



REPORT:

TK Climate Forecasting trip to Tanna Island 10-24 November 2012 & Port Vila Stakeholders Meeting 20 November 2012 Next Steps for Developing a National Framework

Background

Vanuatu's communities utilize traditional knowledge systems for environmental management and coping with disaster, climate extremes and climate variability. In addition to climate model-based forecasts provided by the Vanuatu Meteorological and Geohazards Department (VMGD), island-based individuals commonly make climate and weather projections with traditional knowledge built on generational observation and experience. The depth and breadth of this forecasting knowledge has not yet been documented, and little is known on the compatibility of this knowledge and model-based forecasts.

In a cooperative program among the VMGD, the Vanuatu Cultural Center, the SPC-GIZ Climate Change Program and the Climate and Oceans Support Program in the Pacific (COSPPac), a traditional knowledge and climate program was launched in 2012 in order to:

- Identify local communities that use traditional knowledge for environmental forecast applications, particularly at the seasonal timescale.
- Determine and document the traditional indicators used by these communities; indicators may be based on the behaviour of plants and animals, meteorological indicators such as wind direction and strength or astronomical indicators such as stars.
- Document where possible historical information on the traditional indicators, i.e. past dates/timing of the traditional indicator.
- Train personnel in each community/province for continuous monitoring and archiving of the indicators.
- Compare the traditional knowledge forecasts with that provided by conventional scientific methods (e.g., SCOPIC).
- Disseminate the integrated forecast back to the community.
- Enable the coordination and collaboration of cultural, scientific and development stakeholders involved in climate and disaster related projects in Vanuatu.

Field Test Tanna Island 17-22 November

A draft seasonal indicator data collection template was developed by COSPPac and field tested with locally-based partners on Tanna Island (Tafea Province) in November 2012. See Appendix.

Representatives from the Vanuatu Cultural Center, the Department of Meteorology & Geohazards, the National Disaster Management Office, the Department of Agriculture and the SPC-GIZ Climate Change Program travelled to Tanna Island to pre-test a one-team approach to traditional knowledge and climate change initiatives, and also validate the data collection template.

Experts on the Field-Test Team:

- VMGD (Mike Waiwai & Melinda Natapei)
- NDMO (Alice Iarem)
- DARD (Peter Iesul, Antoine Ravo, Willie Iau)
- VKS (Jacob Kapiere, Joel Nautaman, Noumaline Tavalu)
- SPC-GIZ (Christopher Bartlett, Isso Nimehei, Sanford Nako, Tari Johnny)

In seven remote communities surrounding Port Resolution, the team held a series of discussions with chiefs and area leaders about a future partnership between the government and custodians of traditional climate and weather knowledge. In general discussions in each community were organized in a stepwise fashion:

- 1) Initial meeting with council of chiefs and kava ceremony for customary endorsement
- 2) Seek confirmation that traditional knowledge on climate is used and known
- 3) Seek confirmation that climate change and its impacts are being felt on local livelihoods and environments
- 4) Share and discuss, in a community-meeting style approach, the meteorological and traditional science perspectives on weather, climate and climate change.

- 5) Discuss (utilizing the data collection template) with individual Tanna weather experts their specific methods for forecasting, specifically how they use local meteorological, geological and biological indicators and indicators to foretell a coming dry season, intense cyclone or prolonged rainy period.

On Monday 12 November a major summit was held in Port Resolution in which over 100 leaders and weathermen from all test communities attended. The following technical presentations were made from the expert team, followed by wide discussion:

- Introduction to Workshop: Mike VMGD
- Climate Change: Christopher SPC-GIZ
- Agricultural Adaptation: Antoine DARD
- Seasonal Forecasting at Meteo: Melinda VMGD
- Disaster Risk Reduction: Alice NDMO

The participants were then split into smaller groups to delve into more details and issues in the following way:

- Signs For Weather- Chris SPC-GIZ (middle aged men and youth)
- Signs for Climate – Joel VKS & Melinda VMGD (Tupunas Weather Men)
- Drought Adaptation – Antoine DARD (men, women and youth)
- Flood/Moisture Adaptation – Willie DARD (men, women and youth)
- DRR & Food Preservation – Alice NDMO & Noumaline (women)
- Strengthening the relationships between Meteo and Kastom Forecasting – Jacob VKS & Mike VMGD (chiefs and elderly men)

Many traditional indicators were documented during the template trial (see Appendix). General feedback from the communities on Tanna was extremely positive, specifically:

- **Sharing Knowledge.** Tanna weathermen and leaders are glad to share this type of knowledge with the rest of Vanuatu so that it is not lost, and future generations can use it to keep themselves safe. Local communities place great trust in the Government and the Vanuatu Cultural Center to ensure that their knowledge is not exploited, but rather used for the climate and disaster resilience of the people of the nation.
- **Kastom is a deeply rooted tree.** Some elements of climate and weather are deeply contained within the roots (e.g. weather control etc), only accessible to a select few and not to be seen. The Indicators we are after are in the leaves, accessible for anyone who can see, feel hear and touch. When discussing our purpose it is important to stress that collecting closely held secrets is not intended, rather we wish to acknowledge what is known and share for the benefit of improved forecasting/adaptation for all people in Vanuatu.
- **Strong Belief in Weather/Climate Control –** When discussing indicators and adaptation, this topic should be avoided to minimize confusion
- **Loss of TEK is at a critical level-** The elders visited are strongly aggrieved that knowledge and indicators of weather and climate are being lost among the younger generations. A strong request has been made to help them document, giveback and REUSE this knowledge
- **Local documenters MUST be used,** discussions in local language with support from technical teams
- **Focus detailed surveys on special Knowledge Holders** (e.g. Tupunas on Tanna) . Not everyone has or fully grasps Indicators. More time and effort should be spent to identify and empower these individuals.
- **Use local 'MiddleMen'** to link local knowledge holders and Meteo forecasting. Both to collect knoweledge and also verify indicators, and share info back to community for use.
- **Community workshops,** discussions and awareness must be used in conjunction with surveys, as a capacity building opportunity to disseminate some indicators.
- **Storian' is the most effective approach** for collecting indicators and adaptation strategies. Audio-video record the stories and transcribe later. Allow the story tellers to follow their own direction, and only later pick up and question further. Don't use a formal template for the collection process, fill it in later. The more detail and context, the better.
- **Expected Timing of Signs are Changing –** but Signs still accurately predict events. Seems to be still relevant in the context of climate change.

Multi-stakeholder governance workshop 20 November 2012- Port Vila

The VMGD, GIZ, VKS and COSPPac hosted a major summit with official agencies, cultural institutions, civil society and development partners to report back on the outcomes of the Tanna trial and to begin to define a long-term collaborative approach on traditional knowledge, climate change and disaster risk reduction.

Director of the Vanuatu Cultural Center, Marcelin Ambong, opened the workshop and made the following points and observations:

The Vanuatu Cultural Center:

- has a mandate to preserve all cultural information that is available, beginning in 1875,
- now there are many valuable data and documents collected.
- In 1976 the VKS field workers network was established. Now there are 139 fieldworkers scattered throughout the islands. They document everything that has a place in their cultures, including knowledge and ceremonies (e.g. knowledge surrounding tamtams etc).
- VKS field workers work as volunteers, giving them a certain status.
- VKS has collected 8,000 hours of film and 50,000 hours of audio recording.
- In land cases, the fieldworkers have stepped in at times to help to sort out issues. E.g. land case on North Efate, VKS helped to bring about peace.

Documenting Traditional Knowledge

- VKS is a custodian of knowledge only, and does NOT have power to allow rights to or use of this knowledge to anyone.
- Fieldworkers need to 'rationalize' this information for the use by the whole nation. That is, it is up to the VKS fieldworkers to decide what is available to the public.
- Collaborations for the use of traditional knowledge are already happening with the Mama Graon, VKS and Malvatumauri.
- The typically approach used by the field workers for traditional knowledge collection is informal "storian" rather than going through a list of questions.
- The Vanuatu Christian Council (VCC) typically passed through the Pastors or church leaders within the communities to collect traditional knowledge and information
- The exercise of community engagement should include both an exchange of TK information AND capacity building and awareness in communities.
- There are strict and sacred protocols in relation to the collection of traditional knowledge in Vanuatu
- VKS fieldworkers are well versed in this protocol, which includes the following considerations:
 1. A Chief's role is to manage the welfare of a group, but it is individual people that own knowledge. If authorization is sought from a chief, then direction is given to see specific people, knowledge owners.
 2. People's knowledge must NEVER be exploited in a way that is not permissible by the knowledge owner.
 3. Use or reproduction of permissible knowledge must fully acknowledge its owners. Once work is done, it is critical to acknowledge also the language group and community as a form of respect. At the end of the day the information collected must go back to benefit the community.
 4. Some knowledge/information is extremely valuable, and highly private and not to be shared. Those that are not initiated may not be able to receive this knowledge and it will be not appropriate to share with others
 5. A chain of command for authorizations should be followed beginning with an approach to the Malvatumauri Council of Chiefs, then the island council of chiefs, then area council of chiefs and finally to the village nakamal (chief's meeting house). Collectors must never just call a day in advance, and then go.
 6. VKS field workers are the advisors to the Malvatumauri council of chiefs, with the deep knowledge they possess
 7. Be aware that in the past people have, either to protect themselves or for fun, given incorrect knowledge to researchers. Anyone can tell you anything without really sharing the knowledge (e.g. using the wrong types of leaves for medicines etc).

