

VanKIRAP is making climate information more accessible in Vanuatu. Read our latest project update.

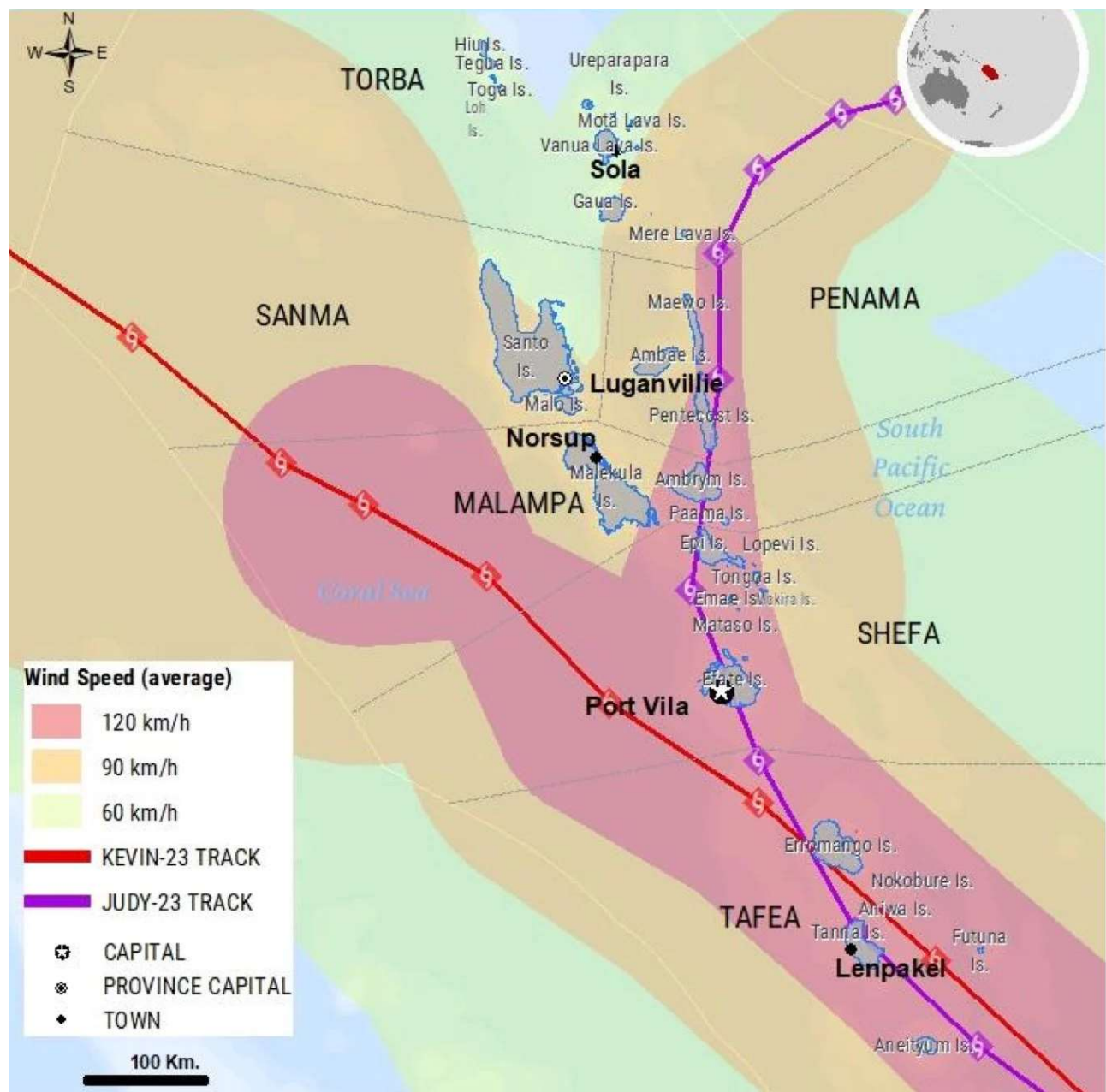
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Vanuatu Klaemet Infomesen blong Redi, Adapt & Protekt / Climate Information Services for Resilient Development in Vanuatu Project



VanKIRAP Project Update

March 2023



Severe Tropical Cyclones Judy & Kevin

The VanKIRAP team would like to acknowledge the unprecedented events of the twin severe tropical cyclones Judy and Kevin. As a climate information services project, we know that cyclones are a major threat to Vanuatu, and that climate change is making tropical cyclones more powerful.

