



# “Himawari” Services: Upgrading receiving systems and follow-up training activities for Asia and Pacific



JMA's Contribution to UN Early Warnings for All (EW4A)

- JMA has operated geostationary meteorological satellites and provided the data, on a free and unrestricted basis, since 1978.
- JMA provided HimawariCast receiving systems for 20 countries and trainings in cooperation with WMO and JICA from 2015 to 2017.
- Upgrades of the receiving systems and follow-up training activities in cooperation with WMO and JICA are being planned as JMA's contribution to UN EW4A.



## Satellite “Himawari”

- Japanese Geostationary meteorological satellites, “Himawari series”, has been observing Asia-Oceania region since 1978.
- Currently, **Himawari-9** is observing with advanced functionalities (16 bands, high res. & freq.).

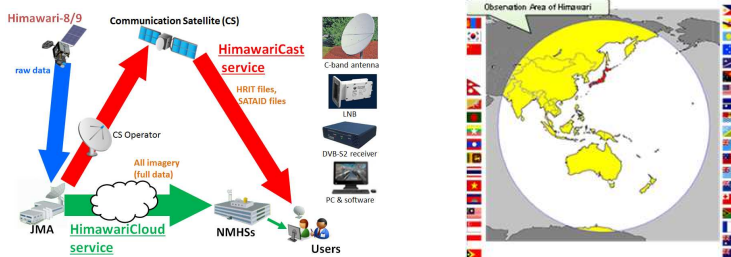
Satellite	GMS	GMS-2	GMS-3	GMS-4	GMS-5	GOES-9	MTSAT-1R	MTSAT-2	Himawari-8	Himawari-9
Obs. period	1978-1981	1981-1984	1984-1989	1989-1995	1995-2003	2003-2005	2005-2010	2010-2015	2015-2022	2022-2029



- All Himawari-8/9 data are provided on a free and unrestricted basis mainly through the following two services.



- “**HimawariCloud**” service provides full-spec data via landlines.
- “**HimawariCast**” service provides moderate-spec data via telecommunication satellite, for countries with limited landline capacity. A total of 33 NMHSs operate HimawariCast receiving systems.



## Contribution to “UN EW4A Initiative” with Himawari-8/9

### Technical Supports

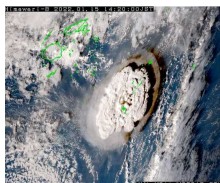
- With assistance from WMO and the Japan International Cooperation Agency (JICA), 20 developing countries installed “**HimawariCast**” receiving systems with follow-up in-country training from 2015 to 2017.
- JMA plans to update the reception systems and have **technical trainings** of new system, contributing to UN EW4A Initiative.



Technical training at Fiji for Pacific island countries



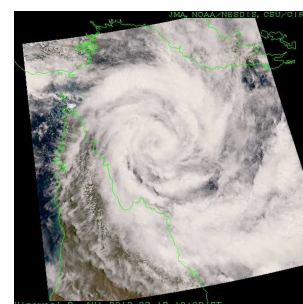
HimawariCast receiving system in Vanuatu



Volcanic eruption in Tonga (January 2022)

### HimawariRequest Services

- JMA has provided “**HimawariRequest**” service to enable NMHSs to monitor extreme events which may affect their countries since 2018.
- NMHSs send requests to JMA and JMA activates Himawari-8/9 rapid scan (1000 km x 1000 km area and every 2.5 minutes) to the targeted phenomena.
- 19 NMHSs registered as “HimawariRequest” users.
- 184 request observation as of 11 May 2023.



Tropical Cyclone in Australia

## Himawari follow-on satellite “Himawari-10”

- JMA has just started manufacturing “**Himawari-10**”, the follow-on satellite.
- Himawari-10 will start operation in the Japanese fiscal year 2029.
- Himawari-10 will be equipped with not only imager but also **hyperspectral IR sounder** in order to grasp the flow of atmospheric humidity which cause hazardous precipitation.



Himawari-10

3D humidity distribution observation by infrared sounder (image)