Documenting Traditional Knowledge and Climate Change

- The VKS was originally approached by the NDMO and SOPAC who were interested in knowledge related to natural disasters. However a program never eventuated.
- VKS is working with the Department of Health on malaria. There are some north winds that bring mosquitoes, and also the colors of the clouds (red) indicate that the mosquitoes are carrying Malaria parasite. This knowledge is directly applicable to climate change.
- The Napanga Pikinini book, funded by the German embassy, has recently been published that includes custom stories with many making reference to earthquakes, cyclones and tidal waves. These stories have much and deep information that is of relevance to climate change
- Many international frameworks and conventions now recognize the value of traditional knowledge and climate change, including the CBD, UNFCCC
- DARD has indicated a strong interest in collecting TEK to strengthen VMGD forecast information which can be given to and easily understood by farmers.
- Traditional CC knowledge that is already stored within the archives should be assessed and studied before going out to collect more information. Thus we 'validate' the existing knowledge, and cross check what is stored to see if there have been any changes. The information within the VKS archives should be used to develop questionnaires, otherwise the original knowledge may be perverted.

- TEK climate collection should be closely tied to the VKS field workers, and all information should go through this existing network.
- Each year the VKS holds a field workers meeting and climate change topics are typically discussed. The director invited VMGD and other stakeholders to engage in the VKS fieldworkers process, particularly the women with a focus on disaster and climate preparedness.
- Some knowledge, including some of that related to climate change, is to be used widely, and many people see this as for the good of the nation. Now is the time to work together to share knowledge and find ways for all to adapt to climate change.
- While we should focus on prediction of weather for climate change, but there is other knowledge (e.g. bush survival and local foods) that is also being collected to help people. (e.g. the people of Ureparara who have knowledge on survival and climate change adaptation)
- In order not to confuse the nation, VKS feels that a first focus should be on documentation of knowledge related to climate change, and then go onto other topics like disaster risk etc.
- Some past work has been done in collaboration with schools. For example Charles Pierce and his students at the teacher's college worked on traditional cropping calendars from every island, to see if those seasons recorded by Meteo have any similarities. The student teachers crosschecked their calendars with fieldworkers.
- Some places in Vanuatu are hotspots for knowledge on climate change and disaster risk reduction, and should be the focus of initial work
 - On Pentecost there is advanced (30 years) knowledge on climate change and disaster response (food preservation).
 - Banks, Ureparapara and Ambrym have advanced knowledge in post-disaster food preservation.
 - In terms of the construction of cyclone proof buildings, SHEFA province have most experience. The traditional architecture can resist cyclones and earthquakes. These buildings have in-built flexibility.
 - With Navigation (e.g. on Epi) there are strong links to traditional knowledge and sea navigation.
 - NE & South Malekula know well the names of the winds and stars and their meanings
 - West-Coast Santo interesting in terms of customary plants that are resistant to pests and diseases.

Data Management and Storage

- Both the VMGD and VKS supported the proposal to create a centralised Database that will allow updating and access, but in a restricted and sensitive way
- VKS, VMGD are the two suggested hosts for this TK and Climate database
- There may be an option for a public portal, but only information that is not restricted and always including specific acknowledgements
- It is suggested that in addition to the national database, products that are community-usable are also developed and shared (books, posters, pamphlets etc).
- It may also be possible to store the more sensitive or detailed information in communities or provincial VKS branches that are more accessible to owners of the information. (E.g Tanna Kaljiral senta)

Once plenary discussions has been completed, the participants were split into small groups and asked to answer the following questions:

- Question 1: What is the best way to collect traditional indicators of climate and climate change?
- Question 2: What types of traditional knowledge is most useful for adapting to climate change?
- Question 3: How should traditional knowledge be stored and managed?
- Question 4: How is your organization already involved in traditional knowledge collection for climate adaptation?

Group Discussion Outcomes:

- Question 1: What is the best way to collect traditional indicators of climate and climate change?

Group 1	<ol style="list-style-type: none"> 1. Story telling 2. Use flip charts with pictures and text contains series of questions 3. Use field worker and his/her network to validate TEK 4. Use Meteo rainfall networks 5. Introductory letter to Malvatumauri NCC
---------	---

Group 2	<ul style="list-style-type: none"> • Cultural Centre / Field Officers - Director(VMGD) – Chief (Agr : Top Down) • PCVDRR – Church leaders <p>Introduction to community</p> <ol style="list-style-type: none"> a. Workshop ; <ul style="list-style-type: none"> - Awareness - Group Discussions - Survey - Acknowledgement.
Group 3	<ul style="list-style-type: none"> • Using vl local field workers as conduits/focal points for information collection • Local chiefs and national council of chiefs • Joint or cross organisational field workers and project more broadly.
Group 4	<pre> graph TD A[Met & Stakeholders] --> B[VKS awareness & cross check information] B --> C[PROVINCE (SG)] C --> D[Council of Chiefs e.g Tanna] D --> E[Area Council (Area Secretary)] E --> F[Chief] F --> G[VKS Field Worker] </pre>

- Question 2: What types of traditional knowledge is most useful for adapting to climate change?

Group 1	<ol style="list-style-type: none"> a. Indicators of cyclones <ol style="list-style-type: none"> I. Indicators of Drought II. Indicators of Rainfall III. Indicators of Warm Temperatures IV. Indicators of Earthquakes V. Indicators of Sunny or Rainy Days b. Traditional Calendars <ol style="list-style-type: none"> I. Planting of crops (Taro/ Yam) Seasons II. Fruit Harvesting III. Fish harvesting c. TEK Adaptation Methods <ol style="list-style-type: none"> I. Food preservatives (breadfruit, banana, fish drying) II. Alternative Food <ol style="list-style-type: none"> i. Erromango Vines ii. Nabalango cultivated & Bush d. Methods of planting to cater for abnormal weather patterns (too much rainfall / too dry) e. Modified building structures (huts on stilts , round huts) <p>Research Traditional animals able to adapt to extreme weather patterns</p> <div style="text-align: right; margin-top: 10px;"> <p>} Long Term & Short Term</p> </div>
---------	---

Group 2	<ul style="list-style-type: none"> • Traditional planting calendar • Temperature / rainfall/ flood/ cyclone indicators • (i.e. yellow hornet builds its nest on a house : cyclone) • Traditional control / adaptation measures
Group 3	<ul style="list-style-type: none"> • Collecting local historical climate data. e.g choosing a specific examples of a climate event & peoples stories of it as a starting point for discussions. • Data on seasonal climate indicators • Species / food specific data & cultivation habits e.g. yam – i.e. seasonal calendars • Coastal erosion patterns/ history (locally) – sea level rise. • Security and safety of community is paramount. Extreme weather events/ disaster related indicators • Links in natural) signs/ indicators e.g behaviour of particular animals. • Traditional adaptation measures & coping strategies for particular weather/ climate events.
Group 4	<ul style="list-style-type: none"> • EWSC (early warning system) • Traditional Adaptation • Mitigation Measures • Meta Data; (Name, Location, Identification, Position, Year) • Calendar

- Question 3: How should traditional knowledge be stored and managed?

Group 1	<p>Establish national advisory Board;</p> <ol style="list-style-type: none"> I. Portal – Maintain this database (internet based portal) II. Database amalgamates all traditional knowledge III. Clear directives that all information is transmitted back to V.C.C/ V.K.S IV. Sharing of information between organisations, communities, schools, provincial councils. V. Linkages of traditional knowledge and science / social science/ development studies. Gather teachers and provide them with relevant TEK for dissemination to schools/ communities. VI. Building good relationships / collaboration with organisations (NGOs, State, Private sector) <p>Create and develop activities for teachers and students.</p>
Group 2	<p>Cultural centre build on existing database.</p>
Group 3	<ul style="list-style-type: none"> • Information to be managed by a centralised govt department through an online portal. • Remote community level- sharing through communities. Mediums like DVDs, paper. • Engaging information sharing.e.g cartoons etc... • Different languages • Issue of ownership, permissions i.e. open access? Restricted to ...who..? <ul style="list-style-type: none"> - Who is allowed to update/ revise? - Who is allowed to access? - Who decides who and gives permission for access or update. - -
Group 4	<p>VKS, overall database. CC & DRR ; Data base. NDMO; Disaster Response Database.</p>

- Question 4: How is your organization already involved in traditional knowledge collection for climate adaptation?

