the communities by the government through the Minister of Climate Change by August 2016. The islands of Buninga and Tongariki were selected for rain water harvesting system due to hardships faced by the people on these two islands on accessing water. The projects on the two islands were recently completed and waiting hand-over to the local communities. Beneficiaries of these RWCs spoke highly of the project acknowledging the support of the WB and GoV saying that their RWCs are now water systems with pipes connecting water tanks to houses. On the island of Buninga in the Shepherds the project built one RWC that supplies water to almost 150 people. This is the first and only water system in the area and is also attached to a community center which caters for community gatherings and also provides for communities leaving near the catchment area. On Tanna, the project built nine (9) RWCs all located in the center of the communities and in areas that are comfortably accessed by the community people. Five RWCs on West Tanna also benefit from the Iru GFS scheme (a GFS also upgraded by the project) and the communities have confirmed that the water from RWCs cater for clean and safe drinking water while water from the GFS is mostly used for cooking, laundry and gardening. On the island of Ambrym, the project erected ten (10) rain water harvesting systems which supplies fresh drinking water to almost four hundred people. A total of 1,986 people were reached directly through rain water harvesting systems on Tanna, Tongoa, Tongariki, Buninga and Ambrym.

Increased access to health, education and trade services on Tanna through upgrades of key road sections

Feeder Roads

An Efate-based local construction company won the tender to construct the feeder roads on Tanna and have managed to finish five of the roads while another Tanna-based company has just completed the last feeder road on Ianuateng in Southeast Tanna. The project widened and made access easy for important services such as health, education and access to the main trade center markets by building six feeder roads that connects some of the very remote villages on Tanna to the main roads that lead to access to these services. The project built and rehabilitated six feeder roads; three in West Tanna, two in Southwest Tanna and another in Southeast Tanna. The roads on Southwest Tanna have opened access to Lenakel trade center, Lenakel hospital and access made easier for schools especially when the roads are all-weather accessible. The road at Ienvitanna on Southwest Tanna has three sections upgraded and improved which has opened access to increased markets for taro and kava that are mainly supplied from this part of Tanna.

It was reported that in the past five years, a total of three women died in the area while waiting for transport to get to the hospital. Two of the women who died while waiting at the other end of the road were elderly women while the other one was a pregnant mother. At the beneficiary interview on April 2019, a group of chiefs from the area acknowledged the project saying that the road upgrade is already making a positive impact in the lives of all people living in the area and that they will surely make more income now that trucks could go right up to the village closer to the gardens even when it rains. A farmer confirmed that in the past he could wait for weeks and while waiting his crops would ware away including kava which means he misses out on the income opportunity however this time around he and other farmers will be motivated to increase their yield so that they could also make more income and could even go to Port Vila to sell their products at the main markets. He confirmed that this will definitely bring in more income which will support him and other farmers to send more of their children to school or afford concrete materials to build stronger and safe houses for their families.

Education and health accessed through use of community Multi-Purpose Centers (MPCs)

The project erected four community multi-purpose centers in four remote areas in Shepherds, East, Central and Southeast Tanna. The project through a local contractor built these four centers in eight (8) months prior to the project original plans to end in December 2018. Two of these MPCs are located in very remote areas of Nalpinakevi in Northeast Tanna and Latanu in central Tanna. In both areas, the two MPCs are the first concrete infrastructure in the areas while all other infrastructure is constructed from local material (wood for posts and leaves for roofing). Both communities are five (5) kilometers from a health or education facility which poses huge threats to these communities. The MPCs in both are currently providing space for Kindergarten schooling, mama's weaving space, health outreach activities for children and also safe house for natural hazards such as cyclones. From the beneficiary survey in April 2019, women in both communities spoke highly of the MPCs use saying that in Tannese kastom it is Tabu for women to attend meetings at the Nakamal (under the Banyan tree) as it is only appropriate for women however the MPCs are now taking over this space within a community which is also breaking some barriers and getting women to also voice their concern and men allow this to happen at the MPC space. It is a comfortable meeting space where women and children could also attend meetings and get their voices to be heard, something very different from the past. Tanna is a male dominated society where men are decision makers and women are to abide by whatever is decided without any rejections to any decision because in

kastom it was the proper way of doing things however with changes in society and more people being educated and getting exposed to other ways of doing things, this is slowly changing. Women of these remote communities are happy that through the project they are now part of the community meetings which they were never allowed to attend in the past and are being allowed to share their views and this is actively reflected in their Community Disaster Committees (CDCs) whereby women are also part of the committee.

Increased access to improved crop varieties for approximately 1,800 farmers and subsistence consumers

In the beginning, VARTC and DARD faced some internal challenges to be able to execute the project initial plans however, a lot of the project interventions after TC Pam was co-coordinated by the two implementing agencies. Earlier in the project, support was provided for two DARD officers that undertook exchange learning initiatives with South Pacific Community (SPC) especially for testing of different taro varieties from the Pacific. This resulted in the project importing Tahitian water taro variety which was trialed in Port Vila and found out to be very resilient but needed to grow where there is sufficient water. A yam specialist from India was taken in to VARTC in 2016 to test different varieties of yam imported from India which took three years to test as yam tests lasts three years. The yam results are yet to be obtained from VARTC

and may also require technical assistance to evaluate the findings. The most successful tests involved kumala and manioc which produced very good results therefore were distributed to badly affected areas of TC Pam in 2015 and farmers have continued to replicate within the coverage areas. Fourteen agriculture demonstration plots established on Tanna were able to replicate the kumala and manioc cuttings especially in West, Central and southwest Tanna while two other demonstration plots were set up in Santo and Efate with corresponding field days that were of great success. World Vision (WV) which supported the TC Pam recovery efforts on Tanna managed to replicate the idea of establishing agriculture demonstration plots throughout its focus sites on Southwest, South and North Tanna which is made a great impact. Isabelle who is the agriculture programme coordinator at WV confirmed that they were able to reach 800 people directly with their planting materials and confirmed that the varieties of kumala and manioc were already selling at Lenakel market and also in Vila in large quantities and sizes as well. This confirms that successful distribution and multiplication of the improved varities of kumala and manioc on Tanna and Efate islands.

Access to accurate and real time seismic data for seven islands with active volcanoes connected to the Pacific data stations

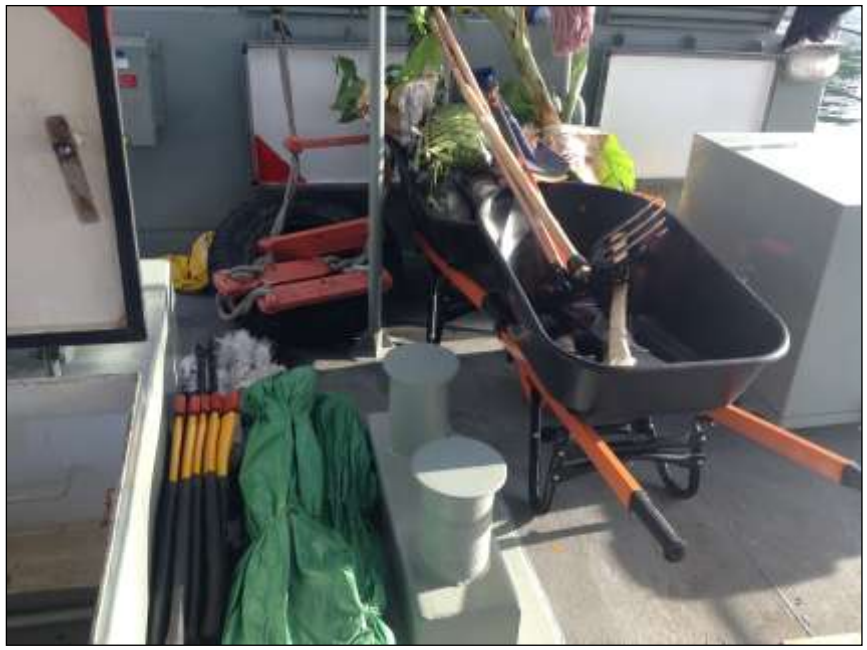
The project supported VMGD specifically through Geo-Hazards division to install seismic equipment on seven islands of Vanuatu with active life volcanoes. These islands include, Gaua in the Banks group, Ambrym, Ambae, Lopevi, Maewo, Epi and Tanna Island which also includes a repaired seismic station damaged by TC Pam in 2015. This has resulted in bringing up all volcanoes online making volcanic monitoring more efficient and data obtained and communicated in real time. The Vanuatu Geo-Hazards division seismic data is recognized and used globally by