Nevertheless, going through two Category 4+ cyclones within 48 hours is an experience that has affected many of us deeply. Many Project and partner organisation staff, their families, and communities have been traumatised by the cyclones and some continue to face a difficult post-disaster recovery.

Our heartfelt gratitude to everyone who has assisted in the aftermath and the humanitarian response. VanKIRAP continues our work to develop new and improved

climate information services that will increase Vanuatu's resilience to climate-related extreme events now and into the future.



VanKIRAP team member assists in response to twin cyclone disaster

Many communities experienced major flooding during the two severe tropical cyclones TC Judy and TC Kevin that hit Vanuatu within an unprecedented 48 hours of each other on 1–3 March. Compounding the impact of the flooding, weeks later, many of the same communities are now facing water shortages due to cyclone damage and water supply contamination.

This is a powerful demonstration of how extreme climate events affect water resources and the communities that depend on them. In the aftermath of natural disasters, Water, Sanitation and Hygiene (WASH) is given top priority in the humanitarian response to ensure that those affected have clean water for drinking, cooking and washing, and can access toilets and keep clean.

As part of the Vanuatu Government's post-disaster response, Vanuatu Klaemet blong Redy, Adapt mo Protekt (VanKIRAP) Water Sector Coordinator Jonah Taviti is providing the Vanuatu National Disaster Management Office (NDMO)'s WASH Cluster with logistical support, helping to coordinate and distribute non-food items such as jerry cans and water bladders to affected communities.

Mr Taviti has been working on Efate and its offshore islands with colleagues from Vanuatu's Department of Water Resources (DoWR), who mobilised quickly as part of the national humanitarian response.

He explains that the cyclones "caused water shortages and sanitation concerns across all islands under their path".

"Fortunately, we were well-prepared", says Mr Taviti. "Climate information services like early warning systems and flood management tools are highly beneficial to local communities and provincial water managers in normal times—but after natural disasters, they become essential, because they give communities climate resilience."

"In the post-disaster response to these two severe tropical cyclones, the Vanuatu Government has been using climate information services to pinpoint the communities most in need of water, sanitation and hygiene support", he says, "and to make sure they receive the help they need".



**Workshop seeks novel ways to
augment climate information using
traditional knowledge**

Over 20 people attended a workshop today (Friday, 31 March) to improve their understanding of using traditional knowledge to communicate weather and climate information. The workshop was held at the Melanesian Hotel, and facilitated by Albert Willy, VanKIRAP's Traditional Knowledge Officer. Vanuatu botany expert from the New York Botanical Garden Dr. Gregory Plunkett presented remotely about traditional knowledge and plant climate indicators, and Wan Smol Bag Turtle Monitoring Coordinator, Donald James, presented on traditional climate knowledge about Vanuatu's sea turtles and how climate change is impacting turtle habitats and behaviours.

Workshop participants also discussed collaborating to improve the accuracy of traditional climate knowledge products being developed by VanKIRAP in partnership with the Vanuatu Department of Meteorology and Geo-Hazards (VMGD). The workshop covered the importance of traditional knowledge, the new ClimateWatch citizen science mobile app being developed, and participants also verified some of the traditional knowledge products through an agile and participatory revision process.

VMGD Principal Scientific Officer John Ruben introduced the National TK Indicators publication as the highlight of indigenous weather and climate forecasting knowledge, which is being documented and will be shared once finalised so that it can be used for disaster risk reduction, particularly in remote parts of Vanuatu—as well as being a national cultural resource.

VanKIRAP Project Manager Moirah Matou noted that the purpose of the traditional knowledge component of VanKIRAP was to improve the resilience and adaptive capability of communities. Many communities rely heavily on their traditional knowledge to respond to climate variability and extreme weather events.





Community Climate Centre gives better access to climate information for Tanna

The people of Tanna now have better access to climate information services thanks to a new Community Climate Centre that was launched by the Vanuatu Klaemet Infomesen blong Redy, Adapt mo Protekt (VanKIRAP) Project on 27 February in Isangel, Tanna—just days before TCs Judy and Kevin hit the province.

