



Vanuatu Meteorology and Geo-hazards Department

5th National Climate Outlook Forum (NCOF)

Theme: Climate Information for a Resilient Agriculture



CONTENT

Acknowledgements:.....	4
Introduction.....	5
NCOF Objectives:.....	5
Summary of discussions:	6
Day 1 - Monday 30 October 2023	6
Session 1: Opening and NCOF overview	6
Session 2: Overview on Vanuatu Meteorology and Geo-Hazards Department	7
Session 3: Meteorology, Climate and Climate Change.....	7
Session 4: Vanuatu Rainfall Network	8
Day 2 - Tuesday 31 October 2023	9
Session 5: Vanuatu Rainfall Network (continue)	9
Session 6: Climate and Traditional Knowledge	9
Exercise 2: TK Monitoring Form.....	11
Session 7: Traditional Knowledge Programme (continue) – Climate Watch App.....	11
Day 3 - Wednesday 1 November 2023.....	13
Session 8: Introducing the Vanuatu Klaemet Infomesen blong redi, adapt mo protekt (VanKIRAP).....	13
Session 8.1 Vanuatu Climate Maps and Vanuatu Climate Futures Portal	13
Acknowledgements:.....	14

Session 8.2 Community Climate Centres - Taking climate information to the ‘last mile’	14
Session 9: Observations Division, VMGD	15
Session 10: Climate Services Division, VMGD	16
Session 11: Weather Forecast Division, VMGD	16
Session 12: Geo-Hazards Division, VMGD	18
Session 13: ICT and Engineering Division, VMGD	18
Day 4 - Thursday 2 November 2023	18
Session 14: Importance of Climate Information for the Agriculture Sector	18
Session 15: Tailored System of Climate Services for Agriculture (OSCAR)	18
Session 16: Agriculture training - OSCAR demonstration	19
Session 16: Site visit to the Vanuatu Agriculture Research Training Centre (VARTC)	19
Day 5 - Friday 3 November 2023	20
Session 17: El Nino Southern Oscillation Status	20
Session 18: Signing of Contracts for the Vanuatu Rainfall Network (VRN)	21
Session 19: En Nino Southern Oscillation Outlook (Looking Forward)	22
Session 20: VMGD Official Declaration of the 2023/24 Cyclone Season	22
Annex A - NCOF Agenda and TK Program	23
Annex B - Communications and media coverage	23
Annex C: 2023 National Tropical Cyclone Outlook	25
Annex D: NCOF Evaluation Form	26

Acknowledgements:

The Vanuatu Meteorology and Geo-hazards Department (VMGD) wishes to acknowledge the following people and organizations:

- a. Vanuatu Rainfall Network volunteers
- b. Vanuatu Farmers
- c. Vanuatu Department of Agriculture and Rural Development
- d. Sanma Provincial Council
- e. Luganville Community Climate Centre

The sponsorship and funding support from the following projects and organisations is greatly appreciated:

- I. Green Climate Fund (GCF)
- II. Secretariat of the Pacific Regional Environment Programme (SPREP)
- III. Vanuatu Klaemet Infomesen blong redi, adapt mo protekt (VanKIRAP) project
- IV. Earthwatch/IUCN and Global EbA fund
- V. Bureau of Meteorology (BOM).
- VI. Government of Vanuatu

Special acknowledge for all the facilitators and presenters: Fred Jockley, Jerry Timothy, William Bae Worwor, Gordon Edward, Moirah Matou, Glenda Pakoa, John Ruben, Albert Willy, Levu Antfalo, John Junior Niroa, Esther Saul, Joseph Worwor, Pakoa Leo, Lynda Chambers, Rafoi Simo, Abel Kalo, Connie Sewere, Kalsuak Gorden, Neil Malosu, John Mangau, Rafoi, Vanessa Iaru, Bradley Baniuri, Joseph Nishina, Nick Howlett, Ellian Bangtor and Sunny Kamuta Seuseu.

Introduction

The Vanuatu Meteorology and Geo-hazards Department (VMGD) in partnership with the Department of Agriculture and Rural Development (DARD), the Secretariat of the Pacific Regional Environment Programme (SPREP), Vanuatu Klaemet Infomesen blong redi, adapt mo protekt (VanKIRAP) and ClimateWatch projects co-hosted the 2023 National Climate Outlook Forum (NCOF) in Luganville, Santo from 30 October to 03 November 2023.

The theme of the NCOF is “**Climate Information for a Resilient Agriculture**”.

The centrality of climate information to the agricultural sector cannot be overstated, as it serves as an indispensable tool for farmers, policymakers, and other stakeholders within the agricultural domain in Vanuatu. The intricate interplay between climate and agriculture underscores the critical importance of timely and precise climate data in upholding objectives related to food security, the adoption of sustainable farming practices, and the overall economic stability of the nation.

The annual convening of the National Climate Outlook Forum (NCOF) traditionally follows the Pacific Island Climate Outlook Forum (PICOF) and serves as a pivotal platform for fostering in-person exchanges and knowledge-sharing between climate information providers and end-users. This collaborative initiative is designed to mitigate climate and ocean-related risks in the context of Vanuatu. A notable feature of the NCOF is the presentation of the Tropical Cyclone Seasonal Outlook Statement for Vanuatu, which outlines expectations for the forthcoming tropical cyclone season 2023/2024. Additionally, the forum includes a refresher training session tailored for the volunteers of the Vanuatu Rainfall Network and Traditional Knowledge focal points.

NCOF Objectives:

- I. To train and upgrade the skills/knowledge of all Rainfall Network volunteers and Traditional Knowledge focal points in regards to quality data collection and monitoring.*
- II. To discuss how ENSO impacts the agriculture sector and how climate information can be used to minimize the impacts*
- III. To strengthen collaboration and partnerships between VMGD and Agriculture sector/Farmers and the VRN and TK collectors.*
- IV. To discuss and determine how monthly and seasonal outlooks are produced in terms of accuracy, utility, weaknesses and strengths;*
- V. To discuss how VMGD is currently accessing and assessing the available guidance, making it nationally relevant, tailoring them for specific end users, and disseminating them to users;*
- VI. To showcase new and enhanced climate information services and tools developed by the Climate Information Services for Resilient Development Planning (VanKIRAP) project such as the (1) Tailored System of Climate Services for Agriculture (OSCAR), (2) Vanuatu Climate Futures Portal, (3). Operational and Historical Climate Maps for Vanuatu and (4). Climate Watch App for monitoring and collecting traditional knowledge data.*
- VII. Declaration of the 2023/24 Tropical Cyclone Seasonal Outlook.*

The NCOF provides a platform for VMGD to discuss climate forecasts and climate information services that support decision making in climate sensitive sectors such as agriculture, tourism, water, infrastructure and fisheries to name a few.

The 2023 NCOF is specifically focussed on the Agriculture Sector.

Summary of discussions:

This section summarizes the agenda items and important discussions raised by participants. The NCOF program is available in annex A.

Day 1 - Monday 30 October 2023

Session 1: Opening and NCOF overview

Mrs Moirah Matou welcomed the participants and delegates from each province. Acknowledge the challenges that the country is going through following the devastation as a result of Severe Tropical Cyclone Lola.

It was noted that 87 participants registered on Day 1.



Figure 1: 1st day group photo of facilitators and participants

The NCOF was officially launched by Mr. Fred Jockley, Acting Deputy Director, Vanuatu Meteorology and Geo-hazards Department. He emphasized the importance of weather and climate information to underpin planning and decision making to facilitate community resilience.

Mr. Jerry Timothy, Manager for the Climate Division outlined the objectives of the NCOF and the structure of the week long program.

The session ended with the following quiz:

1. What does NCOF stand for?
2. What is the theme for this workshop?
3. What is the 5th objective of this workshop?

Session 2: Overview on Vanuatu Meteorology and Geo-Hazards Department

Mr. William Bae Worwor provided an overview presentation on VMGD, its mandate, mission, vision, its different programs and functions as well as staff members, and the different hazards monitored by the department. Mr. Worwor also highlighted that the Vanuatu Rainfall Network (VRN) contributes substantially to the observations data for the department's objectives.

