(Country Report)[1]

VANUATU METEOROLOGY AND GEO-HAZARDS DEPARTENT

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Joint Meeting of RA II WIGOS Project and RA V TT-SU

Jakarta, Indonesia / 11 October 2018

BMKG Headquarter

[1] Your country reports will be posted on the meeting's web page.

Outline

I. Abstract (updates on status and plan of satellite data access, processing, application and training)[2]

II. Satellite data and product requirements, training needs and infrastructure

Appendix[3]

a. Background

b. Short description of NMHS activities

c. Current observational system overview

d. Access, processing and application of satellite data and products

e. Satellite data to address regional challenges

[2] If you reported your country report at the previous AOMSUC, please copy and paste corresponding items to here and make updates, if any, to them.
[3] If you reported your country report at the previous AOMSUC, please just copy and paste corresponding items here.

Abstract (updates on status and plan of satellite data access, processing, application and training)

Vanuatu Meteorology and Geo-Hazards Department has been accessing Himawari Satellite Data for many years. With the current Himawari 8/9 in operation, we are able to download 10 minutes data interval via internet and the HimawarCast system. The data we received, is used in many ways. For example, Forecasting and tracking of tropical cyclones, surface chart analysis and the 10 minutes interval of live feed into our website www.vmgd.gov.vu. Apart from Himawari satellite we also access satellite imagery from other satellite like GOES and MTSAT.

Satellite data and product requirements, training needs and infrastructure

- Satellite data and product requirements

  -5-min multi-spectral imagery for tropical cyclone forecasting
- Training needs

  -on interpreting RGBs

  -on visualizing loops

  -on different channel available
- Technical infrastructure issues to access and process/visualize satellite data

  To have direct reception for Himawari Cloud.

Appendix

Background

I. Country overview

I. Geography

- Vanuatu, is an island nation in the South Pacific Ocean and comprised of an archipelago about 1,090 miles east of northern Australia and west of Fiji Islands.
- Area of responsibility in terms of weather phenomena range from 10 degrees south to 23 degrees south and 160 degrees east to 175 degrees east.

I. Population: 283,077

II. Climate: Tropical/sub-tropical.

Summer is from November to March, the average temperature is 28°C (up to 32°C) and it can be hot, wet and humid. Winter is from April to October with the temperature averaging 23°C.

II. Major historical hydrometeorological disasters

I. Disaster type and distribution: Tropical Cyclon PAM March 2015. Major damage on islands where PAM passed through namely the Shepherd islands, Efate and the southern islands.

ii. Life and economic loss:

11 Fatalities and according to the Humanitarian Action Plan for PAM, An estimated 68 per cent of rainwater harvesting catchment structures were destroyed, 70 per cent of the wells have been contaminated. The extensive damage sustained by sanitation superstructures – 68 per cent were destroyed. In some islands, like Tongoa, Emae and Erromango, up to 90 per cent of houses were destroyed, The damage to agriculture has been extensive. As much as 75 per cent of coconut, 80 per cent of coffee, 80 per cent of leaf vegetables and 70 per cent of taro crops have been wiped out in the most affected areas, leaving families with no alternative food source.

OCHA's Financial Tracking Service (FTS) recorded US$31 million in financial and in-kind contributions from donors to Support the recovery process after the damage from PAM.

(Humanitarian Action Plan: https://reliefweb.int/sites/reliefweb.int/files/resources/vanuatu_tc_pam_hap.pdf)

iii. Major national economic sectors relying on NMHSs

I. Agriculture, Forestry and Fisheries
II. Transportation and Public Utility
III. Tourism
IV. Other government/non-government agency and Private Sector.

Short Description of NMHS Activities

The VMGD will achieve its Vision by being:

A fully professional institution comprising skilled and motivated staff using updated and state of the art science and technology within an efficient and effective organization, providing high quality meteorological and geo-hazards services that are widely available and accessible, effectively applied, beneficial and highly valued by all sections of the community in Vanuatu.

Current Observational System Overview

I. Surface observations: 7 station.

1. Sola (91551, 91550) 2. Saratamata (91553, 91552) 3. Pekoa (91554)

4. Lamap (91555,91563) 5. Baufield (91557) 6. Whitegrass (91565, 91564)

7. Aneityme (91568, 91569)

I. Upper-air observations: Currently not functioning.

II. Marine observations: 4 tide gauges.

1. Luganville Santo 2. Litzlitz Malekula 3. Port Vila Efate 4. Lenakel Tanna

I. Aircraft-based observations: None

II. Satellite observation[4] : None

III. Weather Radar Observations: None

IV. Other observation platforms: None

More information is available via the following link: http://www.wmo.int/pages/prog/www/OSY/Gos-components.html

[4] This item means satellite observation project by your country. It does not include satellite data reception systems.

Access, Processing and Application of Satellite Data and Products

I. List of satellites/instruments currently used operationally for NWP, nowcasting and other applications

Himawari, MTSAT, GOES satellites, Automatic Weather Sations,

and 6 Manuel observation stations.

I. Current capabilities of access, processing and archiving of satellite data and products: **Very capable.**

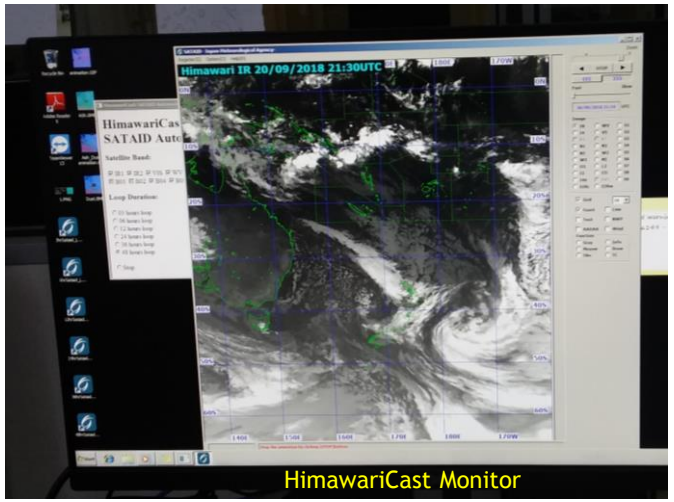
II. Current satellite data applications

I. Key application areas: **Southern Hermisphere (South Pacific Areas)**

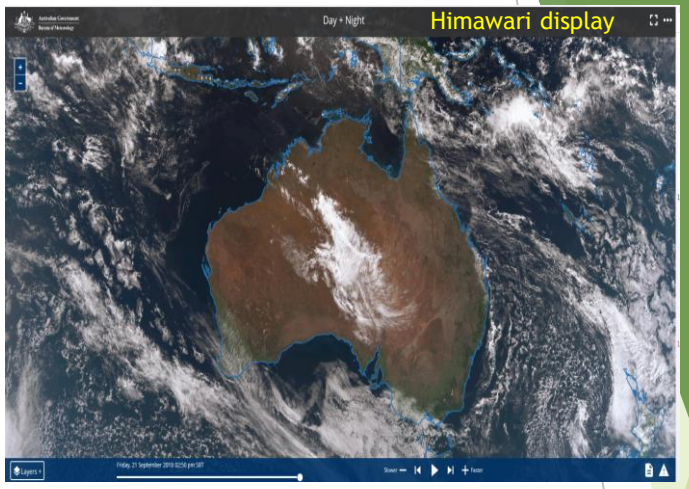
II. Satellite-based products: **ASCAT, SATAID**

Satellite Data to address Regional Challenges


HimawariCast Receiving Station

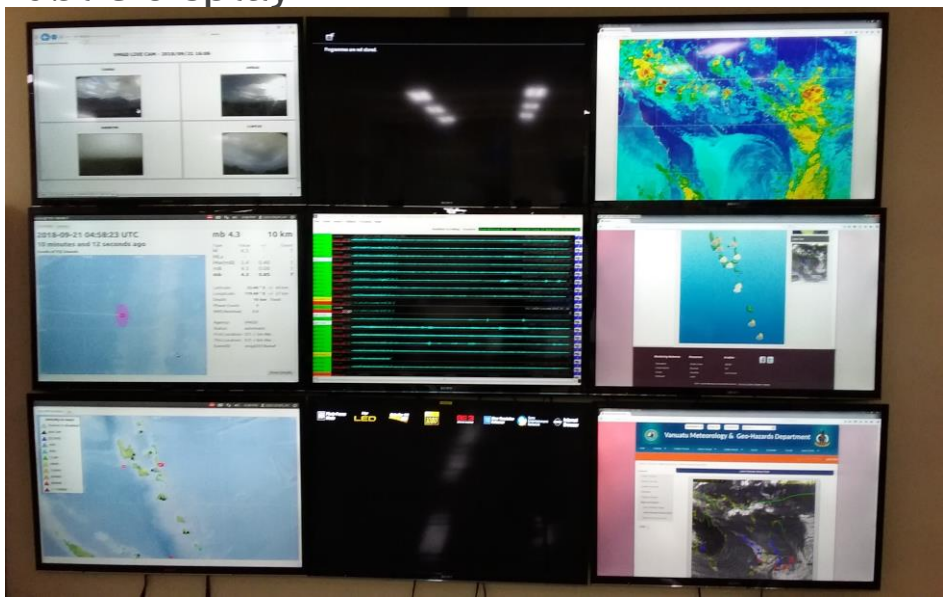


HimawariCast Monitor



Himawari display

Public display



VMGD WEBSITE: