



VANUATU CLIMATE CHANGE AND
DISASTER RISK REDUCTION

LESSONS LEARNED AND BEST
ADAPTATION PRACTICE PROFILE



TRADITIONAL WEATHER KNOWLEDGE

PILOT PROGRAM FOR THE PACIFIC ISLANDS CLIMATE PREDICTION PROJECT

Reaching the Last Mile through Integration of Local Climate and Weather Indicators with Modern Forecasting Techniques in Vanuatu



PROJECT BRIEF |

Communities in Vanuatu have always related to the climate and weather in their own context. Being highly exposed to risks of extreme events such as tropical cyclones, flooding and droughts, communities have naturally adapted in their own ways. They are able to use their surroundings to indicate in advance the different weather extremes they are likely face. These careful observations of their surrounding have allowed them to come up with their own traditional forecasting methods which have been tested and proven to be very reliable.

In parts of the country where communication is still a challenge, communities continue to rely on their knowledge of the environment to guide their preparedness for extreme events. This project is to integrate the traditional and scientific knowledge and use as forecast applications to the communities throughout Vanuatu.

PROJECT DURATION |

5 yrs – 2012 - 2016

LOCATION(S) COVERED |

Tanna, Efate and the four pilots sites still pending and need to be visited that is Malekula, Pentecost, Ureparapara and Tanna

FUNDING |

Australian AID through Climate and Oceans Support Pacific Program (COSPPAC) and a component under the EU-GCCA Climate Change Adaptation Project being implemented by the NAB.

PARTNERS/COOPERATING ORGANIZATIONS|

Lead Agencies: Vanuatu Meteorology & Geohazards Department (VMGD), Vanuatu Kaljoral Senta (VKS), Bureau of Meteorology (BoM), Australia, SPC-GIZ

OBJECTIVES & GOALS |

More specifically, this project will have the following key objectives:

- 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.

The project also aims to bring together different scientific and cultural groups that are involved in climate related projects in Vanuatu. This



collaboration can help open avenues towards better disaster prevention, preparedness, response and mitigation.

STRATEGIES & PROCESSES/METHODS |

The VMGD, during its Agro-Met Summit held in March 2012, established a Memorandum of Agreement (MOA) with the Department of Agriculture and Rural Development (DARD). It is a network we can work around and utilize under the program and exploit the linkages to traditional cropping calendars.

RESULTS |

The following are the primary outcomes that are expected to be achieved by the end of the project:

1. Historical information of TK indicators will be collected and entered into the TK database.
2. TK indicators currently used in different communities for weather and climate forecast applications will be identified and documented.



3. An infrastructure for continuous monitoring of TK indicators will be set-up. This will involve training individuals within VRN structure on the monitoring of TK indicators.
4. A database will be developed for recording of TK indicators.
5. Forecasts using TK indicators will be verified against scientific methods, and a mechanism for disseminating consensus forecast based will be determined.

This project is also likely to advance the scientific understanding of participating communities on key drivers of weather and climate and how this understanding can be incorporated into their traditional cognitive views of weather and climate. It is also likely to strengthen ties between different scientific and cultural groups in Vanuatu. This bridge is necessary for climate change adaptation and disaster risk management purposes.

INITIAL FINDINGS |

This is still the preliminary findings, it shows that;

- There are no standard observation techniques/methods for predicting climate events
- Different villages, islands and provinces have many different indicators for climate events



E.g. villages living close on the coast of Malekula rely on mangrove flowering to indicate active cyclone season while in other areas they use turtles laying eggs inland as their indicator.



- However some commonalities were found in most areas in Vanuatu.

Initial findings were collected and further work on verifying the indicators are yet to complete.

PLAN & SUSTAINABILITY |

- VMGD is working closely with COSPPac and coordinate the arrangements with local institutions such as the Vanuatu Kaljoral Senta (VKS) for documenting and integrating traditional knowledge of weather and climate forecasts with 'modern' scientific methods.
- Dedicated VMGD staff member in the Climate Division was allocated to work full time on this initiative for the period of the program
- The program will be supported by staff in COSPPac – ecological expertise, research and modelling expertise, IT and database expertise.



BEST ADAPTATION PRACTICES |

Transforming local dialogues for tradition weather and climate indicators as a tool for integrating modern weather and climate forecasting techniques. This is to help the Communities throughout Vanuatu to be more "resilient" to climate change and disasters.

LESSONS LEARNED |

Despite the challenge, one of the lessons learned is that the project does not only use the Traditional indicators to forecast the climate and weather events but also help to revive the traditional techniques and stories used before by our ancestors.

A thorough coverage throughout the country needed to be addressed to capture the full potential of this resource pool



For more information

For more information on weather, climate, forecasts and warnings, geological hazards issues contact Vanuatu Meteorology & Geo-hazards Department (VMGD) www.meteo.gov.vu .

For more information on disaster preparedness actions, contact the National Disaster Management Office (NDMO).

Project Contact:

Mike Waiwai, Climate Section
Vanuatu Meteorology & Geo-hazards Department
Ph: +678 24686 | Email: mwaiwai@meteo.gov.vu

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