some big international organizations such as the Hawaii center and Meteo France. The volcanic activities are now monitored more closely and data obtained in real time by highly trained officers within Geo-Hazards and VMGD as a whole. All eight volcanoes are now online including the repaired station on Tanna damaged by TC Pam in 2015 and is indicated by the small icons in the below screen shot figure.

Screen shot of the seismic stations around the country viewed from the National Warning Center at the

Support to recovery efforts after devastating TC Pam through wide distribution of agricultural tools

The project supported the recovery efforts of the GoV after TC Pam hit Vanuatu in 2015 by responding positively to the food and security cluster to fund agriculture tools. This support saw the project procuring VT 32m worth of agriculture tools which were distributed through the agriculture extension offices in all the six provinces of Vanuatu. Seventy per cent (70%) of the tools were distributed to badly hit areas of Shefa, Malampa and Tafea provinces while the other thirty per cent (30%) was distributed to the other three provinces of Vanuatu. Priority was given to Malekula, Tongoa/Shepherds, and Tanna Island however the food and security cluster distributed to other provinces as they were also affected in some areas. The tools were distributed through the agriculture extension network to key farmers and area council secretaries who finally distributed to each community member in their respective areas. Approximately 176,000 people accessed the tools which helped them to build back their gardens after TC Pam. Out of the 176,000 people 1,800 also received planting materials of improved kumala and manioc cuttings from VARTC project initiatives. DARD through its provincial agriculture extension officers distributed the planting material through their networks in places affected by TC Pam. This made massive reach through the agriculture component of the project that needed improvement in recording for a similar event in the future.



Financial Management

The project funds as outlined above is managed by the PMU through SmartStream, the Financial Management and Information System of the GoV. Payments are either processed through SmartStream in the form of Local Purchase Orders (LPO) or direct payments are raised through the Client Connection system of the World Bank. Disbursement of project financial resources to Vanuatu from are effected through Client Connection which triggers the flow of funds from the Finance Hub of the World Bank in Manila to the Reserve Bank of Vanuatu. Funds are then credited to the Designated Account (DA) within the Ministry of Finance once authorization to expend resources has been granted by the Department of Strategic Policy Planning and Aid Coordination (DSPPAC) within the Prime Minister's Office (PMO). Replenishment of the DA is done on a six-monthly basis. Internally the PMU uses a Programme Estimate (PE) when applying for funds to conduct certain project activities. The PE is approved by the project manager and processed through to the director of VMGD who approves all LPOs before cashed and handed to the appropriate officer for activity use. After completion of activities it is required that proper receipts are submitted to the finance officer to retire with finance department. PMU then returns all receipts with a written summary and acquits the funds to the PMU finance manager who submits to finance department. The PE system was used by all consultant's/project officers under the project only allowed to carry names of a government worker within the scope of the project or consultants with a contract under the project. This is to avoid risks that may occur while using project funds to carry out activities. When devastating TC Pam hit Vanuatu in March 2015 the government requested for the project to support the response and recovery of the GoV which saw the procurement of thirty (30) 10,000L water tanks and VT32m worth of agricultural tools. This unplanned support led to closure of components three (3) and component four (4) of the project.

The internal mid- term review held in the last quarter of 2015 confirmed closure of components three (3) and four (4) of the project. These also led to closing most consultant contracts for components three and four. At that stage, the only monies left in the project was basically component two funds earmarked for micro-investments at community and village levels. The focus on micro-investments from then on put heavy emphasis on; water investments, multi-purpose centers, building all-weather access roads and establishing agriculture demonstration plots mostly on Tanna. In 2015 Isra-aid was sub-contracted to rehabilitate all water systems on Tongoa that were damaged by TC Pam which meant that ISra-aid handled all financial management and procurement management to complete the Tongoa projects.

Resource Management /Procurement

Project Design

The project was designed in very complex way as it involves five implementing GoV agencies (DoWR, DLA, NDMO, VMGD, DARD) which in itself already shows some complexity. Challenges with the project design meant that it was not easy to organize and execute with five (5) different implementing agencies for the start. The turnouts of earlier meetings organized by the PMU were very poor and caused continuous delays to agree and make ample decisions and as a result the project was unable to spend VUV 120million from EU grant. This pool of money

from EU was returned. The project in itself had three donors with different timeframes in spending the money and also needed proper contract management systems in place prior to recruitment.

Institutional strengthening

The GoV agreed to absorb the costs of the local consultants under the new structure of new department of Climate Change which in the end did not work out however the consultants were there to support in the establishment of the new department. The WB supported three local consultants to attend training in Italy which include the engineer and the two procurement officers. The training was helpful and happened just in time for the procurement officers especially after TC Pam when large procurements occurred both for services and procurement for goods. This indeed built capacities for the three officers under the project and also supported training for three staff of NDMO who undertook courses from the Fiji National University (FNU) and the Australia Pacific Technical College (APTC). The NDMO officer that undertook the post graduate certificate from FNU graduated in 2016 and the two officers who undertook management studies at APTC graduated with a diploma in management in 2014. In 2016 the WB put a stop to further training given that funding for training of consultants was deemed ineligible. Two of the trained project officers who attained procurement training in Italy have supported the establishment of the DoCC.

Procurement Technical Assistance

Technical assistance was sought for procurement in the form of a Procurement Specialist who supported and actively advised both procurement of goods and services. The Procurement specialist provided supported to both IRCCNH and FCPF projects not only through mission support but on a day to day basis which was very helpful for the officers to ensure they are aligning well to the WB procurement guidelines. The procurement specialist also provided trainings in-house and peer to peer review discussions during the missions. The project also received support from the World Bank Sydney office based on request from the project. Some challenges include lack of experiences in Bank procurement rules which resulted in further delays to procure goods and services to enable the project to progress faster than it should have been. Another major challenge is the market of reputable suppliers in Vanuatu being very limited which led to requesting clearance from the WB to allow for the project to proceed with the evaluation report and contract awarding to the lowest responsive bidder. Other minor challenges include delays in obtaining No Objections Letter (NOL) from the WB side which sometimes involved very minor issues that were overlooked.

Contract Management

A total of 32 number of consultants were procured under IRCCNH to work on different components of the project. The recruitment process started properly in 2014 however other key roles of the project management unit were taken over from previous EU Global Climate Change Alliance (GCCA) project which ended in mid-2014. The project then started recruitment of staff taking in the M&E officer, the M&E advisor,

the finance officer and the project advisor who then facilitated recruitment of other project consultants at that early stage without a procurement officer in charge of human resources management. The procurement officer in charge of human resources management was only recruited in 2015 after TC Pam which was helpful and came in time to strengthen the contracts management side of procurement. Their support included management of contract days, recruitment, preparation of evaluation reports for HR, and managing big contracts. The procurement HR officer worked closely with the procurement specialist in properly managing contracts from 2015 until 2018. Some challenges related to contracts management include;

- The weather (rain, cyclone season) causing the continuous delays in construction works. More recently delays due to weather patterns resulted in contracts being amended for extension to allow for works to complete. This also has implications with the budgets;
- Delays in shipment of goods to site due to bad weather causing amendments to contracts for extension to allow for works to complete;
- Recruitment of government paid staff not allowed under the WB procurement rules – limited pool of special education in the wider society which means GoV pool of workers the only choice but then limited in this case and finally;
- The contract terms of 6 months or 12 months is not attractive for any potential local consultants to resign from his permanent job for the project. It is not easy to find a suitable candidate in the market.