Group 1	<p>Live and learn Environmental Education</p> <ol style="list-style-type: none"> 1. Children in Development (peace Building : Efate& Santo) 2. Human Rights (Efate, Santo) 3. Invasive species (Santo, Tanna) 4. Reduction of emission, deforestation, degradation of the environment (REDD: Santo, Tanna, Efate) 5. Water Security (water , Sanitation, Health and Association : Buninga) 6. Climate Change Adaptation (food security : Efate, Santo, Tanna) <p>USPACE Climate Change Project</p> <ol style="list-style-type: none"> 7. CCA Pele (Climate & Weather indicators) 8. CCA Moso (Tasiriki) 9. CCA Launamilo, Middle Bush Tanna. <p>GIZ/VMGD</p> <ol style="list-style-type: none"> 10. Port Resolution (TEK weather & climate indicators) <p>VITE</p> <ol style="list-style-type: none"> 11. Science students research Traditional Knowledge collected during holidays.
Group 2	Field officers (cultural center)
Group 3	<ul style="list-style-type: none"> • Need to agree on key questions .i.e. minimum standard – all around Vanuatu) • Meteo – Tanna, Santo • Vanuatu Red Cross = Torba Provice planning to do soon. • Paolo's study • Agriculture Department (Traditional Planting)
Group 4	<p>DLA: 12 sites</p> <ul style="list-style-type: none"> - Torres (Loh) - Merelava - South Santo - West Coast Santo - East ambae - West Ambae - Craig Cove - Efate - Emae - Aniwa - White Sand <p>CARE : 18 Sites (11 schools)</p> <ul style="list-style-type: none"> - Futuna – 4 sites - Santo Big bay – 6 sites - Maewo – 5 sites - Vanua Lava – 4 sites <p>VCC:</p> <ul style="list-style-type: none"> - Ambrym – 22 sites - Tongoa – 14 site - Efate – 3 sites - ANeityum -2 sites <p style="text-align: right;">} 78 Sites</p> <p>Live & Learn:</p> <ul style="list-style-type: none"> - Tafea – 3 sites - Efate – all schools - Santo – all schools, kohle, East Santo, South Santo.

In closing the summit, it was agreed by all that VMGD and VKS would take the lead on developing a national framework on the collection and use of traditional weather and climate information that places the Vanuatu Cultural Center at its heart and ensures that any agency or civil society group engaged in traditional climate initiatives will adhere to the protocols and approaches it sets out.

Appendices

I. Draft Data Collection Template

Assessment of Traditional Knowledge for Seasonal and Weather Forecast Applications in Vanuatu

This questionnaire has been prepared to assess the use of Traditional Ecological Knowledge (TEK) in Vanuatu for seasonal forecast applications. The information collected will be used to identify traditional seasonal indicators and comparing these with conventional VMGD seasonal forecasts to improve the communication of seasonal forecast information. Here TEK indicators may include behavioural or timing changes of plants and animals or observed changes in meteorological or astronomical variables.

Interviewer:	
Interviewee:	Date:
Village:	Province:
Age group (i.e., <20yrs; 20-30yrs; 30-50yrs; 50-70yrs; >70yrs):	
Position (e.g. elder, chief):	Language:
Do you have Audio/Video of the interview (Yes/No and description):	

Part 1: TEK indicators for seasonal/weather forecast application

1. Narrative (story) relating the traditional knowledge indicator to a climate or weather event (e.g., ‘When tree “Y” flowers early a “wet” season will follow.)

.....

.....

.....

.....

2. If the traditional knowledge indicators in (1) above is a plant or animal, please provide its Local Name and English/Common Name (if possible):

.....

Scientific Name (if possible):

.....

3. Type of traditional knowledge indicator (i.e., Weather – 1 to 24hrs; Weather – 2 to 10 days; Seasonal – 1 to 3 months; Longer – please specify how long):

.....

.....

.....

4. How reliable is this TK indicator for weather or climate forecasting (e.g. Low – rarely correct, Medium – more often than not correct or High – almost always correct):

.....

.....

5. Have you noticed any change in the timing of the TK indicator in the last few years/decades? If so how?

.....
.....
.....

6. Who uses this (these) TK indicator(s) and for what purpose, including non-climate/weather related purposes (e.g., used by farmers to decide which crops to plant and when)?

.....
.....
.....

7. How often is the TK indicator used (e.g., rarely, only occasionally or very commonly)?

.....
.....
.....

8. When should the TK indicator be observed (e.g., look during September-November)?

.....
.....
.....

9. What is the typical time delay between seeing the indicator and the subsequent weather/climate event (e.g. bird seen on 5 May means weather bad will come 4 days later; flowering of plant in early October means drought is likely over the period December to March)?

.....
.....
.....

10. How can you tell the indicator is in the state it is in (e.g. If it relates to the timing of flowering, what do you mean by 'early' or 'heavy flowering' etc)?

.....
.....
.....

11. How do you define the climate or weather event (e.g. provide dates or time period it is likely to occur and define any terms such as wet, dry, hot etc)?

.....
.....
.....

12. Who holds or owns the more detailed information about the indicator (e.g., village weather man, chief or elder, etc)?

.....
.....
.....

13. Do you know if the same indicator is used elsewhere by different people, villages or islands? If so please indicate

the name of the village or island where it may be used?

.....
.....

14. Does historical information (written, photographic or oral) exist for the indicator and, if so, who holds it?

.....
.....

Part 2: Exploring variations in people’s sources and uses of weather/ climate forecast

1. In addition to traditional knowledge identified in Part 1, do you also use weather or climate forecast information from any of the following sources? If so, how often (i.e., daily, weekly, monthly, twice-a-month, etc.)?

