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of the RA II WIGOS Satellite Project
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Far Eastern Federal University

FSM COUNTRY REPORT

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Outline

I. Introduction
II. Short discription of NMHS activity
III. Current observational system overview
IV. Collection, processing and utilization of satellite data and products
V. Satellite data to address regional challenges

Introdution

I. Counrty overview

1. Geography: FSM lies between 5 degrees North- 25 degrees North, from 130 degrees East, 180 degrees East
2. Population: More than 100.00 (Jan 2016)

3. Climate: 2 main seasons

- Wet season (Nov –April) known as typhoon season
- Dry season (May – Oct)

II. Major historical hydrometeorological disasters

1. Disaster type and distribution:

- Typhoon and landslide are the major historical hydrometerological disasters

2. Life and economic loss:

- More than 100 life loss during those major historical hydrometeorological disasters and it exceed 35 million for property and residential damaged.

3. Major national economic sectors relying on NMHSs

- Agriculture
- Transportation
- Fishing
- Construction Private/Government Agencies

Short Discription of NMHS Activity

There are 23 operational observation meteorological stations in the FSM. Multiple observations within a 24hrs period are taken at five stations in Chuuk State, six in Pohnpei State (including Kosrae State) and three in Yap State. In addition, there are two single-observation-a-day rainfall stations in Yap. All those observation were shared with all meteorological stations.

Current Observational System Overview

I. SURFACE OBERVATIONS: The surface observations, all the FSM Weather stations are taking on an hourly basis.

II. UPPER-AIR OBSERVATIONS: There are two Upper-air observations one during the day @ 00z and one during the night @ 10z.

III. MARINE OBSERVATIONS: The Marine observations always prepared every 5 am and 5 pm daily and used mostly to any private/Government Marine Vessel on request.

IV. AIRCRAFT-BASED OBSERVATIONS: FSM Weather Stations are not using Aircraft-based observations.

V. SATELLITE OBSERVATIONS: Satellite observations used any time the Observers about to prepare the daily forecast. And it could use to let the general public see what going on in our area of responsibility especially during Severe Weather.

VI. WEATHER RADAR OBSERVATIONS: FSM Weather stations are relaying WFO, Guam of Weather Radar observations.

VII. OTHER OBSERVATION PLATFORMS. Each FSM Weather Stations have their own Synoptic and Surf observations.

Collection, Processing and Utilization of Satellite Data and Products

1. LIST OF SATELLITES/INSTRUMENTS CURRENTLY USED OPERATIONALLY FOR NWP, NOWCASTING AND OTHER APPLIC
- GOES satellite

GOES full disk (Disk images are updated every (3) hours.)

A. GOES west infrared
- HIMAWARI 8

A. Individual sectors (visible/daytime, infrared/night)
B. Large area regional sector (WFO Guam sectors)
    1. INFRARED/VISIBLE
    2. WATER VAPOR/ENCHANCED INFRARED

- Earth(produce by GFS, RTGSST,WAVEWATCHIII,GEOS,CAMS)
- 1. A visualization of global weather conditions forecast updated every 3 hrs.
- 2. Ocean surface current estimated, updated very five days,
- 3. Ocean surface temp. and anomaly from daily average, updated daily.
- 4. Ocean waves, updated every 3 hrs.

2. CURRENT CAPABILITIES OF COLLECTION, PROCESSING AND ARCHIVING OF SATELLITE DATA AND PRODUCTS:
- All the FSM Weather Service Stations are no longer collect, process and archive of satellite data and products.

3. CURRENT SATELLITE DATA APPLICATIONS.

❑ KEY APPLICATION AREAS: HIMWARI 8 WOULD UTILIZE DATA FOR RAPIDLY DEVELOPING CONVECTIVE CLOUDY OVER T
WESTERN PACIFIC ISLAND AND OBSERVATION DATA FOR TYPHOON MONITORING.

4. SATELLITE-BASED PRODUCTS

1. What we have here in Weather Service Office, Chuuk, we usually used the following satellite datasets, such as JAXA Real-t Watch (Global Satellite Mapping of Precipitation). Himawari 8 (Infrared Color Loop). A Global Mapping from GFS/NCEP/US Nati Weather Service

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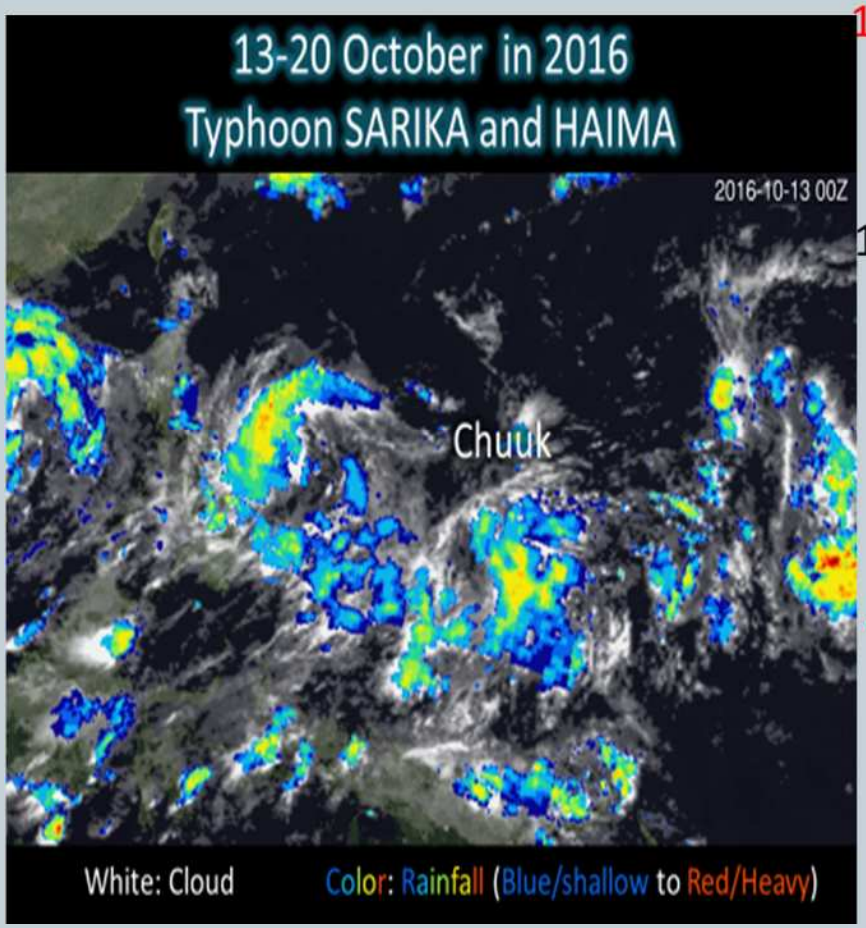
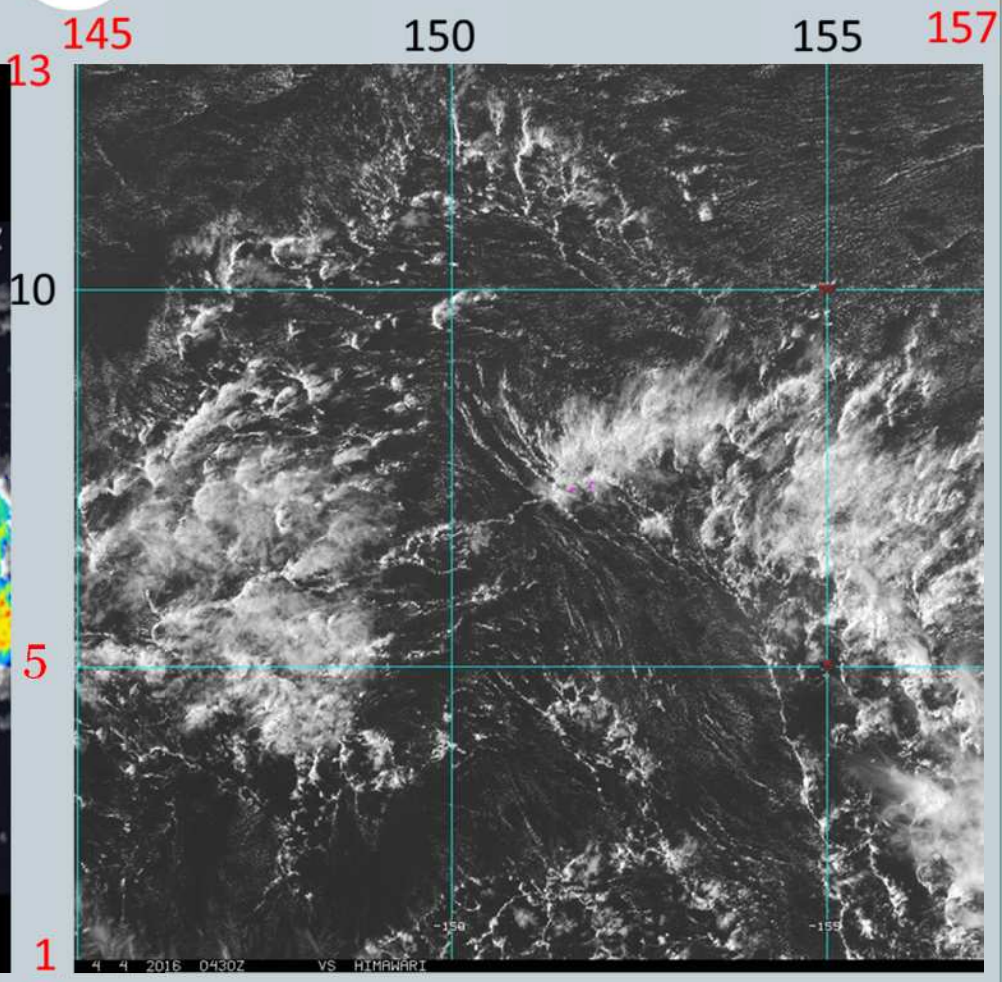
4. SATELLITE DATA AND PRODUCT NEEDS AND GAPS. Satellite date and product needs and gaps for FSM WSO Offices. How t typhoon, low pressure and high –resolution cloud analysis information. And the gap that Weather Service Office Chuuk face r the optic fiber cable no yet install it will cause the Internet to be slow. And during monitoring typhoon or any weather phenom

Satellite Data to address Regional Challenges





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THANK YOU VERY MUCH