The following lists all the consultant's specialties and their time frames spent with the project between commencing from year 2014 to year 2019 except for Vatu Maori Consortium (VMC), Israel Aid and Road Constructions Company which were sub-contractors under the project.

Consultant Name	Consultant Role	Time frame spent	Specialization
Paul Audin	Project Advisor	2 years	
Brian Philips	Project Manager	6 years	
Florence Iautu	Safeguards and community outreach	3 years	
Samuel Lnparus	Procurement officer (goods)	6 years	
Cinderella Thomas	Procurement officer (services)	3 years	
Humao Tomatsele	Finance Officer	6 years	
Arnold Lawi	Finance Assistant (1)		
Lidvina Karie	Finance Assistant (2)		
Rebecca Iaken	M&E officer	6 years	
Kastong Theophille	DoWR –Tanna field coordinator (1)		
Joshua Mael	DARD project coordinator		
Rosette Kalmet	DoWR project coordinator (1)		
Reginald Tabi	DLA project coordinator		
Lisa Hardwick	DLA – Technical Advisor (TA) (1)		

James Biscoe	DARD – Technical Advisor (TA)		
Julien Seley	DoWR – Tanna field coordinator (Tanna) (2)		
Philip De Norwoir	Technical Advisor (TA)		
Jean Jacques Goussard	M&E advisor		
Manoj Kumar	DLA- Technical advisor (TA) (2)		
Tim Gunson	GIS specialist		
Greg Longman	Water engineer (TA)		
Mark Bethel	GFS coordinator Tanna (1)		
Joseph Joel	GFS coordinator Tanna (2)		
Jean Marie Tenengver	GFS plumber		
Moriss Stephen	DWSSP Trainer		
Max Kalo	DWSSP Trainer		
Morris Cliff	GFS Coordinator Tanna (3)		
Jimmy Napuk	GFS assistant Tanna		
Iakar Tess	MPC site supervisor – works, Tanna		
Annie Samuels	DWSSP Trainer		
Ruffino Penada	VARTC project coordinator		
Allen Faerua	PWD – project coordinator (1)		

LESSONS LEARNED AND RECOMMENDATIONS FOR FUTURE

Project design – Financial management arrangements, safeguards, M&E

The IRCCNH Project is the first World Bank project initiative to be implemented through Vanuatu's national institutional arrangement for climate change and disaster risk reduction – the National Advisory Board and the Project Management Unit. The project was also the biggest in terms of financing compared with other initiatives under implementation at the time of its commencement. The value of the project however came with the added complexity of 4 different grants (EU, GFDRR and GEF) and the requirement to manage and report on the 4 different grants separately.

This requirement to manage and report on the funds separately was extremely burdensome on the PMU as it created additional work (FM, Procurement and Contract Management), it was time consuming and it delayed the timely development of IFRs which contributed to significant delays in the issuance of annual audit reports.

Recommendation: Future projects (multiple grants) to be designed such that all funds are pooled into one source without the requirement on the client to report and manage individual grants separately.

Changes to Implementation arrangements – changes in implementations (DLA)

The role of the PMU has always been a lead executing agency for projects in very close collaboration with the relevant and key beneficiary sectors. This role also includes the fiduciary aspects of project management while the key sectors played the lead role in implementing activities with PMU support where necessary. Halfway through the project, TTL arrangements of the project were changed and in light of the project's mid-term review discussions, the new Bank team instituted a rash change in the implementation arrangements of the project. This change effectively placed the Department of Local Authorities as the lead executing agency while the PMU was downgraded to playing a fiduciary role. This manipulation was conducted without fully appreciating capacity constraints within the Department of Local Authorities and the Ministry of Internal Affairs, particularly, lack of project management capacity, lack of personnel to drive the project and inability to coordinate multi-agency engagement at the national level in support of project implementation.

As a result, critical project consultations and activities were delayed affecting the timely completion of many of the micro-projects by 4 months. During the following mission of the Bank, it was resolved to revert to the original arrangement with the PMU as lead implementing agency. The biggest casualty in this exercise unfortunately was the relationship of the PMU and the Department of Local Authorities and their continued engagement in the project. The Department of Local Authorities essentially removed themselves completely from the project for the rest of its implementation period.

Recommendation: Rash changes to practical and proven institutional arrangements should be avoided. They should be the last to change if actions are required to improve the performance of a project and all else fail.

Micro-investments (Rain water catchments, GFS, Feeder roads, MPCs) – Ambrym micro-projects

GFS-The micro-project interventions in the Water sector are the IRCCNH activities that have the furthest reach in terms of beneficiaries and also entail a greater diversity of co-benefits including WASH, village scale tourism opportunities, agriculture and education. All water projects have been completed successfully in full compliance with the relevant DWSSP standards for water. The first batch of gravity fed water systems (Ennima, Iatukwei, Imaio) were delivered as part of the TC Pam quick fixing/recovery support and were completed and delivered/handed over prior to the commencement of all other GFS micro-projects.

With the presence of so many NGOs working on Tanna as part of the TC Pam recovery, one in particular, attempted to conduct further work on the Ennima and Iatukwei water systems after handover. As a result, the water systems were affected and were not returned to the full

working conditions they were in at handover by the IRCCNH project. Subsequent missions of the Bank picked up on this and insisted that the project revisit these systems and have them fixed even though they were already handed over to the community and the Government. This decision by the Bank came at a time when the focus of the team on the ground was already on the other new priority water systems. This decision also prevented the demonstration of the critical element of sustainability by Government through DGMWR to address these defects through their annual maintenance plan for Tanna water systems – something that would have otherwise reflected positively on the value of partnership and collaboration in the delivery of the water micro-projects and most importantly Government and community ownership of the projects before and after handover.

Recommendation: Future projects to allow Government to step in and address defects that occur after handover to demonstrate Government ownership and assurance of sustainability.

Going into closure, the Bank team in their missions recommend additional water related activities without appreciating the need to allow PMU to focus entirely on ensuring the completion of all remaining activities. One such recommendation is the support of DWSSP training for all communities surrounding water systems rehabilitated by the project. The DWSSP training can only be delivered by licensed individuals and at the time of the decision many of the licensed specialists were not available. The additional logistics to cater for the new activities, though critical, is burdensome. Again, these are opportunities where, if allowed, the Government through DGMWR can step in and demonstrate the spirit of ownership and take over the DWSSP training as part of their annual water activities for Tanna. The approach of doing everything for Government is detrimental to efforts that attempt to cultivate a culture of buy-in by Government.

Recommendation: Where necessary allow for the relevant Government agency to demonstrate ownership of a particular aspect of a project so the project is seen to be a true collaboration between donor and Government.

All Weather Access Roads – The all-weather access roads are the flagship of the IRCCNH project given their key role in linking communities with ease to critical services and markets all year round, something previously difficult in the rainy seasons. The daily use of the access roads by the public has particularly enhanced the visibility of the project.

The support from PWD has been evident from the start and their supervision support including the provision of culverts where necessary has contributed to the successful completion of the key access roads for Tanna despite the delayed start of this particular micro-project intervention.

The PMU experienced great difficulty in getting approval for the road designs even though they were standard designs approved by PWD and widely used by multiple donors throughout Vanuatu where contracts are either awarded though tenders or to certified Island Based Contractors who were trained specifically to build such access roads.

The delays with the approval of the road designs resulted in the set back of the procurement process for the access roads. Commencement of physical works on the ground began 4 months before the project closure. This tight timeline placed immense pressure on both the Contractor and the PMU to fit all works within the 4-months period. The extension of the project fortunately allowed for additional time that was needed.

Recommendation: Seek the flexibility of the Bank to expedite approval of standard road designs approved by PWD and widely adopted by multiple donors.

The construction of the Early Warning Center extension is part of the institutional strengthening support activities funded by the IRCCNH Project in support of the growth of the Ministry of Climate Change and its critical line departments with early warning mandates. The PMU faced similar issues with the Bank engineer in the construction of the Early Warning Center extension works. Halfway through the construction, the engineer decided to conduct an inspection and started raising structural issues. These were responded to by the PWD supervising engineers with pictorial aids but were disputed by the engineer. The Bank engineer was not present at any time during the construction but formed an assumption and refused the responses of the local engineers. This was seen as an insult by the qualified and seasoned local engineers and the experienced contractor who were being subtly accused of cutting corners. The issue not only delayed works but it also got to a point where PWD were almost about to pull out their supervision support to the project. Progress resumed only after the issue was elevated to the level of the Minister of Infrastructure and senior Bank officials.

Recommendation: Bank engineers need to be more constructive in their support to the country and where necessary, present themselves on site at the most critical stages of construction.

Ambrym Projects

The selection of Ambrym as an area for intervention through the IRCCNH project was a decision that was made without any consultation with the PMU. Consultations were entirely between the Bank and the Ministry of Agriculture to commit the IRCCNH to fund the establishment of four nurseries on Ambrym including the procurement of quad bikes and trailers.

Implementation was to be led by the PMU of the Ministry of Agriculture and the Department of Agriculture & Rural Development. To date, 2 nurseries remain incomplete. A possible consequence of rash decisions without fully understanding capacity constraints to deliver such micro-projects.

Institutional strengthening (EWCs, PDCs, capacity building limits, review ACT

Given that the IRCCNH Project is the first World Bank project initiative to be implemented through Vanuatu's national institutional arrangement for climate change and disaster risk reduction – the National Advisory Board and the Project Management Unit, capacity building focused on PMU staff was a top priority and accordingly a budget line for training was incorporated into the project budget and approved. This was a welcomed activity given the infancy of the Ministry of Climate Change and the need to put in place robust systems to aid the execution of projects but also to build the credibility of the fiduciary functions of the Ministry in light of Government aspirations to work towards establishing a National Accredited Entity for the Green Climate Fund.

Unfortunately, the Bank advised against further training after 3 staff were funded to attend procurement and contract management training at the ILO International Training Center in Turin, Italy. This was a huge loss to the Ministry and the NAB as the Bank knew full well that there was no capacity at all to implement Bank projects using Bank rules when Vanuatu embarked with the IRCCNH project.

Recommendation: Bank should allow flexibility with training so that it contributes to building a pool of nationals competent with Bank rules and guidelines to support future Bank funded initiatives in Vanuatu instead of relying on foreign consultants.

Overall Bank support to project execution or implementation (Financial management, procurement, Engineering, Safeguards, NOL delays, WB Vanuatu presence support

Financial Management Support – Of all specialist support from the Bank, the FM support was very negative from the beginning and this contributed to the poor performance of the local FM team. Lack of patience, understanding and positive/constructive attitude led to a complete withdrawal of the local FM team in key FM and Technical missions. This has affected the FM aspects of the project significantly. There was a lack of appreciation of the complexity of the IRCCNH project, lack of previous experience with Bank projects and the need for the Bank to provide a more positive and concrete FM support to the project team in light of their request to drop training from the project budget.

The PMU was also fully aware of attempts by the Bank to discredit and block access for PMU FM staff through the Ministry of Finance & Economic Management. The consequence saw delays in IRCCNH FM processes that in turn impacted the FCPF project that was also being

supported by the PMU. Unfortunately, the true spirit of partnership was often lacking in the IRCCNH project collaboration with the World Bank.

Recommendation: Bank needs to recognize the importance of training and the Bank needs to ensure its specialists come with the right attitude – not to police but to guide and assist the management and implementation of Bank funded projects.

Engineering Support – Support particularly with regard to the All Weather Access Roads and the Early Warning Center extension could have been more constructive. Lack of flexibility, the lack of recognition of capacity and lack of trust created unnecessary delays that then affected the timely implementation of activities.
Recommendation: Engineering aspects of projects in future could benefit from a more collaborative and joint effort where Bank and local engineers conduct joint inspections, assessments, design review etc.

World Bank National Presence – The World Bank have maintained a small presence in Vanuatu however there is an obvious disconnect between the office and Bank projects being implemented by Government. Local Bank staff engagements with the project only happens in the event of a Bank mission. Additionally, the local office lacks the presence of specialist level staff who could liaise with projects and provide the required backstopping in between Bank missions. All Bank projects could benefit from some coordination across projects facilitated by the local Bank office where lessons can be shared and capacity can be shared.

Recommendation: The Bank presence in Vanuatu should be strengthened with specialist level staff who could provide backstopping to projects on a regular basis.

WB technical and implementation support missions
Technical and implementation support missions are useful and have helped to shape the outputs and outcomes of the project. It is however worth mentioning that missions to projects sites need to be well coordinated with project staff and at all times a project staff member must accompany visits to sites. On one occasion, no project staff accompanied a mission team to the field to provide background to mission members. As a result, so many unnecessary issues were incorporated into the mission Aid Memoire that required additional time and resources for the PMU to respond and address these.

As alluded to elsewhere most missions often churn up new activities for the PMU to take up and the most recent, on the eve of closure, is a beneficiary survey requested by the Bank for their ICR which required additional resources to be conducted including staff time.

Contracts management – WB complaints over TAs, contract timeframes

While all contracts with consultants followed Bank processes including the required NoLs, often the PMU would be subjected to complaints raised by Bank missions concerning the daily rates of consultants. Comparisons were made with Bank rates and those awarded by contract to the consultants. Bank staff had direct access to procurement/contract files hence their detailed knowledge.

The Bank issues with consultant rates eventually led to their leaking of consultant rates to the Ministry of Finance & Economic Management at an international event. As a result, MFEM management proposed additional measures to scrutinize all IRCCNH imprest. The checks on imprest implicated that funds were being misused, something that was additional to the issue of daily rates. This information leak raised concerns from consultants with regard to confidentiality and personal security. The PMU had to work extra hard to provide assurances to all local and international consultants to keep them engaged.

Again the Bank employed the strategy to address issues through MFEM to penalize the PMU. Partnership at the project level again was eroded.

VNPF

The World Bank through the FM Specialist continuously flagged VNPF compliance right up to the closure of the project. Though an official State Law legal opinion by the Attorney General was provided to the Bank, compliance continued to be flagged throughout the project timeframe without any guidance on possible solutions to address the Bank's concern. The FM Specialist only started hinting on a possible solution during a teleconference well after the project closing date of 28 June 2019, almost 6 years since they commenced red flagging VNPF issues.

Recommendation: The Bank approach to FM issues needs to change to a more constructive, mentoring and solutions based support instead of focusing on the negative, disregarding justification and withholding solutions.

Post project Tasks

The table below outlines all post project tasks that the project officers are to collaboratively carry out along with DoCC director and counter parts.

Outstanding Task	Actions to be taken	Responsible Officer	Update at June 25 2019
Complete Assets Register	Finance Officer to update	Humao Tomatsele	Register updated
Official closing ceremony	Organize logistics for the day	Rebecca and Florence	Completed on 5 June 2019
Hand over assets to MoCCA	Included at official closing	Brian Philips	Completed on 5 June
Prepare Final Report	M&E to submit to Manager	Rebecca Iaken	Draft handed to Manager on 10 July 2019
Close all contracts	Meet each contractor	Samuel Lnparus	Completed on 25 June 2019
Complete all payments	Finance officer to update	Humao Tomatsele	To be completed on 29 July 2019

APPENDICES

(i) Results Framework

Updated June 30 2019

Global Environmental Objective Indicators

(ii) **Intermediate Results Indicators**
(iii)

▶Number of beneficiaries directly supported by the project (disaggregated by gender, water- and agriculture-related investments) (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	32,540	172,344	158,051	3,000.00
Date	01-Sep-2013	6-Dec-2017	25 March 2019	30 Jun 2019

Comment: Beneficiaries include all the fifty-one (51) micro-projects completed on Tanna, Tongoa and Ambrym islands including the water projects on Ambae, Epi and Malo prior TC Pam and the emergency responses to WASH cluster requests after TC Pam for Tanna, Epi and Efate islands. It further includes beneficiaries for the eight islands with seismic station installments fully operational since January 2018 and the sixteen agriculture demonstration plots and distribution of planting materials across Tongoa, Santo, Tanna, Efate, Epi and Shepherds.

Note that the baseline was corrected to include the Tanna (32,540) that already had seismic stations prior to the project.

◢**Beneficiaries disaggregated by gender (Number, Custom Breakdown)**

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Males: 16,202 Females: 16,338	Males: 79,551.00 Females: 61,212.00	Males: 84,555 Females: 73,496	1,400.00
Date	01-Sep-2013	6-Dec-2017	25 March 2019	30 Jun 2019

Comment
Females inclusive of girls.

◢**Beneficiaries from water-related investments (Number, Custom Breakdown)**

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	3,959.00	114,298	1,800.00
Date	01-Sep-2013	6-Dec-2017	25 March 2019	30 Jun 2019

Comment: These include all beneficiaries for water projects on Tanna, Tongoa, Shepherds and Ambrym including the fifty (50) water tanks (30 pre Pam and 20 post Pam).

◢Beneficiaries from agriculture-related investments (Number, Custom Breakdown)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	102,280	43,753	1,000.00
Date	01-Sep-2013	06-Dec-2017	25 March 2019	30 Jun 2019

Comment: These include demo plots and distribution of planting materials on Santo, Efate, Tongoa/Shepherds, Ambrym and Tanna. There was a mixture which involved double counting of water beneficiary numbers with Agriculture numbers in November 2018 which brought the Agriculture beneficiaries to 110,255 in November 2018 which was wrong.

▶People provided with access to improved water sources (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	70,020	7,422	1,500.00
Date	01-Sep-2013	06-Dec-2017	25 March 2019	30 Jun 2019

Comments: These are beneficiaries for Gravity fed water systems since they involve an upgrade to the water sources including training surrounding issues related to water safety and security and environmental social safeguards.

(iv)

(v)

▶Strengthened institutional structures and capacity to deliver climate-resilient investments at the provincial to local levels (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	zero	Low	Medium	High
Date	01-Sep-2013	6-Dec-2017	25 March 2019	30 Jun 2019

Comment: Two Provincial Disaster Centers established and operational on Tanna in Tafea province and on Sola in Torba province. Provincial governments and officers involved in the micro-projects and integrating the climate and disaster resilience in the discussion with the communities utilize the premises and resource people housed in the PDCs for advise and project related activities.

▶Investments in post TC-Pam recovery needs (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	13	62	65.00
Date	01-Sep-2013	6-Dec-2017	25 March 2019	30 Jun 2019

Comment: 6 GFS on Tongoa, 6 GFS on Tanna plus 3 pilots, 4 MPCs on Tanna, 8 RWCs on Tanna, 3 RWCs on Tongoa, 2 MPCs on Buninga, 1 RWC on Tongariki, 10 RWCs on Ambrym, 14 demo plots on Tanna, Efate (1) and Santo (1) completed, 4 feeder roads on Tanna and 3 demo plots on Ambrym.

Note: Investments on Ambrym - TC Hola in 2018

◢Number of water systems repaired (Number, Custom Breakdown)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	7.00	15	8.00
Date	01-Sep-2013	6-Dec-2017	25-March-2019	30 Jun 2019

3 pilots in Tanna (Imaio, Itukwei and Enimah) + 6 water systems on Tongoa + 6 water systems on Tanna
Only repaired systems

▶Number of early warning system stations established and/or repaired (Amount(USD), Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	8.00	9.00	8.00
Date	01-Sep-2013	6-Dec-2017	25 March 2019	30 Jun 2019

Comment
8 new sites established plus 1 existing site repaired on Tanna after TC Pam. The new sites are on

islands of Tanna, Gaua, North Ambae, Maewo, Santo, Malekula, Ambrym, Lopevi, and Efate

▶Availability of Operational Manuals providing procedures / protocols for Climate Change adaptation & Disaster management projects/programs (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	None	2.00	3.00	Manuals Available
Date	01-Sep-2013	6-Dec-2017	25 March 2019	30 Jun 2019

Comment: Includes a micro-project manual and the POM and MDRR and FCPF were also developed but do not focus on climate and disaster resilience in Vanuatu include those approved in 2018. Project operations manual and micro-project manual still in draft.

▶Guidelines/manuals/tools based on good local and international practices developed for guiding CBA in Vanuatu being used at national and provincial level (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	1.00	3.00	3.00
Date	01-Sep-2013	06-Dec-2017	25-March 2019	30 Jun 2019

Comment: Includes what has been done for Tanna by consultant in 2017 and was included in the micro-project manual which is being used in the provinces.

▶Number of villages receiving climate and disaster resilient investments (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	13.00	225	65.00
Date	01-Sep-2013	06-Dec-2017	25 March 2019	30 Jun 2019

Comment
11 villages in Tongoa have access to fresh water. Information Source: IsraAID Report
19 villages on Tanna have access to safe drinking water collected through proper rain water harvesting systems and gravity fed water systems. 5 villages on Shepherds have access to fresh and clean drinking water. 30 village on Santo and 25 village on Efate,140 villages on Tanna are benefiting from improved crop varieties

▶Number of people in rural areas provided with access to Improved Water Sources under the project (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	3,959	7,422	6,000.00
Date	01-Sep-2013	19-Dec-2018	25 March 2019	30 Jun 2019

▶Provincial Disaster Centers Fully Equipped and Operational (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	2.00	2.00	2.00
Date	01-Sep-2013	6-Dec-2017	25 March 2019	30 Jun 2019

▶Data communication links established to volcano monitoring sites (Percentage, Custom)				
	Baseline	**Actual (Previous)**	**Actual (Current)**	**End Target**
Value	0.00	75.00	100.00	100.00
Date	01-Sep-2013	6-Dec-2017	25 March 2019	30 Jun 2019
Comment: All seismic stations are now up and running. Two are not on automatic transmission yet				