Copy of Mr. Worwor's presentation is available here:

The presentation ended with the following quiz:

1. What is one secondary hazard for El Niño?
2. What is one secondary hazard for La Niña?

During the second half of this session, Mrs. Moirah Matou presented an overview of the Van-KIRAP Project, how the project came about from negotiations at the Conference of the Parties (COP), funded by GCF and the accredited entity is the Secretariat of the Pacific Regional Environment Program (SPREP), its alignment to national, regional and global frameworks. The aim of the project is to enhance and improve capacity and technical resources of the department.

The presentation ended with the following quiz:

1. What does Van-KIRAP stand for?
2. What is one of the sectors Van-KIRAP works with?
3. What is one main objective of Van-KIRAP?

Session 3: Meteorology, Climate and Climate Change

John Ruben presented on the difference between weather, climate, climate variability and climate change, understanding the current and changing climate in the region, understanding climate projections, possible impacts and planning of climate change.

Session 4: Vanuatu Rainfall Network

Mr. Kalsuak Gorden and Mr. Joseph Worwor co-presented on the VRN network and the impact the VRN has had on climate monitoring and increasing the understanding of climate in Vanuatu.

The presenters provided an overview of the new Dashboard developed to facilitate the capture of weather and climate observations by the VRN network including climate elements such as rainfall, temperature, winds, clouds, severe weather and traditional knowledge.

The VRN dashboard is still under construction.

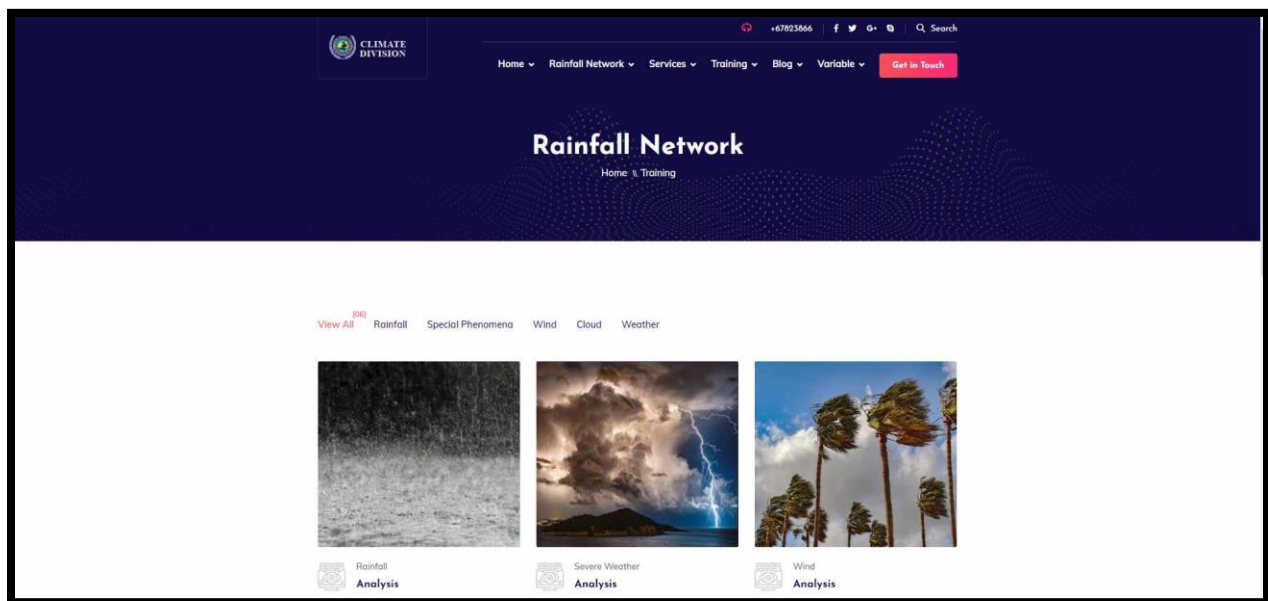


Figure 2: Vanuatu Rainfall Network Website home page.