Being the most vulnerable country in the Pacific Region to climate related hazards, Vanuatu's vulnerable communities need adaptive capacity to help prepare themselves for extreme weather and climate-related events. Climate information services (CIS) are tools that give people details about climate and weather so that they can improve their decision-making, planning and preparation about these kinds of events.

The launch of the Tanna Community Climate Centre is a significant outcome for the Tafea Provincial Government and the island's communities. As a demonstration of its relevance and usefulness, the Community Climate Centre was able to provide detailed information to communities and provincial officials about the approaching cyclones Judy and Kevin on the day the Centre launched—just days before the cyclones arrived.

The Community Climate Centre provides the people of Tafea Province with timely, tailored climate information and tools to help minimise the impacts of extreme weather and climate events on lives, livelihoods, natural resources, property and infrastructure. It also supports better policy, planning and decision-making across various sectors at the provincial and community level.

The launch followed a three-day Climate Science 101 training for government and NGO stakeholders from 22-24 February, facilitated by the Vanuatu Meteorology and Geo-hazards Department (VMGD) and the VanKIRAP Project.

The training provided climate-sensitive sectors and key community focal points the ability to apply climate science and ocean science information in their decision-making. The training covered a range of topics including the climate system, climate change, climate in Vanuatu, seasonal climate forecasts, drought monitoring and ocean climate.

The training concluded with a total of 25 participants nominated as climate champions. These community members will be focal points within their villages to disseminate information from the community climate centre down to the 'last mile'.

In his official remarks at the CCC launching ceremony, Francis Iaoiap, President of Tafea Province said that the establishment of the Community Climate Centre is "in line with the people's plan under the Environment Pillar 3 which will help to improve and strengthen monitoring using early warning systems, and help build resilience"

"It also allows people at the community level to receive timely and accurate information on weather and climate", he said.

Mr. Iaoiap thanked the VanKIRAP Project's funder, the Green Climate Fund (GCF) and the Project's managing entity, the Secretariat of the Pacific Regional Environment Program (SPREP), as well as implementing agency VMGD and other delivery partners who helped establish the Centre.

Mr. Sunny Seuseu, Acting Vanuatu Manager for SPREP said he was delighted that the Isangel Community Climate Centre will allow people in Tafea Province to have better access to climate and weather information to improve their planning and decision-making in their daily activities.

He urged the communities of Tanna to use the Community Climate Centre to get the information that they need about climate and weather.

Mr. Seuseu also explained that the Community Climate Centre is not the only kind of climate information service that the VanKIRAP Project provides on Tanna. Others include an ocean climate monitoring buoy deployed at Port Resolution, rainfall gauges installed at ten schools on Tanna, and an automated weather station that will be installed later this year, again at Port Resolution.



Schools on Tanna join climate monitoring network thanks to VanKIRAP

Ten schools on Tanna have been equipped with rainfall gauges that allow them to become part of the Vanuatu Rainfall Network (VRN) climate monitoring initiative, thanks to support from the Vanuatu Klaemet Infomesen blong Redy, Adapt mo Protekt (VanKIRAP) project and the Vanuatu Meteorology and Geohazards Department (VMGD).

In Vanuatu, above average rainfall can cause flooding, soil erosion, crop damage and damage to infrastructure. Drought can cause crops to wither and die, and water sources to dry up. Rainfall data helps VMGD's meteorologists and climatologists provide early warning of these two kinds of extreme hydrological events, and allows VMGD to model these events to better understand the relationship between rainfall and climate change. VMGD provides these models to sectors so that they can improve their climate resilience.

The ten schools that received rain gauge installations were Tafea College, Latan Tuhu Primary and Secondary School, Laukotai Primary School, Kona School, Lenakel Junior Secondary School, Isangel Junior Secondary School, and Imailone Primary School.

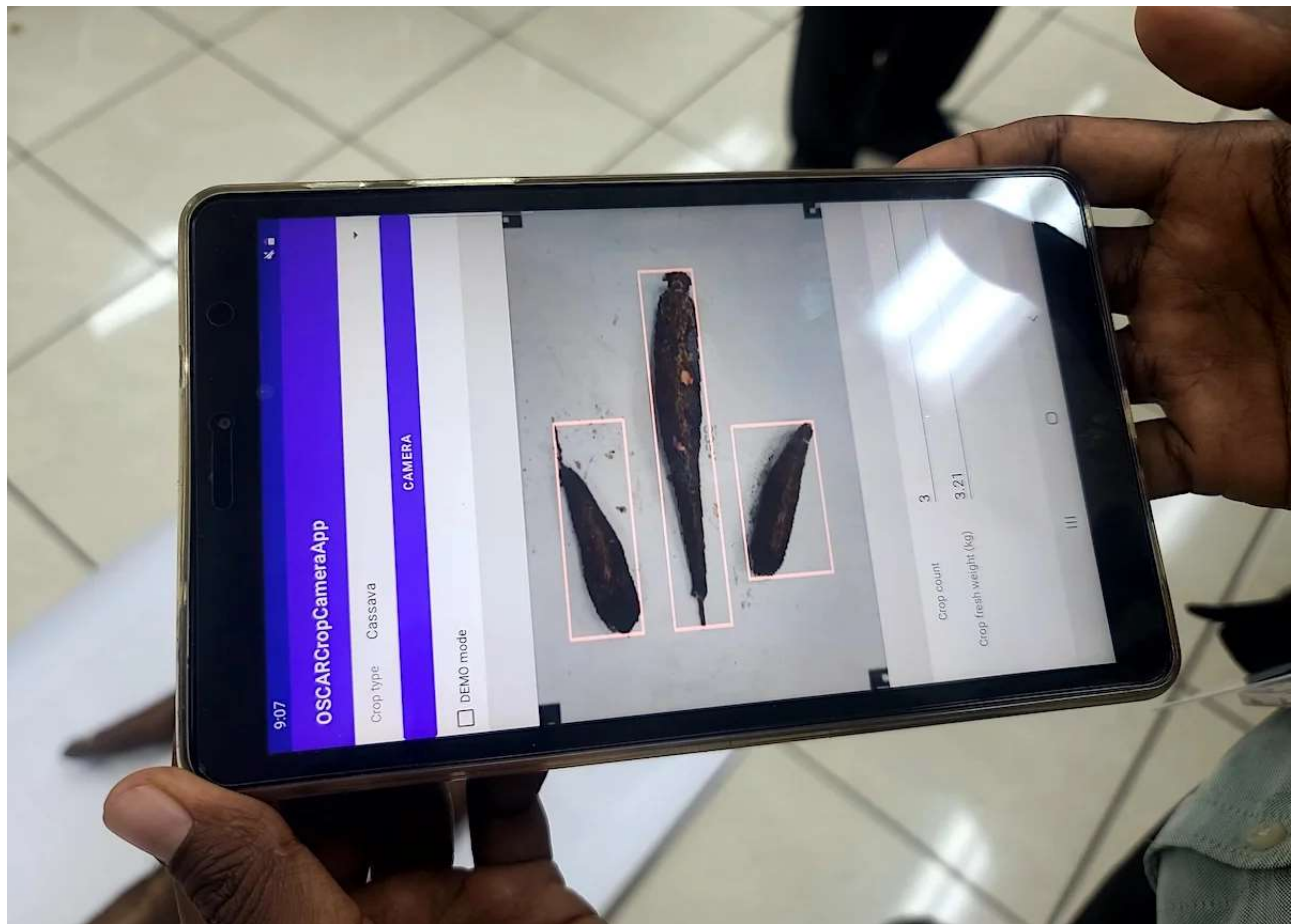
The Principal and Science Department Head of Latan Tuhu Central Primary and Secondary School, Mr. Luke Stephen Sawia, says the installation of a rainfall gauge at the school "is very useful because it helps broaden science students' knowledge of how to read and collect rainfall data, and send it to the VMGD's main office in Port Vila for analysis".

The installation of the rainfall monitoring gauges followed a training workshop conducted by VMGD Climatologist Kalsuak Gorden.

The workshop covered topics such as understanding rainfall patterns, the importance of Vanuatu Rainfall Network as an early warning system for remote and rural areas, how to record rain gauge data and how to maintain rainfall gauge sites to World Meteorological Organization standards.

At the launch of the VRN rain gauge at Latan Tuhu school, Principal Sawia acknowledged VMGD's Climate Division and VanKIRAP for their initiative to install climate monitoring equipment at Tanna's schools.

He explained that students taking part in gathering rainfall data for VRN are gaining first hand experience of climate science that will help them make decisions about future career paths".



