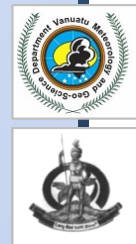


Climate resilient development in SIDs: Opportunities provided by the Pacific Climate Change Centre

Vanuatu capacity building need for climate resilience development

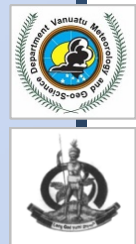
Vanuatu Meteorology and Geo Hazards Department,
Ministry of Climate Change

Philip Malsale
Manager - Climate Services Division

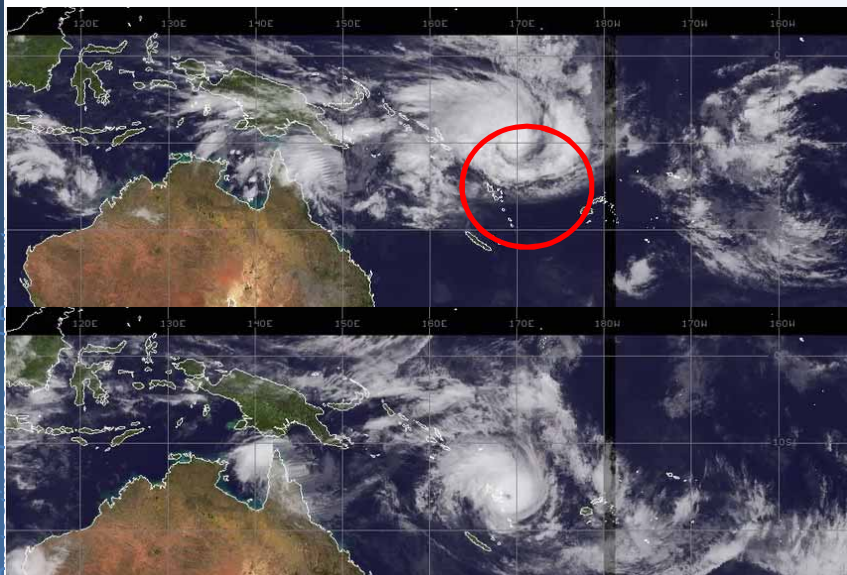


Presentation outline

- **Vanuatu- Background Information**
- **Role of Vanuatu Meteorology and Geo-Hazards Department (VMGD)**
- **Vanuatu Framework for Climate Services (VFCS)**
- **Vanuatu climate products and services**
- **Communication channels – Using existing networks**
- **Capacity building needs**
- **SPREP role in supporting NMS in the Pacific region**



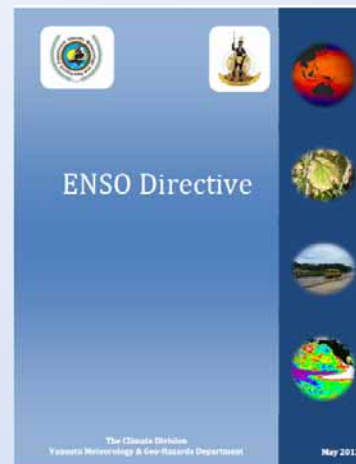
Vanuatu – Background information



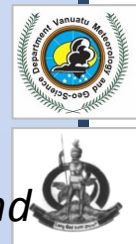
- Rank one on the UN vulnerability risk index
- Hot spot for TC events and experience, ENSO related events couple with Geo-Hazard events such as Tsunami, earthquake, volcanic eruption – TC Pam
- The government is focusing on building resilience among communities – science to action
- 80% person of people live in communities in around 83 islands depending on land and seas for survival
- Weather and climate determine their livelihood



Role of Vanuatu Meteorology and Geo-Hazards Department (VMGD)



- *Guiding documents*
- *Timely and accurate information to help decision making*
- *Observation/Forecast/climate/climate change/Geo-Hazards/supporting divisions*
- *60 Staff scatter across 8 locations around the country – 84 voluntary officers*
- *However, there are still gaps to address performance to meet needs*
- *VMGD works with government and regional/international organization with donor partners*



Vanuatu Framework for Climate Services



Vanuatu Framework for Climate Services



A guidance document for the development and strengthening of climate services so that all Ni-Vanuatu can prepare for and adapt to climate variability and change as a basic human right

July 2016

Financed by Climate Investment Funds through the Asian Development Bank (ADB) Strategic Fund and administered by the Regional Technical Support Mechanism (RTSM) at SPREP

- Data infrastructure
- Data analysis
- Climate data value added products
- Dissemination of information
- USERS
- PROVIDER

A guidance document for the development and strengthening of climate services so that all Ni-Vanuatu can prepare for and adapt to climate variability and change as a basic human right



Vanuatu climate products and services



- Rainfall outlook
- Vanuatu Monthly Climate Update
- Vanuatu Monthly Climate Summary
- Vanuatu Annual climate summary
- Data/Awareness/workshops
- Climate Field schools
- Klaod Nasara and toolkit
- Climate briefing
- NCOF – becomes an annual activity
- Future Services
 - Incorporation of TK into forecasting
 - Sub-seasonal forecast
 - Sector specific products
 - QMS certified climate service provider

VANUATU CLIMATE UPDATE
Vanuatu Meteorology and Geo-Hazard Department

ISSUED: 10 February 2016

HIGHLIGHTS

RENFOI OUTLOOK
Overall (Vanuatu): Below normal rainfall. Some increased long spells of rain.
Northern Region: Below Normal
Southern Region: Below Normal

ENSO WATCH:
El Niño is still present. It may stay for another 1-2 months before it ends. The La Niña may start in 2016.

Coral reef watch:
Coral reef bleaching remains likely. Tropical cyclone damage to coral reefs remains low. Long term coral reef health is still good.

Drought watch:
Long Drought: Sofo, Paka, Lema, Bawafofo, Pasi, Viti, Vuniporo and Aniwaniwa.

Tropical Cyclone Outlook:
Seasonal outlook: 1-2 tropical cyclones in 2016 is most likely. Some increased long spells of rain.

KLAEI MET AOTLUK MAJ 2016 – MEI 2016

RENFOI
Fokast blong manis Mei kaem Mei 2016.
fokast i bas ko long renfoi we i low below normal long Sofo, Paka mo Lema.
OVERALL VANUATU: Yumi sad expectam below normal (renfoi) we i one spell long (normal) long ol tel manis we tetap kam tru wet long Vanuatu.

3 MANIS RENFOI AOTLUK (MAJ 2016 – MEI 2016)*
* Outlook is Model based forecast

Region	Station	Outlook			
		Below Normal	Normal	Above Normal	Probability
NORTH	SOLA	Below Normal	+1344.0 (17%)	-1344.0 -1372.0 (17%)	+1372.0 (16%)
	PERDA	Above Normal	-699.7 (82%)	699.7 -668.9 (9%)	-668.9 (9%)
	LAOAP	Below Normal	-777.2 (89%)	777.2 -726.8 (9%)	-726.8 (9%)
SOUTH	BAWAFUFO	Below Normal	-838.8 (81%)	838.8 -862.4 (9%)	-862.4 (11%)
	PORT VILA	Below Normal	-694.8 (85%)	694.8 -828.9 (14%)	-828.9 (14%)
	WATE				

VANUATU MONTHLY CLIMATE SUMMARY
VANUATU METEOROLOGY AND GEO-HAZARDS

ISSUED: 16 JAN 16

Vanuatu Monthly Climate Summary: December 2015

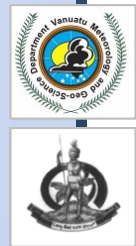
El Niño Southern Oscillation Status

- Strong El Niño conditions continued in December 2015.
- A number of El Niño-Southern Oscillation (ENSO) indicators suggest that the 2015-16 El Niño peaked during the month of December 2015. Tropical Pacific Ocean temperatures suggest this event is one of the top three strongest El Niño events of the past 50 years.
- Strong El Niño continues to dominate the climate of most countries within the Pacific Ocean.

Significant Climate Drivers: El Niño Southern Oscillation (ENSO), South Pacific Convergence Zone (SPCZ), Madden Julian Oscillation (MJO), Inter-tropical Convergence Zone (ITCZ).

- El Niño conditions continued to persist during the month.
- The South Pacific Convergence Zone (SPCZ) was displaced northeast of its normal position, bringing higher than normal rainfall totals for the region from the Solomon Islands eastward. The Inter-Tropical Convergence Zone (ITCZ) was displaced southward of its normal position, suppressing rainfall in parts of the north Pacific.
- A moderate to strong Madden-Julian Oscillation (MJO) event entered the western Pacific in the last week of December, disrupting the dry conditions associated with the displacement of the SPCZ. Convection was enhanced which increased the chances of Tropical Cyclone in the southern Pacific. The MJO also brought the rainfall Vanuatu experienced in the last week of December.
- Tropical cyclone Uta, the second cyclone of the season, formed in late December and impacted the southern islands of Vanuatu in early January 2016.

CONTACT US
Call: 6772-3868, Email: climate@metvan.gov.vu, Visit: www.metvan.gov.vu



Communication channels – Using existing networks

THE REPUBLIC OF VANUATU
VANUATU METEOROLOGY AND GEO-HAZARD DEPARTMENT
 Address: Private Mail Bag 254, Sorba
 Telephone: (677) 2466 Fax: (677) 2212
 Email: Administrator: admin@meteo.gov.vt Chief: Chief@meteo.gov.vt

CLIMATE DATA REQUEST FORM
 (FOR INFORMATION ONLY - NOT FOR USE)

Name (Family): _____

ALL Data Requested from this Department is subject to the terms and conditions of the Pacific Climate Change Science Program (PCCSP) and Pacific-Australia Climate Science and Adaptation Planning (PACCSAP) Program. For more information on the terms and conditions of the program, please visit the PCCSP website: www.pccsp.org.
 PACCSAP is a multi-year program of research and adaptation planning. It is a joint effort between the Pacific Islands and Australia. PACCSAP is a multi-year program of research and adaptation planning. It is a joint effort between the Pacific Islands and Australia.

Climate Data Requested (tick the appropriate box)	Station for which the Data is Requested (tick the appropriate box)
<input type="checkbox"/> Time Data	<input type="checkbox"/> SOERTE (at the Vanuatu, Meteorology and Geo-Hazards Department website) 7 meteorological stations in the country (give name). There are other weather stations scattered throughout the country that may have useful rainfall records and are not included in the list.
<input type="checkbox"/> Rainfall	<input type="checkbox"/> MALAKO (MALAKO Province)
<input type="checkbox"/> Mean	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> MAXIMUM	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> MINIMUM	<input type="checkbox"/> LAKA (LAKA, MALAKO Province)
<input type="checkbox"/> WIND	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Speed	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Direction	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Humidity	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Cloud	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Visibility	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Temperature	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Dew Point	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Wind Chill	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Heat Index	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Frost	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Snow	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Ice	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)
<input type="checkbox"/> Other	<input type="checkbox"/> SOBA (Soba Laka, TORBA Province)

Specialty Data Requested (tick the appropriate box)

Monthly Average: Agency/organization implementing

Hourly Average: Agency/organization implementing

Daily Average: Agency/organization implementing

Other: Agency/organization implementing

Specialty Data Use (tick the appropriate box)

For Research: Agency/organization implementing

For Education: Agency/organization implementing

For Other: Agency/organization implementing

Other Data Requested (tick the appropriate box)

Other: Agency/organization implementing

DATE OF THE REQUEST (tick the appropriate box)

2016 2017 2018 2019

Specialty Data Use (tick the appropriate box)

For Research: Agency/organization implementing

For Education: Agency/organization implementing

For Other: Agency/organization implementing

Other Data Requested (tick the appropriate box)

Other: Agency/organization implementing

DATE OF THE REQUEST (tick the appropriate box)

2016 2017 2018 2019

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For Research: Agency/organization implementing

For Education: Agency/organization implementing

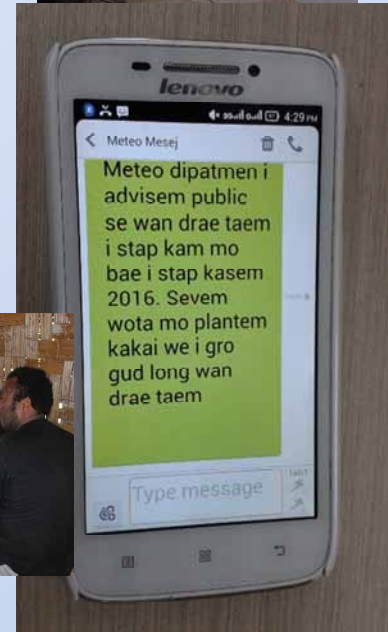
For Other: Agency/organization implementing

Other Data Requested (tick the appropriate box)

Other: Agency/organization implementing

DATE OF THE REQUEST (tick the appropriate box)

2016 2017 2018 2019



Capacity building needs



- *CC negotiations*
- *Project proposal*
- *Contributing to IPCC reports*
- *Climate science analysis*
- *Tradition Vs. Science*
- *Climate IT experts on programming for climate software*
- *Development of sectoral climate early warning system and specific sector products*
- *Language barrier – 3 language's*
- *Rural Vs. Urban*
- *National –provincial – Communities- different levels of governance is difficult*
- *Community science – an area need to pursue further*
- *Using of climate related information for decision must be part of planning*



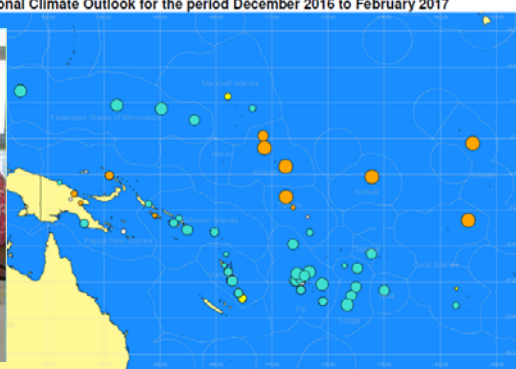
SPREP role in supporting NMS in the Pacific region



➤ Serves as the regional hub for climate change related issues

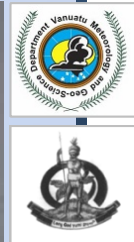
- Region direction on NMS priorities
- Climate science
- Traditional Knowledge
- Regional database
- Transition of projects
- Help to develop Project proposal development
- Funding opportunities -RIE
- Advise on linkages to regional and international framework/plans
- Help develop NMS in the region

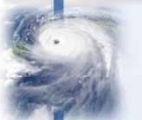
Seasonal Climate Outlook for the period December 2016 to February 2017



Legend ● Bias towards below-normal rainfall ● Bias towards normal rainfall ● Bias towards above-normal rainfall ○ No bias in forecast (Climatology)
Larger "bubbles" represent higher forecast skill (based on LEPS scores)

These roles will be further strengthened with the establishment of Pacific Climate Change Centre





Thank you