The Rainfall Network website is intended to collect and analyze rainfall data, and can be accessed offline. Mr. Kalsuak reassured the VRN Collectors that this tool will be improved further and launched in Bislama. Mr. Worwork gave a brief overview on how to collect quality data on the climate elements listed above, and how to fill the online form.

Audience Participation:

1. How to determine direction of the wind: Hang a piece of cloth on a stick, place it up on a tree within 10m from the surface.
2. How to install a rain gauge: the back of the rain gauge to face north.

Day 2 - Tuesday 31 October 2023

Session 5: Vanuatu Rainfall Network (continue)

The participants were given group exercises on how to install manual raingauges on 2x4 timber and the process for reading, recording daily rainfall observations. The training exercises were focussed on the VRN volunteers, whilst other participants including technical staff from the Department of Agriculture and Rural Development found the exercises useful.



Figure 3: Group Exercise - installing a rain gauge and collecting rainfall data

Session 6: Climate and Traditional Knowledge

Mr. Albert Willy, VanKIRAP Traditional Knowledge Coordinator presented on the traditional knowledge component of VanKIRAP. Mr. Willy gave a brief overview of what is Traditional Knowledge and its importance, the project sites, TK indicators of extreme weather events, and the TK products such as the TK Calendar, TK Sign Board and Glossary. Mr. Albert also went through the Climate Watch App and how the participants could enter any TK indicators into it.

Dr. Lynda, Rafoi and Mr. Albert handed out questionnaires to participants to answer. The questionnaires were centered around TK and Climate Information, what kind of climate products do the participants know about, do participants use information from VMGD? Do participants find TK useful?

Exercise: Group activity on different indicators, what do these indicators indicate, and what action will you take when you see these indicators.

1. Cloud color during sun set
 - Red color observed (next day – fine weather)
 - Dark/cloudy (bad weather/rainy/windy conditions)
2. Dove (Short Leg) – Cyclone

- Nest observed below 1m height

3. Hornet Nest – Cyclone

- Nest observed below 1m height

4. Low water level observed (drought)

- ‘wintywinty’ plant observed near river banks

ACTION

Advise community to store and manage water

5. Sea bird (pidgin blo solwota/pidgin blo Mataso) – Cyclone

- Observed further inland

ACTION

Advise community to prepare (Secure houses, store food/water, move livestock to safer locations, etc..)

6. Leaves turn up-side down – Cyclone

ACTION

Advise community to prepare

7. Abundance of seasonal fruit trees observed – Cyclone

ACTION

Advise community to prepare

8. Turtle laying eggs inland – Cyclone

9. Special ground worm observed – Heavy rain

10. Narara falling leaves – Drought

11. Taro leaves turning yellow/brown – Drought

ACTION

Advise farmers to plant drought resistant crops and safe enough drinking water

12. Rainbow – Drought

- Rainbow observed near the coast (NW Tanna)

13. Full rainbow observe - Fine weather

14. Half rainbow observe - Bad weather

Exercise 2: TK Monitoring Form

Participants were asked to observe/record some TK indicators (Plants) outside the workshop venue and complete the TK Monitoring form that was circulated earlier.



Figure 4: Participants in group exercises looking at TK Monitoring form

Refresher Quiz: Why is TK important? – Cheap. It is accessible and available in our homes and villages.

Session 7: Traditional Knowledge Programme (continue) - Climate Watch App

Traditional Knowledge officer presented on Traditional Knowledge or *lokol save* of how on the past Vanuatu natives used the signs/behavior from plants and animals to understand the climate and weather. Plants and animals were indicators/predictor of the weather and climate in the near future. In their own way of life and culture our natives long ago were resilient and adapted because of their traditional knowledge.

The participants were all aware of the TK monitoring forms. Mr Albert Willy introduced the newly launched Traditional Knowledge booklet and calendars which participants easily acquainted with. Participants familiarised with National Traditional Knowledge Indicators.

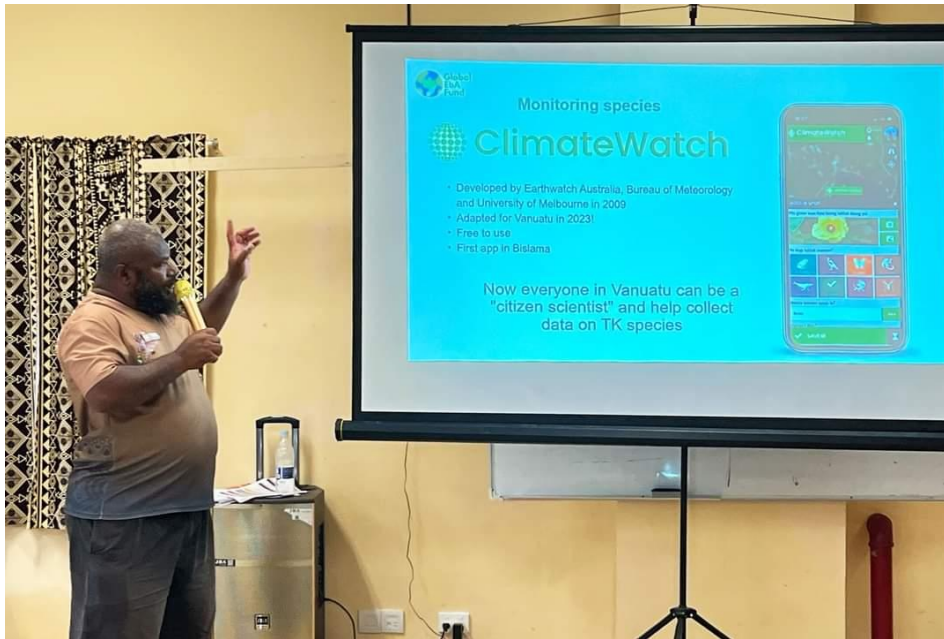


Figure 5: Traditional Knowledge officer presented on Traditional Knowledge of weather and climate, and climate Watch app



Figure 6: Participants trying out the new Climate Watch App

Mr Albert then continued by introducing the newly developed Vanuatu Climate Watch App, which would ease the task by basically loading photos of indicators with descriptions. This encouraged all participants to contribute to TK indicators and the TK database. A lot positive feedback was received with how easily Climate Watch App worked.

The second part of the session the participants moved out to the field and trialed out the Climate Watch App. All were transported to the Vanuatu Agriculture Research Centre and used the Agriculture field session to collect TK data.



Figure 7: A participant uploading Navele Tree in fruit (nut)

Day 3 - Wednesday 1 November 2023.

Session 8: Introducing the Vanuatu Klaemet Infomesen blong redi, adapt mo protekt (VanKIRAP)

Session 8.1 Vanuatu Climate Maps and Vanuatu Climate Futures Portal

Mr. Sunny Kamuta Seuseu, Secretariat of the Pacific Regional Environment Programme (SPREP) provided a presentation on the new tailored climate information services (CIS) tools that was developed by VanKIRAP project with funding support from the Green Climate Fund (GCF). These tools include: (a) New Climatology and Operational Maps (b) Vanuatu Climate Futures Portal.

The Vanuatu Framework for Climate Services (VFCS) enshrines the need for enhancing the development, tailoring, communication and uptake of climate change science and services in climate sensitive sectors and communities.

The Climate Information Services for Resilient Development Planning Project locally known as the Vanuatu Klaemet Infomesen blong redi, adapt mo Protekt (or VanKIRAP) is addressing the 11 out of 18 priorities for Vanuatu on delivering practical climate information services, tools and resources to support resilient development.

The VanKIRAP project is a FLAGSHIP project for SPREP and VMGD in partnership with the Green Climate Fund. Van-KIRAP is breaking ground and setting the benchmark in the delivery of climate information services (CIS) to the “last mile”.

An example of the ground-breaking tools the project is developing for the Vanuatu Meteorology and Geo-hazards Department (VMGD) is the Vanuatu Climate Futures Portal.