(ii) Output List

(iii) VANUATU IRCCNHP ICR Output List – Updated 30 June 2019

(iv) **(v)**

Activities	Indicators	Status	Results
A. Institutional Strengthening for Climate Change Adaptation and DRM (STRENGTHENED DRM SYSTEMS)			
Build capacity of PMU in project management, procurement, financial management, and M&E	# PMU staff trained	2014 - 2016	5 people received training
	Type of training received	Achieved	3 Procurement training, 2 in DRM
	# Operational Manuals produced	2014 –early 2016	3 (POM, micro-project appraisal manual, trainer of

			trainers manual for community development programs
	Availability of Operational Manuals providing procedures/protocols for CCA and DRM	Mar 2019	3
	# of households in target sites incorporating climate considerations in their decision making	May 2017	50 (not monitored after restructuring)
Strengthen NDMO	National Disaster Management Act reviewed (YES/NO)	May 2018	Yes
	Strategic plan and organizational structure developed (YES/NO)	Throughout	Yes, (for the ministry of climate change, the NAP processes, the PMU standards, department for climate change, VMDG (Vanuatu meteorology and geo-hazards dep)
	# of learning and twinning arrangements with NDMO of other PICs;	2014	2 (Solomons and PNG)
	# of fully equipped provincial disaster coordination centres;	April 2018	2
	Evidence that new provincial centres are operational	Mar 2019	2 full time officers employed and paid by the Government
	Provincial DRM and CCA plans developed for Tafea and Torba provinces YES/NO	From 2013 - Feb 2019	Yes, happens annually
	# of volcano contingency plans for high risk islands	2015-2016	4 in place in Gaua, Tanna, Ambae and Ambrym
	# of national and sub-national institutions with functioning DRM arrangements;	May 2017	5 (Provinces of Tafea, Shefa, Torba, Malampa and Sanma)
	Strengthened institutional structures and capacity to deliver climate resilient investments at the provincial to local level - Examples	Mar 2019	Medium
	Data communication links established to volcano monitoring sites YES/NO	Nov 2018	YES (100%)
	Examples of applications of provincial DRM and CCA plans and volcano contingency plans to influence community resilience	September 2016	Ambae mass evacuation from Manaro volcanic disaster
Strengthen Early Warning Systems	# of early warning systems stations established and/or repaired;	Mar 2019	8
	Real-time data communication network linking volcano, seismic, and weather observing stations with national data and warning centre (YES/NO)		YES

	# of strengthened multi-hazard standard operating procedures developed		
	Evidence of increase in frequency and reliability of early warning messages		
	# people served by early warning system (before and after)		

(vi)

B. COMMUNITY RESILIENCE IN ACTIVE VOLCANIC ISLANDS AND COASTAL AREAS. PILOT INVESTMENTS IN SELECTED VILLAGES - IN AREAS AFFECTED BY TC PAM			
	# of direct beneficiaries	June 2019	158,051
	# of direct beneficiaries (males)	Mar 2019	84,555
	# of direct beneficiaries (females)	Mar 2019	73,496
	# of direct beneficiaries in (a) volcanic and (b) coastal areas;		
	# of direct beneficiaries in water-related investments	Mar 2019	114,298
	# of beneficiaries from agriculture-related investments	Mar 2019	43,753
	# community sub-projects (total)	Mar 2019	71 villages
	# of villages receiving climate and disaster resilient investments	Mar 2019	71 villages
	Investment in post TC-PAM recovery needs (#)	Mar 2019	71 villages
	# community sub-projects (water-related)		45 villages
	# community sub-projects (agriculture-related)		16 villages
	# community sub-projects (shelters)		6 communities (group of villages)
	# community sub-projects (other infrastructure)		6 communities (group of villages)
	# of community sub-projects in (a) volcanic and (b) coastal areas:		7 islands
Methods, Processes, Protocols and Plans for CCA and DRM	# of new national and sub-national DRM strategies, plans and standard operating procedures developed and tested;		1 micro-project manual
	Investment in post TC-PAM recovery needs (#)	Mar 2019	71
	# of Guidelines/manuals/tools developed for CBA used at national and provincial levels	Mar 2019	3
	Evidence that guidelines/manuals/tools are based on good local and international practices		Successes of the project
B. PROMOTION OF IMPROVED TECHNOLOGIES FOR FOOD CROP PRODUCTION AND RESILIENCE TO CC			
Distribution of Improved Ag Technologies to support production and resilience to CC	# of improved cultivars adopted		2 (Sweet potato and Manioc)
	# of farmers adopting new technologies or cultivars	May 2017	43,753
	# of improved plant materials distributed;		
	# of farmers /farmer leaders trained and/or contacted on ways to improve cropping practices;	May 2017	164
	Of which, # of women farmers		50% of 43,753
	# technologies demonstrated in project areas	May 2017	22
	Type of technologies demonstrated in project areas		Kumala and manioc are

			produced in large yields and sold at the markets on Tanna, Santo and Efate
D. RURAL WATER SECURITY / PILOT INVESTMENTS IN SELECT VILLAGES - WATER SUPPLY			
Water Inventory, and Standards	Completed National Inventory of Rural Water Systems; YES/NO		YES (for three provinces include; Torba, Sanma and Tafea)
	Completed water supply standards and guidelines for water supply provision; YES/NO		YES (started by the project in 2015 and completed by another project)
	# and type of partner outreach activities		8
	Evidence of use of new inventory, standards and guidelines for installation of rainwater systems (e.g. by NGOs/churches/others)	2016	--
Installation of rainwater catchment and storage systems to rural communities	# of water systems installed and/or repaired	Mar 2019	13
	# Rainwater catchment systems		23
	# Other type		6 MPCs
	# People provided with access to improved water sources	Mar 2019	7,422
	% of water capacity increase (if data available)		

(i)Black – Original (maintained)
(ii) Blue – Restructured
(iii) Red – Dropped at Restructuring
(iv) Green – As described in the original PAD

(v) Financial Management Advisor's Report

The FM Consultant summarizes the various FM aspects of IRCCNH below (which may also apply to the other two projects); in this, the FM Consultant looks at the role and performance of the three parties to the project FM – the World Bank (WB), the Government of Vanuatu (GoV; VMGD, with its PMU, and Ministry of Finance and Economic Management {MFEM}), and the FM Consultant.

Overall, the FM Consultant considers the approach and performance of the WB Financial Management Specialist (FMS) to be "Totally and Completely Unsatisfactory and Unacceptable". The approach and performance of the WB FMS has been lacking in honesty and in competence – with the lines between these two aspects being blurred. This has manifested itself into a totally uncollaborated and negative input from the WB FMS throughout the four years or so during the involvement of the FM Consultant. The FM Consultant expects that it is in the interests of WB and GoV for the three parties (WB/GoV/ Consultant) to work in a collaborative and constructive way towards bringing improvements and

the achievement of the goals, operating under an acceptable standard of business conduct, rather than the WB FMS positively operating in a destructive and disruptive way. The input of the WB FMS has added zero value.

Overall, the FM Consultant considers the approach of VMGD/PMU to have been collaborative and positive – FM approaches and requirements have always been discussed and agreed with the FM Consultant in an open and transparent way. However, the PMU has not been able to take up key aspects of the project's FM to the expected level (including certain aspects of the project's accounting and financial reporting system within the GoV's Smart Stream (SS) system which may need a higher level of skill and focus). In the FM Consultant's opinion, the PMU has a good level of knowledge but needs to improve its application, such that the level of input from the international consultant may be reduced. The FM Consultant has had to do too much FM implementation, when the PMU should have been increasingly taking on this work.

Overall, the FM Consultant considers that MFEM have been largely indifferent to the potential for replicating the complete integration of the project's accounting and financial reporting systems within SS after the initial discussions that were held with MFEM representatives who are mostly no longer there. However, MFEM have been largely supportive and collaborative with the actual implementation of the system, for example the processing of Journals.

There have been two key aspects of the FM Consultant's TOR: (i) the design and establishment of the project's accounting and financial reporting system, integrated within SS, which the FM Consultant considers to have been largely successful; and (ii) capacity building. The capacity building has been successful in terms of the PMU understanding the operation of the accounting and financial reporting system; however, this has not yet resulted in the PMU being able to regularly apply this knowledge, to be able to really take on the project's FM without significant support from the FM Consultant. There are just two aspects of the FM Consultant's work which, with hindsight, he would do differently: (i) the initial design for integration of contracts financial management within the project's accounting and financial reporting system in SS, which was not quite correct; and (ii) the re-assigning of certain VARTC costs under Component 1.1 in the chart of accounts.

The above assessment of the FM roles and performance is supported by the FM Consultant's report on the actual events over the past four years or so, as follows:

1. FM Reviews and Reports by WB

Upon taking up the assignment in November 2014, the FM Consultant was advised by the PMU that they were unclear about the WB's FM reviews – unclear about what had been done and they had not received the formal FM review reports. This situation has never improved during the past 4 years or so.

The FM reviews are supposed to be a basis for assessing the project's FM performance, and (where applicable) making constructive improvements going forward; usually, there is a basis for improvements to be made, and this should be seen as a way to improve FM performance – for the project, and also within the context of a standardized approach for WB projects for FM performance as adapted country to country. The FM performance should be seen in the context of sound project management, not just meeting WB reporting requirements. The FM review points should be agreed in a clear, balanced and transparent way with the project IA(s) - with an opportunity for the project to respond before the FM review report is finalized, to reach a common understanding on expectations that can make improvements, and then be able to monitor these expectations.

Instead, the FM reviews for IRCCNH have been chaotic, confusing, unstructured, unclear, unhelpful and lacking in honesty. The FM Consultant's summary of the FM reviews over the past 4 years or so is as follows:

- The WB FMS carried out an FM review for IRCCNH during the FM Consultant's first input in November 2014. However, the FM Consultant never saw a FM review report.
- The next FM review that the FM Consultant was aware of was carried out in October 2016 and was covered in an FM review report included in the Aide-memoire (A-M) dated January 2017 for the WB's November 2016 mission. Many of the comments in the FM review report related to previous findings although the FM Consultant was not aware of these previous findings until seeing the A-M in February 2017. The FM Consultant notes the following:
    - There were two different FM ratings within the one A-M.
    - One of the key findings was "Questionable Expenditures" from 2014 that had not been corrected to date. The FM Consultant had not seen these findings previously – firstly, these points could have been discussed and cleared directly in a ten-minute discussion with the PMU and the FM Consultant (as the FM Consultant was there at the time), without the need to include these as formal FM review report items; and secondly, the FM Consultant never saw an FM review report from the November 2014 FM review.
    - One of the "Questionable Expenditures" related to "duplicate DA claims"- this was based on the WB FMS seeing two copies of the same SOE in the file, with different WA numbers. In fact, there were no duplicate claims (just an extra file copy of the WA that had an old WA number), and this could have been cleared in five minutes – as the FM Consultant did. The FM Consultant drafted the responses to the FM review report points and included these in his February 2017 end of mission report, but got no response from the WB FMS.
    - The above point raises an important and fundamental issue – in the opinion of the FM Consultant, the FM review findings should be cleared as far as possible through on-site discussion, and no statements should be made in the FM review reports unless there is a reasonable assurance that what is being said is correct. This is yet another case of blurred lines between a lack of competence and a lack of honesty from the WB FMS.

- The next FM review was carried out in October 2017. Based on the approach and outputs from the previous FM reviews, the FM Consultant (in agreement with the PMU) wrote to the WB FMS ahead of the review, requesting that draft review findings be discussed with the PMU and written up in draft for the PMU to respond to before the FM review report was finalized – this approach is the same as for the external audits and provides a basis whereby the FM review findings are clear, fair and balanced, and understood by all. The FM Consultant received no response to, or even acknowledgement of, his communication. The PMU drafted notes themselves during the review discussion – based on this draft, the FM Consultant responded to the WB FMS, but again there was no response. No FM review report has been seen - the A-M dated February 2018 (for the Dec 2017 WB mission) did not include any FM review report; then, the July 2018 A-M stated that "A complete FM review was undertaken in March 2017. Full details were provided in December 2017 Aid Memoire." A FM review was definitely carried out in October 2017, it is not clear if one was carried out in March 2017; what is clear is that the December 2017 A-M (the one received by PMU) did not include any FM review report. The statement in the July 2018 A-M is not true, but in any case, why would a FM review report be distributed nine months after the event?
- The FM review comments in the November 2018 A-M, and the comments made in February 2019 are too late. Notwithstanding the lack of FM outputs during 2018 from the PMU, the WB FMS's approach and actions did nothing to prevent this situation developing; rather, it helped the situation develop.

The above approach and outputs for FM reviews is very much the same for the other projects under VMGD/PMU. It is possible that PMU has missed some communications, and it is understood that improvements could be made – however, overall, these FM reviews have been unstructured (to the point that they provide little or no benefit to WB) and have provided a zero contribution to IRCCNH.

<u>Similar Issues</u>

(i) Most of the time, there has been no response (acceptance, comments, or otherwise) from the WB FMS to the submission of the IFRs on a quarter-to-quarter basis, even though up to the end of 2017 these were generally submitted on a regular and timely basis.

(ii) In August 2017, WB incorrectly advised the project that the figures in the 2016 IFRs and 2016 audited financial statements "do not agree". A five-minute review of the financial statements is all it should have taken for it to be clear. Again, in the opinion of the FM Consultant, such comments and findings should not be made without a reasonable assurance that what is being said is correct – this is yet another case of blurred lines between a lack of competence and a lack of honesty from the WB FMS.

(iii) In February 2019, PMU were advised by the WB FMS to submit IFRs that were so clearly incorrect (did not add up). Despite the urgency, the FM Consultant advised PMU against this – aside from the fact that it is not a good policy to submit clearly incorrect reports, the issues just get carried forward.

(iv) In the opinion of the FM Consultant, the external audits have not been strong – this is largely due to the minimum level of testing carried out. This situation, coupled with the unstructured WB FM reviews, has meant an overall lack of FM oversight. The FM Consultant believes

that there should be a review of the external audit TOR, to make these more effective; a review and common understanding of the TOR of the WB FM reviews would also be helpful.

2. Approach to Performance Management

In the opinion of the FM Consultant, WB needs to have a strategy for managing and improving FM performance for projects. This strategy should be based on two key aspects: (i) building in-country FM capacity; and (ii) ensuring that the project FM works well – anything else can only be detrimental to the project. The strategy should cover: (i) systems (WB-consistent, adapted by country); (ii) management of FM requirements, and (iii) costs.

There has never been a strategy for IRCCNH, only ad hoc decisions that have served to make things worse. In terms of how the project FM requirements are managed, the expectations of the three parties - WB, GoV (including national consultants hired in lieu of government staff) and international consultant - need to be defined and established at the start of the project, and then monitored and managed effectively, especially over the first half of the project. This will not in itself guarantee that GoV will be able to handle all the FM requirements, but it will guarantee accountability and it will guarantee that the FM will work well. For the international consultant, the expectations in terms of "doing" and in terms of capacity building should be clear.

The FM Consultant's own contract has been badly handled by WB, right from the start when the length of the original contract was extended with the same number of days (under WB instruction), through to 2018 when PMU were instructed by WB to reduce the number of days to a level that was unacceptable to the FM Consultant.

In the four years or so that the FM Consultant has been involved with the project, there has never been any feedback/questions/responses from WB to anything in any of his fourteen reports.

Regarding key FM performance indicators for IRCCNH:

- As stated above, from 2014 up to the end of 2017, the IFRs were regularly submitted within the due time.
- The annual audit reports have mostly been submitted late, although not with a huge delay. There have been some audit findings, although these have not been so significant.
- The accounting system itself has worked well, but there has been an issue with the coding of transactions, the taking up of impress and the timely taking up of Journals.
- Records management. Documents could always be found, but the PMU did not take up the more complete system proposed by the FM Consultant.

3. Project's FM Systems and Procedures

Based on the FM Consultant's terms of reference, the accounting and financial reporting systems for IRCCNH (and the other two projects under VMGD/PMU) were established in 2015, integrated within the SS accounting system. (Any historical transactions were recoded, to be under the same system). This was based on a design agreed between PMU, the FM Consultant and MFEM. Two consultants (SS Consultants) were engaged short term to set up the system in SS,

The FM Consultant was advised that the WB FMS had advised the VMGD/PMU and MFEM that (i) the system does not work; and (ii) the system is not in SS. Both of these statements are incorrect (and are not consistent with the statements in the October 2016 FM review), as follows:

(i) The "system" does work. The main component of the system (without which there is no "system" at all) is defined (by the FM Consultant) as "1. Capturing the complete project transactions within a double entry bookkeeping system, and within a structure (chart of accounts) that enables reporting to meet all project management requirements; and 2. Mapping the transactions through to agreed report formats". The FM Consultant has tested the system since 2015 up to date (including the recoding of the historical transactions) and the system works 100%. The only reason why the system reports cannot be taken up directly as the figures for the IFRs is that all the transactions data entry is not up to date and there are coding errors, meaning that reconciliations have to be carried out in order to take up the correct figures for the IFRs. However, the project system in SS has been the basis of all IFRs, all DA reporting and all transaction listings for audits, since 2015. The FM Consultant has had to keep the system working through the reconciliation process each quarter, as reported in each quarterly IFRs.

(ii) The system is in SS. All project transactions are taken up in SS using SS/MFEM systems and templates, through three main data types: (i) Local Purchase Orders (LPOs) for payments from the DA; (ii) Receipts into the DA; and (iii) Journals, for Direct Payments, impress retirements, and coding corrections and other adjustments. All transactions use standard SS/MFEM data entry codes, plus additional coding (within the SS structure) for the project. The project reports (including transaction listings) have been set up using a separate access path, but are still mapped directly from the SS data – the reports may sit anywhere within the SS system, but the project reports are not part of the standard SS reports, including the project transaction listings which have been formatted to provide information to meet project requirements and are different to the way transactions are normally presented in the standard SS reports.

The current system provides a sound basis for replicating to other projects, with the understanding that improvements to the system may be made, as follows:

- Integration of contracts. This component was part of the FM Consultant's original design and SS Consultants' contract, and is considered to be an important aspect of project management. Unfortunately, the FM Consultant's design was not 100% correct and it

took too long for the PMU to test the system, resulting in this component never working properly. The FM Consultant did an updated design in 2017, and sent this to the WB FMS with a view to incorporating this; however, there was no response from the WB FMS.

- Budgets. This component was included in the design and was set up as part of the overall system. It was tested successfully under MDRR, but was never fully taken up.
- The two main reports generated from the project system are (i) Sources and Uses (with expenditure shown as one total only for each funding source); and (ii) Uses by Component/Sub-component/Activity – the capturing of expenditure by Activity (and where appropriate Sub-activity) are necessary for ongoing project management. For possible future use of the system, it would be necessary to agree the final report formats that are needed from the system (to merge with exact IFR requirements as much as possible, plus any additional project management requirements). Some parts of the IFRs (e.g. Sources in financing currency) are not directly part of the SS system in VUV.
- Agree with MFEM where the project reports (including the transaction listings in the format required by the project) sit within the SS system/structure and who should have access.
- Impress. The project system was set up so that impress (cash advances) were not recorded as expenses until the retirements were processed, and the impress were managed through sub-ledgers (by recipient). This worked well until 2016, when VMGD/PMU had an issue processing payments as impress with MFEF, and resorted to coding impress straight to expenses. The FM Consultant believes that this issue can be resolved with MFEM.
- Withdrawal Applications. For DA reporting, the project system has been used as the basis to complete the Statement of Expenditure and Summary Sheet. To be able to generate these forms automatically would need more consideration given the way the information is captured under SS.
- Housekeeping. There are various small aspects that may be tidied up/made more consistent, such as names of reports, titles within the reports, how the reports look etc.

In the opinion of the FM Consultant, the aim of the WB FMS has been to be able to discredit this system and report it as a failure, and if it was not possible to do this truthfully, then no matter. This started from the end of 2014 during the development of the TOR for the SS Consultants – the WB FMS wanted to change the TOR agreed between the VMGD PMU, MFEM and the FM Consultant, but was overruled.

This was an initiative agreed by WB at the outset – what was needed were collaborative, competent and objective inputs from WB to support a way forward and agree this with GoV; the system has the potential to be replicated, across sectors and across donors – it has provided the opportunity for WB to maintain a standard approach for accounting and financial reporting systems across all its projects in Vanuatu. The inputs actually received from the WB FMS were to undermine the project system – there were never any joint meetings (MFEM/PMU/WB) re this system, there was never any proper/objective testing of the system undertaken by the WB FMS, and there were never any clear

statements to the FM Consultant except trying to criticize the SS Consultants. (In the opinion of the FM Consultant, the performance of the SS Consultants was good overall – there were a few areas where this could have been improved, but overall they did a good job with a low level of inputs). There was no response from WB to the write up of the FM Consultant following the meeting at PMU in February 2017. As things stand, the system is likely to be archived after the closure of the projects currently using it – from this perspective, it may be considered a failure.

Robert Hanmer
April 2019

(vi) ESMF Report

Executive Summary

It is a World Bank requirement to ensure there is prevention and mitigation of harm to people by protecting their communities and environment in the development process of any projects including the Increasing Resilience to Climate Change and Natural Hazards (IRCCNH) Project. Conducting the Social and Environmental Safeguards prior to implementation to proposed sites is an important part of the World Bank policy that ensures people and their environment are not harmed in any development activities of this project. To guide the implementation of the Project's activities, the Government and the World Bank have agreed to establish two safeguards framework documents and one of which this project is using is the Environmental and Social Management Framework (ESMF). This Framework is the main document that guides and inform the project officers who are responsible on what actions and or activities to do regarding safeguards requirements. This is to set out the principles and processes that would apply if specified environmental or social issues emerged especially with the selected projects sites initiated under this Project. As a result, an Environmental and Social Safeguards Screening (ESSS) form was developed to help with screening of projects and their sites prior to implementations and also to manage any issues during implementation period. All micro-projects are categorized under the World Bank Category B according to the World Bank ESMF requirement. This means that all projects are geographically limited and have readily identified impacts that can be easily mitigated, therefore will not cause huge environment and social impacts to project sites and surrounding communities.

The safeguards implementation process and activities used in this project are as follows:

- Community consultation process
- Environmental and Social Safeguards Screening
- Mitigation measures developed

- Environmental preliminary assessment
- Safeguards monitoring and reporting
- Grievances redress mechanisms

There are challenges faced during the implementation of this process at all levels – government stakeholders, implementing partners, communities and internally within the project. Challenges are mainly due to the lack of understanding of the Safeguards requirement as it is a first ever World Bank project to be implemented with new staff who have limited knowledge on such issues. Despite the many challenges faced, a lot of lessons have been learnt over the years of implementation and collaboration with various stakeholders and partners in relation to safeguards policies. These lessons and reflections have informed few recommendations put forward by the project team with the aim of assisting the Government and the World Bank for planning purposes for similar projects requiring safeguards into the future.

(Please see full report attached as separate document…)

PROJECT CLOSURE REPORT APPROVALS

Approved:	Brian Philip Project Manager (Project Management Unit)	Signature _____
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Approved:	Habiba Gitay (WB Co-Task Team Leader) World Bank	Signature _____

Approval Date: 10 July 2019