- a) Local newspaper:
- b) Television:
- c) Radio:
- d) Other sources (please specify):

2. If you answered yes in (1) above, please describe what you use the forecast for (i.e., fishing, preparing land for planting crops, harvesting crops, etc.)?

.....
.....

3. What are your views on combining modern weather forecasting and traditional indicators?

.....
.....
.....
.....

4. The combination of modern weather and seasonal forecasts with traditional indicators (please circle all that are applicable):

- a) Is something that I try and do myself and I do not need this information from the government
- b) I would like someone to provide this information to myself and my community.
- c) Would improve community awareness of weather and climate events and may increase the ability of the communities to deal with extreme events
- d) Would not be accepted by some community members
- e) Would make no difference to how my community deals with weather and climate events
- f) I only use traditional methods and am not interested in modern forecasts

Any additional comments:

.....
.....
.....
.....

DRAFT

Appendices:

II. Sample data collected on Tanna Island by local collectors after going through several trainings by VMGD staff on the template

Date	Village	Name	TK indicators for Seasonal/weather forecast	Type of traditional knowledge indicator	How reliable is this TK for weather or climate forecasting	have you noticed any change in the timing of the TK indicator in the few years/decades? If so how?	Who uses this (these) TK indicator(s) and for what purposes, including non-climate/weather related purposes	How often is the TK indicator used?	When should the TK indicators be observed?
14.11.2012	Iankuanemi	Kuaniamek	Early flowering of WAELKEN (NING) in their language	indicates a seasonal forecast of a 2 Months (July- August) which they normally experience HOT season in beginning of July 2-5 and to end of August and sometimes beginning of September	It is always correct	No	Farmers, to prepare crops in their garden (preservation technique) to prepare for cyclone	Very commonly in every year	beginning of July (first week)0
14.11.2012	Iankuanemi	Joel	Early flowering of TERA (sino) In their own language	indicates a seasonal forecast of a 2 Months(july-August) experiencing Hot season	Always correct	No	Farmers & Fishermens, to prepare as they know there is a cyclone coming soon	Very commonly in every year	July-August
15.11.2012	Ianeiai	Sam Louis Nauka	Fruit trees (NUKUI NAI) once they get huge bundles of fruit	indicates a 2-3 months of Hot season and a sign to prepare for cyclone season	More often than not correct or high	Yes, a shifting change on the exact dates as usual in the past	Every community members	Very commonly in every year	Normally on November
13.11.2012	Iankuanemi	Nakweren	MAK (Short Leg) a bird	indicators of weather of 2 to 10 days	always correct	No	Village weather Man to send message to the Village people	only occasionally	November only
15.11.2012	Ianeiai	Sam Louis Nauka	Fruit trees but mostly Banana and others (Orange, Mango, Mandarine etc..)- NAHMIAN in their language	Extreme events-	almost correct	no	Vilage Captain and chiefs	Very commonly in every year	November-December

DRAFT

Appendices

III: Draft work Plan for development of National Framework

GLOBAL CLIMATE CHANGE ALLIANCE – VANUATU PROGRAMME ESTIMATE No. GCCA-V/01, ADDENDUM No. 1

Operational period: 24 April 2012 to 23 January 2014 (including two month closure period)

ACTIVITY	1.4.6 Framework for Traditional Knowledge & Climate Change and Disaster Risk Reduction
TIMEFRAME	Jan-Nov 2013
BUDGET	1,252,134 Vt
PROJECT MANAGER	Brian Phillips, PMU Manager, VMGD
PROJECT LEAD	Christopher Bartlett
SUPPORT	Phillip Malsale, Mike Waiwai, Malcolm Dalesa, Pete Turnbull

1. Links to other projects

ACTIVITY	TIMING	LINK	CONTACT
VMGD Strategic Plan	Jan-Mar	To incorporate VMGD TEK priorities into framework	Philip Malsale
Reaching the Last Mile through Integration of Local Climate and Weather Indicators with Modern Forecasting Techniques in Vanuatu: Pilot Program (VMGD led, CosPPAC funded)	2013-2015	Will set the stage for the April 2013 stakeholders and planning workshop, and ensure the formal relations have been established among all TEK partners	Philip Malsale
National Policy CC & DRR (GCCA-V, 1.1.1)	Jan-Nov 2013	To inform the traditional knowledge section of policy –analysis, priorities and action plan	Rebecca Duffy
AgroMet (GCCA-V, 1.4.7)	May	Any key TEK priorities identified in the framework can be taught or discussed at the summit	Jesse
Inventory and NC2	?	To provide context including CC vulnerabilities and a summary of government action to date, plus any priorities to be incorporated into the policy and plan	Brian
Other TEK activities (Red Cross, GIZ, Live and Learn)		To ensure that all partners collecting, promoting or disseminating TK will do so according to an agreed framework and approach	Christopher

2. Objective

The expected “result” as per the approved PE 01 (section 1.4.3) is:

3. GoV capacity for partner-dialogue on and coordination of CC strengthened
4. National awareness on CC vulnerabilities and adaptation opportunities enhanced and visibility of the program achieved

3. Project Summary

At present multiple stakeholders are currently involved in activities related to traditional knowledge and climate change, and several major projects on the topic will be launched in 2013. In order to ensure

smooth implementation, and effective coordination, a strategic framework which satisfies the concerns and aspirations of all parties must be developed.

Under NAB oversight, and in consultation with stakeholders, the PMU will oversee the establishment of a Framework for Traditional Knowledge & Climate Change and Disaster Risk Reduction (1.4.6). This will be accomplished through qualitative stakeholder interviews and aspiration research, followed by a 2-day workshop facilitated by local experts. Depending on funding, the activity may include a joint traditional knowledge data collection mission to one Province (to be determined).

4. Organisation & Reporting

The Project Lead for this activity is the Climate Change Technical Advisor within the PMU. The TA works alongside, and receives guidance from, the PMU Manager and the Director of the VMGD. A NAB Technical Team, comprising VMGD and PMU staff, World Bank advisers, Vanuatu Cultural Center associates and NDMO representatives functions as an advisory committee on a day-to-day basis.

The Project Lead is responsible for:

- i) ensuring the activity is implemented, including delegation and coordination of tasks
- ii) ensuring project knowledge, including all documentation, is shared or easily accessible
- iii) ensuring procurement is in line with the activity budget and the EU Practical Guide
- iv) monitoring progress and referring issues to the PMU Manager for resolution as necessary
- v) delivering brief informal progress reports to the PMU and Technical Team at weekly PMU meetings;
- vi) providing detailed monthly progress reports to the Manager and VMGD Director;
- vii) providing updates for the PMU Manager or VMGD Director to present to NAB as necessary;
- viii) providing input to GCCA-V progress reports to the EU (this process will be managed by the M&E Officer)
- ix) completing a closure report.

All formal reports to the EU and any activity documents intended for external audiences must be approved by the PMU Manager or Imprest Administrator and the VMGD Director prior to release.

The NAB is the Steering Committee overseeing development of the Framework for Traditional Knowledge & Climate Change and Disaster Risk Reduction. Formal responsibility for managing implementation of Activity 1.4.6 rests with the VMGD Director who has delegated this responsibility to the PMU Manager. However, as per formal GCCA-V documentation, the Imprest Administrators are responsible to the EU in the first instance for all GCCA-V related activities. The PMU Manager and the Imprest Administrators report to the VMGD Director.

5. Monitoring and Evaluation

The relevant section of the logical framework for the GCCA-V Program (as per PEO1/Addendum 01) is below. [Note: Revisions may be made after finalisation of all Activity Plans in consultation with the M&E Officer.]

Intervention logic	Objectively verifiable indicators	Sources of verification	Assumptions
Result 3: GoV capacity for partner-dialogue on and coordination of CC strengthened	Proposed workshops for stakeholder and finance mapping and cc/drr actor capacity building held	Workshop reports	That funding will be released in time to implement all workshops within the funding period
Result 4: National awareness on CC vulnerabilities and adaptation opportunities enhanced	Research and data collection on traditional knowledge and indicators, lessons learned and agricultural sector adaptation practices completed	Symposium transcripts and records Research reports	That qualified and appropriate researchers are available to undertake research

6. Implementation

Activity 1.4.6 will be implemented with the support of researchers and facilitators from the University of the South Pacific, the University of Western Sydney and the Vanuatu Cultural Center. This will include qualitative stakeholder interviews and workshops.

Workshop logistics will be engaged on the basis of single offer direct agreements.

While the Technical Advisor will coordinate the process, all members of the PMU project staff funded under the GCCA-V (PSOs, M&E Officer and Communications Officer) will contribute the framework development, particularly those portions that are relevant to their work. The Administration Officer will provide logistical support, and the Technical Team will assist with some coordination, analysis and input to the framework.

The broad timeframe for the activity is set out below.

ACTIVITY	TIMEFRAME
1. Desktop review	Thru 14 Feb 2013
2. Qualitative stakeholder interviews and meetings	15-30 Feb 2013
3. First Draft Traditional Knowledge Framework & Stakeholder Workshop	6 March 2013
4. Redrafting of Framework	7-15 March 2013
5. Validation of Final Framework	18 March 2013
6. COM endorsement	?
7. Implementation	April 2013 onwards

7. Budget

The budget for Activity 1.4.6 is set out in the table below. The Project Lead will be responsible for managing the Activity budget and ensuring all necessary documentation is completed, signed by the Imprest Administrator and provided to the NAO accountant for payment. The Project Lead must ensure the PMU keeps proper financial records for all Activity spending. All procurement must be undertaken in accordance with the EU Practical Guide.

Item No.	Activity budget item	Unit	Qty	Unit rate (Vt)	Total (Vt)
1.4.6	Establish Framework on Traditional Knowledge & Indicators (TKI) on CC				
	TKI workshop				
1.4.6.1	Catering		60	2,574	154,440
1.4.6.2	Stationaries		30	468	14,040
	Joint Field Data Collection mission (5 day)				
1.4.6.3	Air travel		7	39,897	279,279
1.4.6.4	Generator fuel to power laptops		25	351	8,775
1.4.6.5	Land transport hire		10	9,945	99,450

1.4.6.6	Per diems	person	70	9,945	696,150
				TOTAL	1,252,134

8. Visibility plan

The EU flag and written acknowledgement of funding through the GCCA-V will be included on all formal workshop invitations, workshop outcomes documents and the final framework document.

The EU/GCCA will be formally recognised at the launch of the framework through a media release, radio and TV interviews, any associated framework documentation such as fact sheets.

9. Approvals

POSITION	SIGNATURE	DATE
Jotham Napat, VMGD Director		
Williams Worworkon, Imprest Administrator		
Brian Phillips, PMU Manager		



giz



Event: TRADITIONAL ECOLOGICAL
Date: KNOWLEDGE INDICATORS WKSP
Location: 14 NOV 2012, VMGD CONFERENCE

Name	Organization	Contact Email/Telephone	Signature
Andrina K. Thomas	Live + Learn	andrina.thomas@livelearn.org	
Merniam Toalake	Quarantine	mstt@vanuatu.gov.vu	
Barua I.	VCC-PCR Project	cisnm4@gmail.com	
Malcolm Dalea	PMU / VMGD	mdalea@meteo.gov.vu	
Florence Iauhe	CARE Int.	22951 florence.iauhe@careintl.org	
Meliteras James	CDU	43508 jmeliteras@vanuatu.gov.vu	
Alice Taram	NBMO	alatang@parliament.gov.vu 7774307	
Glavinda Anclre	Live & Learn	glavinda.anclre@livelearn.org	
Job Dalili	VCC-PCR Project	7793732 jobdalili@gmail.com	
William Wozow	VMGD	wwozow@meteo.gov.vu	
Sheng Cuo	Australian BOM	squo@bom.gov.au	
Kylie Mullins	VMGD	kmullins@meteo.gov.vu	
ULA MAJEWski	VMGD	umajewski@meteo.gov.vu	
Rebecca Duffy	VMGD	rduffy@meteo.gov.vu	
Melinda Natapci	VMGD	melnat@meteo.gov.vu	
Patricia Mawa	VMGD	patou@meteo.gov.vu	
Peter Feke	VMGD	pfeke@meteo.gov.vu	
Christopher Bartlett	SRC-G7	christopher.bartlett@giz.de	

Bartlett@giz.de



giz



Event:
Date:
Location:

Name	Organization	Contact Email/Telephone	Signature
Sofia Apollonou	ND MO	Sapollonou@vanderbilt.gov.vu 7717 317	<i>[Signature]</i>
Charles AUROUET	Vanuatu Red Cross	5527418	<i>[Signature]</i>
Susan Postawko	Univ. of Oklahoma USA	spostawk@ou.edu	Susan Postawko
Marks Morrissy	Univ. of Oklahoma USA	MMORRIS@ou.edu	<i>[Signature]</i>
Karen Bennett	BOM	k.bennett@bom.gov.au	<i>[Signature]</i>
Lynda Chambers	BOM	L. Chambers @bom.gov.au	<i>[Signature]</i>
Salesa Kaniaka	VMGD	skaniaka@meteo.gov.vu	<i>[Signature]</i>
Johnam N	VMGD	jnopet@meteo.gov.vu	<i>[Signature]</i>
Peter Jesul	PARO	pjesul@vanuatu.gov.vu	<i>[Signature]</i>
Sylvio Bule	Quarantine	bsylvio@vanuatu.gov.vu	<i>[Signature]</i>
Charlie Pierce	VITE	cbpierce@vanuatu.com.vu	<i>[Signature]</i>
Joe MALA	VMGD	5907426 jsmala@meteo.gov.vu	Malastanby
Philip Malsale	VMGD	Malsale@meteo.gov.vu	<i>[Signature]</i>
Jerry Bottery	VITE	joy.bottery@ifer.edu.vu 5967287	<i>[Signature]</i>