Vanuatu Climate Futures Portal - <https://www.vanclimatefutures.gov.vu/dashboard/home>

The Vanuatu Climate Futures Portal is a gateway to climate information services and tools, providing users with the science, mapping, data, videos and other resources to plan their adaptation actions.

The web portal will be the primary operational tool used by VMGD to tailor national and provincial climate change projections to support planning, resilient development and climate change adaptation in Vanuatu. It includes sector case studies for Agriculture, Fisheries, Tourism, Infrastructure and Water to demonstrate how updated Vanuatu Climate Change projections using CMIP5 and CMIP6 model outputs are utilized by climate sensitive sectors to underpin decisions.

Moreover, the Vanuatu Climate Futures Portal will interface with the existing VMGD website, the NAB Portal and other Government of Vanuatu websites. It will also include enhanced functionality for accessing, analysing and visualizing multi-decadal Global Climate Models (GCMs) from IPCC and downscaled projections and sector application-ready datasets for rainfall, temperature, sea level rise, extreme winds and other climate parameters.

The benefits of the portal include the enhancement of the delivery and uptake of climate change science information in sectoral and community development, as well as applying of climate change projections to support Government of Vanuatu risk assessments across all sectors and in six provinces of Vanuatu.

The Vanuatu Climate Future Portal is an exemplar to future expansion to other Pacific Island countries as well as for a Regional Climate Futures Portal for all Pacific islands.

The new web-tool responds to the needs identified in the Env 3.2 Pillar of the Vanuatu National Sustainable Development Plan (NSDP) 2016-2023, the Vanuatu Climate Framework for Climate Services, the Vanuatu Climate Change and DRR Policy.

In the regional level, this important undertaking ticks boxes for the Pacific Islands Meteorological Strategy (PIMS), the Pacific Roadmap for Strengthened Climate Services, the Pacific

Acknowledgements:

Acknowledge the work of the Climate Information Services for Resilient Development Planning in Vanuatu (VanKIRAP), the Green Climate Fund (GCF) for the funding support and the partnership between the Vanuatu Meteorology and Geo-hazards Department (VMGD), Secretariat of the Pacific Regional Environment Programme (SPREP), Commonwealth Scientific Industrial Research Organization (CSIRO), NGIS and the five target sectors – Agriculture, Fisheries, Tourism, Infrastructure and Water.

Session 8.2 Community Climate Centres - Taking climate information to the ‘last mile’

Mr. William Bae Worwor, Acting Coordinator, VanKIRAP Community Climate Centres discussed the new Community Climate Centres network that has been established across Vanuatu in all the provinces to deliver climate information services to people in the “last-mile”.

This session aimed to inform all the participants about all the new six community climate centres that were established, in the six provinces far north of Vanuatu is TORBA province, at the Sola Provincial Head Quarters, Lakatoro – Malekula in the MALAMPA province, Saratamata – Ambae for the PENAMA province, Luganville -Santo in SANMA province, Nakere- South Santo in SANMA province, and Isangel -Tanna for the TAFEA province.

The emphasis on the importance and main purpose of the Community Climate Centres which to serve as the main information hub for the climate information. This is where climate champions collect right information and communicate with their communities. It also serves a decision support platform helping communications to better use the CIS and make informed decisions.

Climate Champions support to VMGD is quite significant. NCOF is an opportunity to continue to train and increase their ability to better inform the community and public at large. The participants were able to understand through this session there is a number of new services and tools developed for VMGD which needs to be communicated and utilized by the communities.

Already collecting rainfall data and monitoring Traditional Knowledge indicators, the participants were keen to receive new information and enhance their skills to be communicate Climate Information services.



Figure 8: As Climate Champions going through workshop exercises

Session 9: Observations Division, VMGD.

Mr. Bradley Baniuri and Mr. Joseph Nishina presented an overview of the Observations Division, Station codes with WMO, Synoptic Observations Processes – Synop and metar, Bradley went through synop and metar codings, and observations instruments, Joseph briefed on how to record wind and cloud.