**Climate resilience of Vanuatu's
agriculture sector supported by new
online tool**

Earlier this month, the VanKIRAP Project and delivery partner APEC Climate Centre (APCC) co-hosted a side event during the Pacific Agriculture and Forestry Week at Denarau Island, Fiji. The theme was ‘Growing Together: Transforming Pacific Agriculture and Forestry’.

During the side event, APCC demonstrated their work with VanKIRAP in a presentation about OSCAR (tailOred System of Climate services for AgRiculture), an online tool that APCC has developed as part of the project. OSCAR is a CIS-based decision support system for agriculture that provides farming advisories powered by artificial intelligence models, an interactive weather map, a crop climate diary, a digital soil map, and an agro-met bulletin all in a single online platform.

To develop OSCAR, APCC has been working with Vanuatu’s Department of Agriculture and Rural Development (DARD) under the VanKIRAP project on field trials with major staple crops like taro and cassava, training DARD officers and farmers to use OSCAR’s Crop Climate Diary (CCD) to collect climate and crop yield data at different sites around Vanuatu.

Mr. Edmond Nalau, local data collector for DARD says the OSCAR system is very useful because it helps Vanuatu’s farmers to “increase their resilience to climate variability and also reduces potential damage from climate events”.

Mr. Nalau further explained that the Crop Climate Diary (CCD) component of OSCAR enables farmers to know their crop growth rates and yield simply by taking a picture of each harvested crop on a white card: “OSCAR automatically gives you the results within a few seconds”.

The side event also included discussion led by SPREP on exploring opportunities to establish User Interface Platforms (UIP), which allow communities of practice such as the agriculture sector to engage around common information needs, and how the climate community might better address them, for example by developing targeted systems such as OSCAR.

Mr. Mark Vurobaravu, Deputy Director of DARD, who could not attend Pacific Agriculture and Forestry Week due to the impacts of the twin severe tropical cyclones Judy and Kevin on Vanuatu, nevertheless conveyed his congratulations to APCC and SPREP on the development of OSCAR: “enabling farmers to plan their activities using with tailored agro-met information to reduce the impacts of climate on their crops has long been a dream of DARD”.

“Vanuatu is grateful to APCC for this new powerful tool which will contribute to building the resilience of farmers and remote farming communities in Vanuatu”, Mr. Vurobaravu said.



New digital dataset improves accuracy and quality of Vanuatu's climate data

The Vanuatu Meteorology and Geo-Hazards Department (VMGD) is benefiting from historical climate data digitized by the VanKIRAP Project. VMGD is using newly digitised weather and climate data to provide up-to-date and accurate climate and weather information to decision makers in key sectors in Vanuatu. This follows a data digitisation internship program that concluded last year.

The digitised data includes parameters such as rainfall, maximum and minimum temperature, humidity, atmospheric pressure and visibility. Most of the data digitised was taken from paper records for weather stations and is suitable for calculating long term climate trends, which require a minimum of 30 years' of data to be included in computer climate models.

VanKIRAP Climatologist Neil Molosu says data digitization and quality controls contribute towards improving coverage, accuracy and quality of climate information services (CIS) tools used by VMGD.

Mr. Malosu explains that datasets will also be used by the World Meteorological Organisation (WMO) for climate indices analysis.

He says almost 50,000 scans were made and digitally converted into PDF electronic format. These files are now accessible to VMGD staff online.

Mr Malosu thanked the digitisation interns for their contribution in rescuing and digitising Vanuatu's historical climate data.

VanKIRAP data digitization intern Natalie Godden says, "it is a good experience to be involved in digitising the Vanuatu climate historical data, because it helps VMGD provide accurate information that will enable a lot of people to make better decisions when it comes to how they address climate change."

About VanKIRAP

VanKIRAP (Vanuatu Klaemet Infomesen blong Redy, Adapt mo Protekt) is a project based at the Vanuatu Meteorology and Geohazards Department (VMGD) that is making climate information better, more relevant, and more accessible for people across Vanuatu.

VanKIRAP supports Vanuatu's resilient development by increasing the ability of decision-makers, communities and individuals to plan for and respond to the impacts of climate variability and change, using climate information services (CIS).

VanKIRAP is the Bislama name for the Vanuatu Climate Information Services for Resilient Development Project (CISRDP) project, which is funded by the Green Climate Fund (GCF) and jointly implemented by VMGD and the Secretariat of the Pacific Regional Environment Programme (SPREP).

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