Session 10: Climate Services Division, VMGD

Mr. John Ruben – went through the aim of the climate services division and the products, VRN falls under Climate Services Division.



Figure 9: Mr John Ruben, Climate PSO Research officer explaining Agro-climate Bulletin on Droughts

- Three Programs under the Climate Services Division. (a) Data Management. (b) Seasonal Forecasting. (c) Research and Development.
- John Ruben went through different activities within Climate Services.
- Different Climate Products and Services.

Session 11: Weather Forecast Division, VMGD

Mr Levu Antfalo, provided the NCOF with a presentation on the functions of the Weather Forecasting Division, VMGD.

Operation Desk and Weather Information:

- Aviation
- Marine
- Tropical Cyclone
- Public Weather Services
- Tsunami



Figure 10: Mr Levu Antfalo explaining different types of weather phenomena

VRN also plays an important role in WFSD. The more rain gauges around the islands, the better.

Went through different severe weather warnings given out by WFSD.

Participants accessed Pacific Tides, downloaded from Play Store.

VMGD website – where and how to receive which information.

Why is the cyclone season from November to April?

- Hot and Humid
- Distance of the earth to the sun is closer in this period – our ocean is more exposed to the sun, more heating.
- Shortest day 21 June
- Longest day 21-22 December
- Equal day & night – 22-23 September (Summer equinox), 21 March (Winter equinox)

World's Tropical Cyclone basin

Went through the Tropical Cyclone Tracking Map, its progress over the past years.

Why did the TC Map shifted 10 Degrees North? – To cater for any cyclones that form closer to Vanuatu.

How to name TCs, and favorable conditions for cyclone genesis.

Copy of Mr. Antfalo's presentation is available here:

Session 12: Geo-Hazards Division, VMGD

Mr. John Junior Niroa, Manager, Geo-hazards Division presented on the functions and services provided by the Geo-hazards Division. This includes delivering quality services and products on geohazards and related phenomena using modern science and technology to mitigate against potential impacts of geological hazards (earthquakes, tsunamis and volcanic eruptions) by preventing disastrous consequences on the people, environment and economy of Vanuatu.

Copy of Mr. Niroa's presentation is available here:

Session 13: ICT and Engineering Division, VMGD

Ms. Esther Saul, Manager ICT and Engineering Division gave a talk on the functions of the division and how data is collected by weather, climate and geo-hazards observations network across the country.

Esther also presented on the systems that allow for the dissemination of alerts and warnings to the people.

Copy of Ms. Saul's presentation is available here:

Day 4 - Thursday 2 November 2023.

Session 14: Importance of Climate Information for the Agriculture Sector

Mr John Ruben delivered a talk on the importance of climate information for Agriculture planning and raising crops on the farm. He spoke about the climate information that were co-developed by the Vanuatu Meteorology and Geo-Hazards Department and Vanuatu Department of Agriculture and Rural Development (DARD) such as the Agrometeorology bulletin, Vanuatu Climate Update (VCU), EAR Watch as well as new enhanced climate information tools and services developed by VanKIRAP such as Tailored System of Climate Services for Agriculture (OSCAR) - see Session 14.

Copy of Mr. Ruben's presentation is available here:

Session 15: Tailored System of Climate Services for Agriculture (OSCAR)

Mr. Pakoa Leo, VanKIRAP Agriculture Sector Coordinator, provided a talk on the new Tailored System of Climate Services for Agriculture (or OSCAR), the agrometeorology bulletin which is the primary CIS for the agriculture and farmers in Vanuatu.

The presentation followed with practical exercises on the use of the web and mobile versions of the OSCAR system. The participants were able to access weather, climate, soil, drought indices and climate smart recommendations to support farming of crops such as cassava, taro, yams, cocoa to name a few.

Copy of Mr. Leo's presentation is available here:



Figure 11: Mr Pakoa Leo, Acting Agriculture Sector Coordinator presenting the OSCAR system

Session 16: Agriculture training - OSCAR demonstration

This session the participants were introduced to the Tailored System of Climate Services for Agriculture (or OSCAR) as well as hands-on practical exercises to test the functionalities of the system as well as training on the use of the CIS therein.

The OSCAR introduction (promotional) video was played to the participants. https://www.youtube.com/watch?v=FFIs4GKoA_E&t=22s

Session 16: Site visit to the Vanuatu Agriculture Research Training Centre (VARTC)

In the afternoon, the participants went on a field trip to the Vanuatu Agriculture Research Training Centre (VARTC). The participants were introduced to the VanKIRAP agriculture demonstration plots as well as the newly established automatic weather station (AWS) installed to provide researchers at VARTC with weather and climate data. This is a collaboration between the two government departments to further understand the impacts of climate on crop production in order to develop more resistant varieties.

The participants were also able to see the different approaches including effective traditional farming methods used by VARTC to promote higher crop yield with climate science underpinning decision making pertaining to the application of water (irrigation), fertilizers and other treatments.

The participants were provided with free planting materials from the VARTC nursery to take back home and to introduce into their own farms and gardens.



Figure 12: Mr Pakoa Leo conducting demonstration on TK Agriculture practices



Figure 13: Presentation of the OSCAR system

Day 5 - Friday 3 November 2023.

Session 17: El Nino Southern Oscillation Status

This session evaluates the evolution of climate in the past 12 months (looking back) and assessing the recent conditions experienced in May to October 2023 period.

Glenda Pakoa provided a presentation on the climate and key climate drivers that influence the conditions observed in the past 12 months including El Nino, trade winds, sea surface temperature (SST) and the Klad Nasara (South Pacific Convergence Zone - SPCZ).

Copy of Ms. Pakoa's presentation is available here:

Session 18: Signing of Contracts for the Vanuatu Rainfall Network (VRN).

The meeting welcome the arrival of the VMGD Director, Mr. Montin Romone. This followed with the execution of contracts between the Vanuatu Meteorology and Geo-Hazards Department and VRN volunteers.

Master of Ceremony (MC) explained that the contracts include Terms of Reference (TOR) on key responsibilities of VRN volunteers and this milestone achievement shows a huge leap in the partnership between VMGD and the communities. VRN is a citizen science initiative established by VMGD to engage the community in science and data collection. This helps community members understand their own climate and increase climate literacy which leads to climate resilience. The VanKIRAP project has expanded the citizen science network in schools in over 30 locations in Tanna, Malakula and Ambae. The signing of contracts means that VRN volunteers are now civil servants and working with Government



Figure 14: VMGD Director Mr Montin Romone signing new contracts with VRN officers



Figure 15: Deputy Director Mr Fred Jockley presenting tablets to VRN officers

The full list of VRN volunteers that signed contracts and received a TCL mobile phone from VMGD is in Annex E.

Session 19: En Nino Southern Oscillation Outlook (Looking Forward)

Ms. Glenda Pakoa presented on the key points from PICOV, and outlined what to expect in the coming months in terms of the El Niño Southern Oscillation, Rainfall, atmospheric and sea surface temperatures, coral bleaching, and sea level.

Session 20: VMGD Official Declaration of the 2023/24 Cyclone Season



VanKIRAP/VMGD Official Launch of the Traditional Knowledge Indicator Booklet, TK Matantas Sign Board and Provincial TK Calendars



Annex A - NCOF Agenda and TK Program

The agenda for the 2023 National Climate Outlook Forum can be accessed here:

Annex B - Communications and media coverage

The following communications and media stories on the 2023 National Climate Outlook Forum is available in the following links:

SPREP Website:

<https://www.pacificmet.net/news/vanuatu-hosts-national-climate-outlook-forum-just-week-after-severe-tropical-cyclone-lola>

VMGD Website:

Vanuatu Local media outlets:

Annex C: 2023 National Tropical Cyclone Outlook

The National Tropical Cyclone Outlook can be accessed here:

Annex D: NCOF Evaluation Form

The NCOF evaluation form was given out at the end of each day to assess the NCOF sessions. The evaluation form can be accessed here: