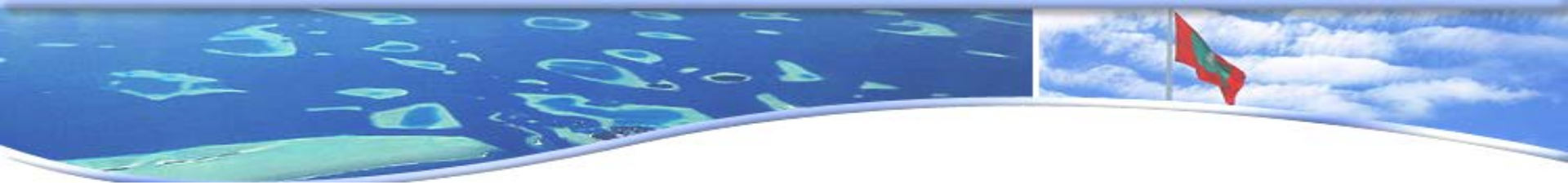


Special Session 1:

Earth Intelligence to implement Early Warnings for All

The 16th AOGEO Symposium

3 - 5 September 2024

Tokyo, Japan

Ahmed Rasheed
Maldives Meteorological Service.

Maldives Meteorological Service

The Maldives is an island nation in the Indian Ocean composed of about 1190 coral islands.
About 99% of the country's area is sea.
Average height of the islands are 1 m above MSL.
Highly Vulnerable to climate change & Sea level rise
Population: 515,132 (residential population as of Dec 2022)

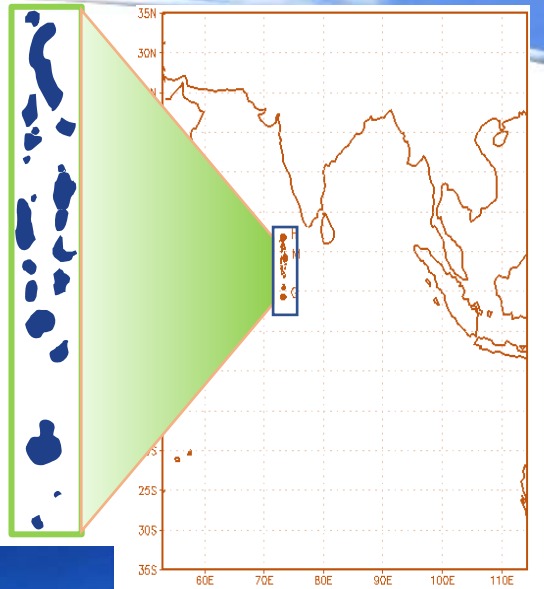
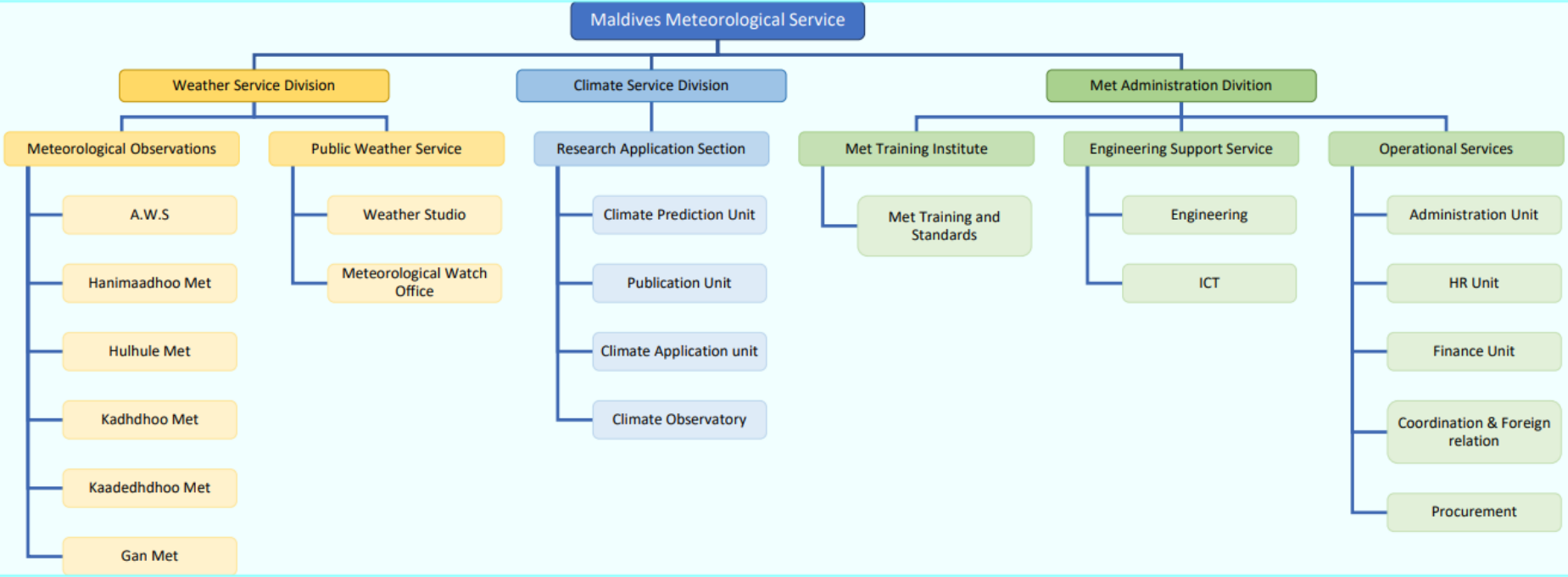


Photo Credit : https://visitmaldives.com

Maldives Meteorological Service

Organisation Chart



Maldives Meteorological Service

Vision

Provide accurate, timely and reliable meteorological information to minimize the impact on life and property while supporting sustainable socio-economic development of the Maldives

Mission

- Timely dissemination of alerts and advisories on all natural disasters.
- Expansion and maintenance of weather observation net-work in accordance with international standards and best practices with well trained professionals.
- Enable easy access of high quality historical meteorological data to the user community for Sustainable National Socio-Economic Development.
- Develop meteorological services and capacity building for the national requirement, and contribute to regional and international community.Timely dissemination of alerts and advisories on all natural disasters.

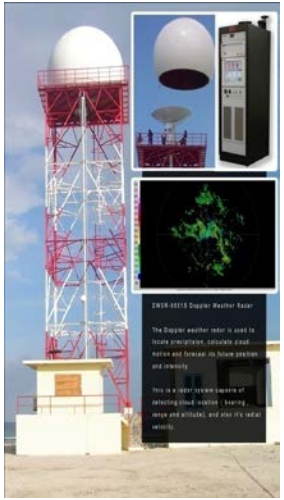
Core Values

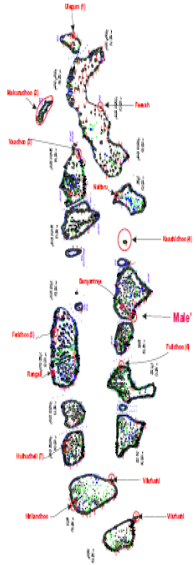
- Integrity, Trust and Honesty,
- Discipline,
- Competence,
- Customer focused, Dedication and Timeliness,
- Adherence to Scientific principles and professionalism.

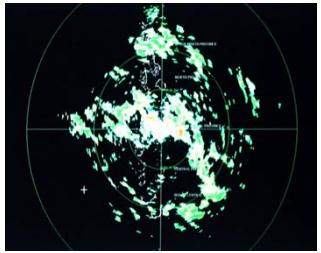
Weather, Earthquake and Tsunami monitoring

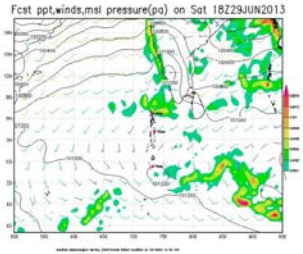
Observation Network

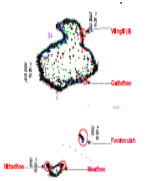
- Manned observatories : 5
- Automatic Weather Station : 43
- Upper air observation : 1
- Weather RADAR : 1
- Seismometer : 2
- Lightning detection sensors : 2
- Tide gauge : 3
- Satellite picture receiving system CMACast: 1
- Numerical Weather Prediction Models (WRF, WW3)











Maldives EW4All National Lead Agencies

NDMA
NATIONAL DISASTER MANAGEMENT AUTHORITY

Pillar 1: Disaster Risk Knowledge

Maldives Meteorological Service

Pillar 2: Detection, Monitoring, Analysis, and Forecasting

Early Warnings for All

Maldivian Red Crescent

Pillar 4: Preparedness and Response Capabilities

Pillar 3: Warning Dissemination, and Communication

Ongoing / upcoming projects in pipeline

Post

Min. of Climate Change, Environment and Energy
@MoEnvmv

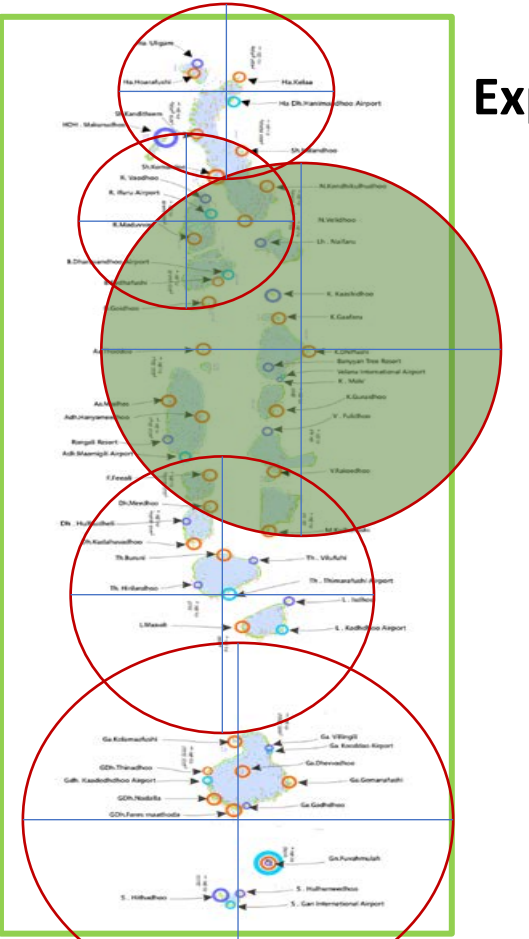
Maldives is the first country among the 30 focus countries of the Early Warnings for all (EW4All) initiative to develop and endorse at the presidential level a national EW4All road map to ensure multi-hazard early warnings for all by 2027.

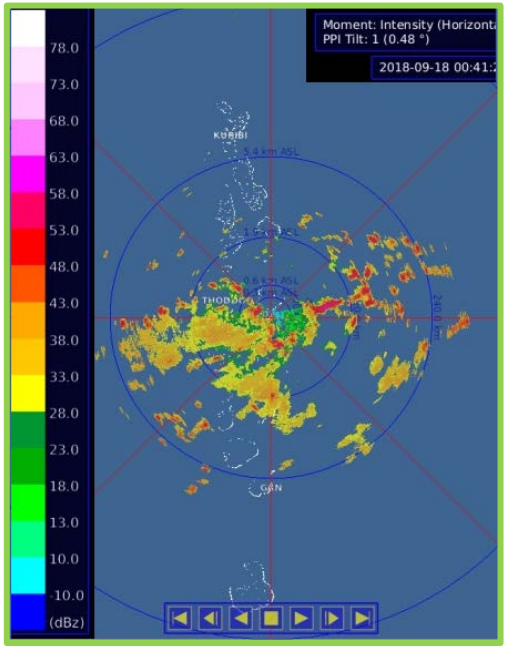
12:40 PM · Jan 21, 2024 · **4,884** Views

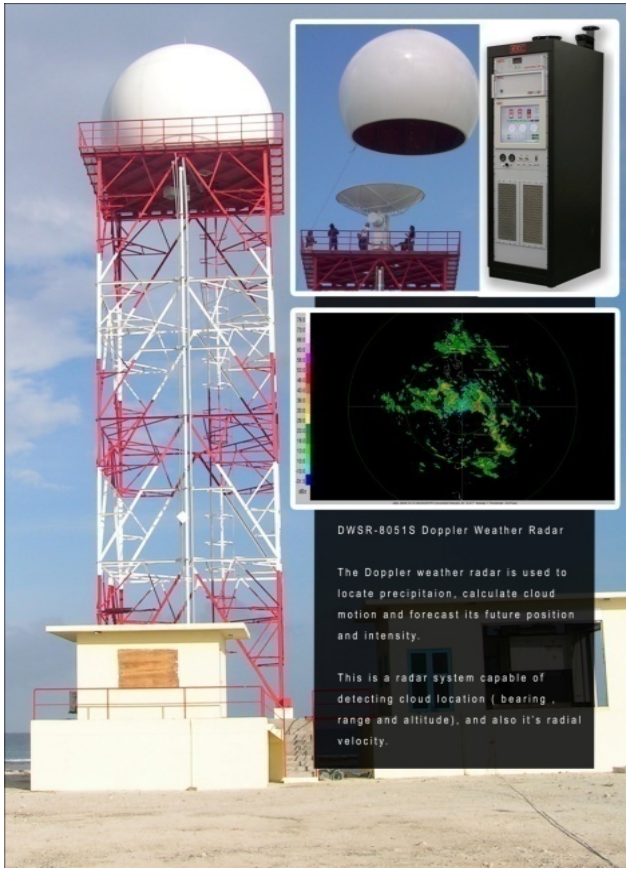
Early Warnings for All

Ongoing / upcoming projects in pipeline

Expansion of RADAR Network

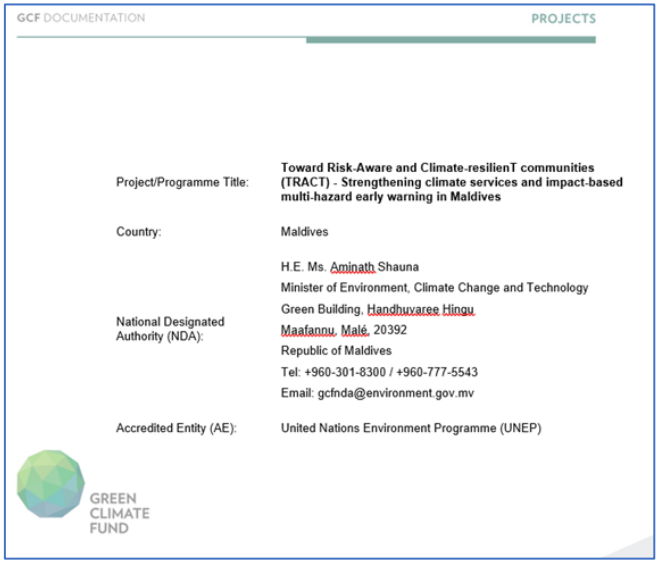






Ongoing / upcoming projects in pipeline

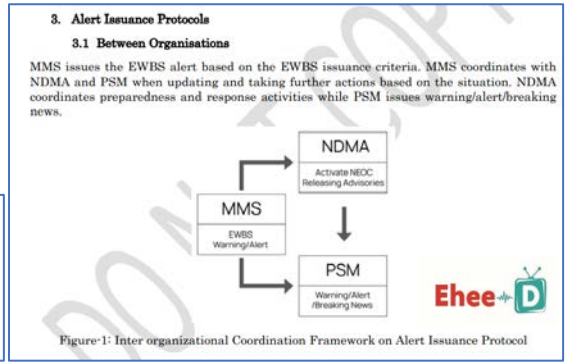
Early Warnings for All



GCF DOCUMENTATION PROJECTS

Project/Programme Title:	**Toward Risk-Aware and Climate-resilienT communities (TRACT) - Strengthening climate services and impact-based multi-hazard early warning in Maldives**
Country:	Maldives
National Designated Authority (NDA):	H.E. Ms. Aminath Shauna Minister of Environment, Climate Change and Technology Green Building, Handhuvaree Hingu Maafannu, Malé, 20392 Republic of Maldives Tel: +960-301-8300 / +960-777-5543 Email: gcfnda@environment.gov.mv
Accredited Entity (AE):	United Nations Environment Programme (UNEP)

GREEN CLIMATE FUND



3. Alert Issuance Protocols

3.1 Between Organisations

MMS issues the EWBS alert based on the EWBS issuance criteria. MMS coordinates with NDMA and PSM when updating and taking further actions based on the situation. NDMA coordinates preparedness and response activities while PSM issues warning/alert/breaking news.

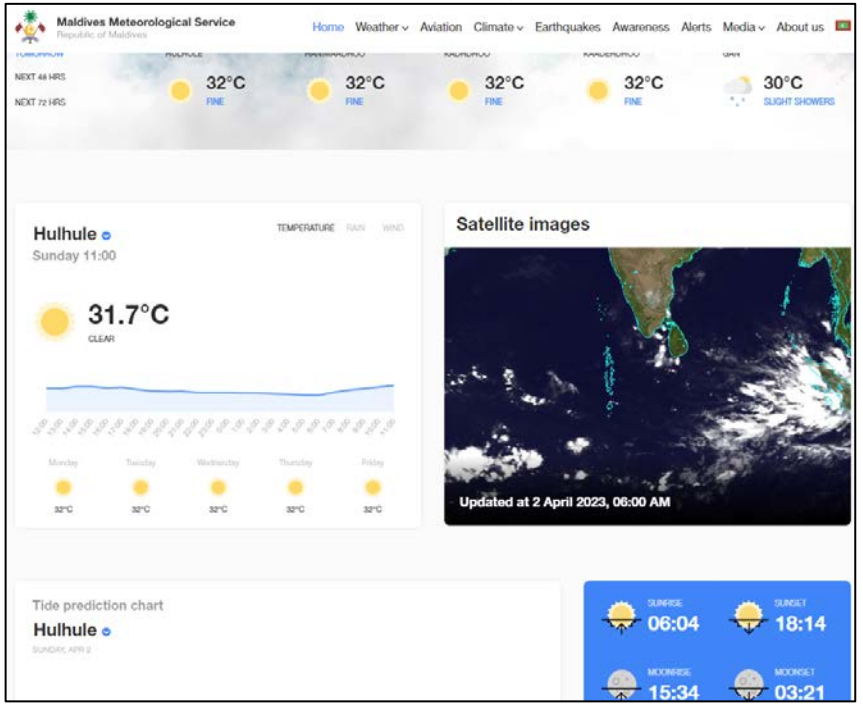
Figure-1: Inter organizational Coordination Framework on Alert Issuance Protocol

Early warning message dissemination Mechanism

Community Viber group with **41,000+ members**

Mobile App (Android & iOS)

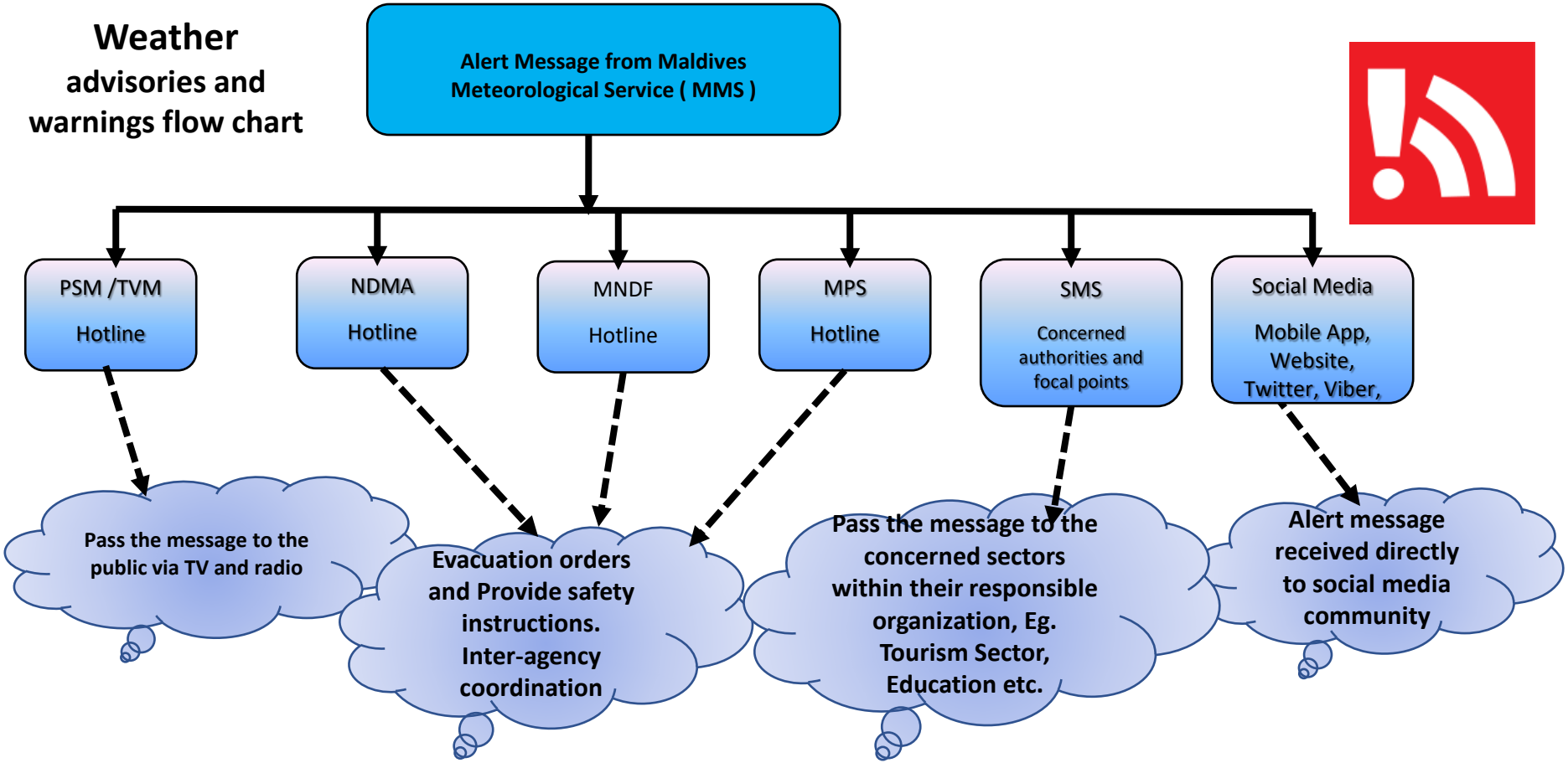
https://www.meteorology.gov.mv/



@MetMaldives

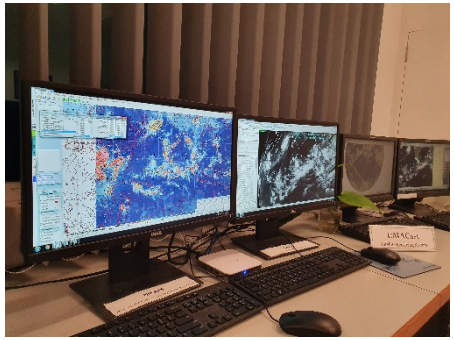
Early warning message dissemination Mechanism

Weather advisories and warnings flow chart

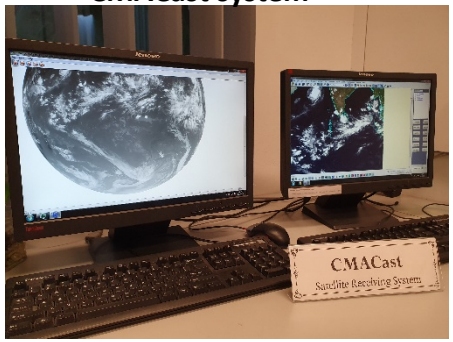


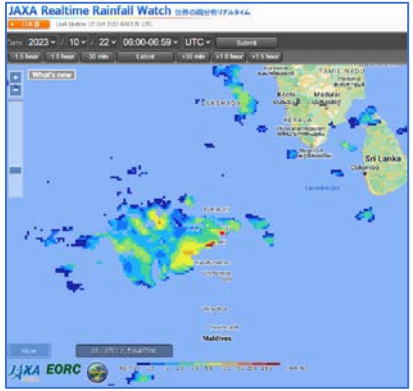
Gaps & Challenges

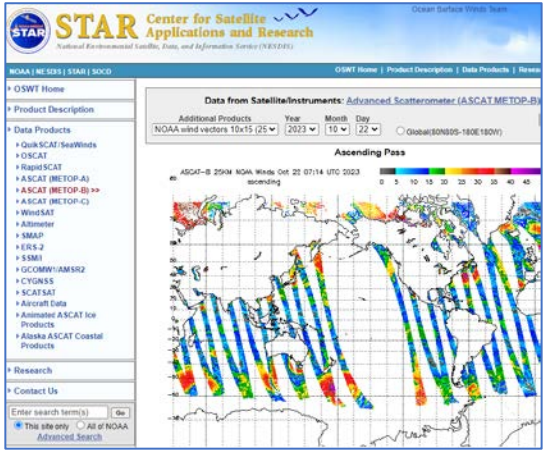
MICAPS and SWAP Application



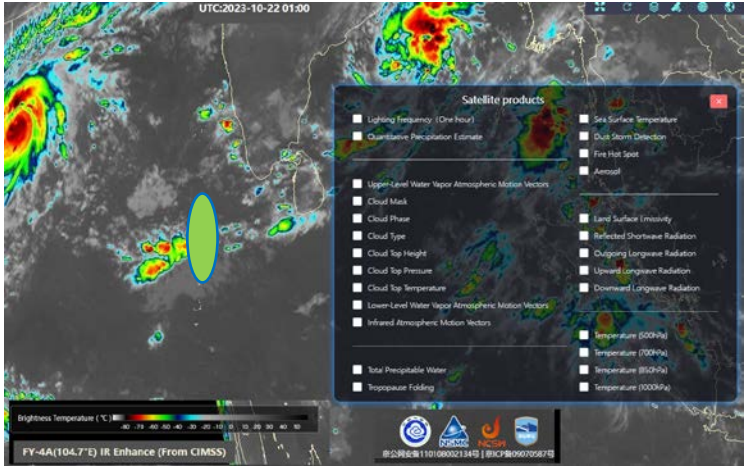
CMACast system

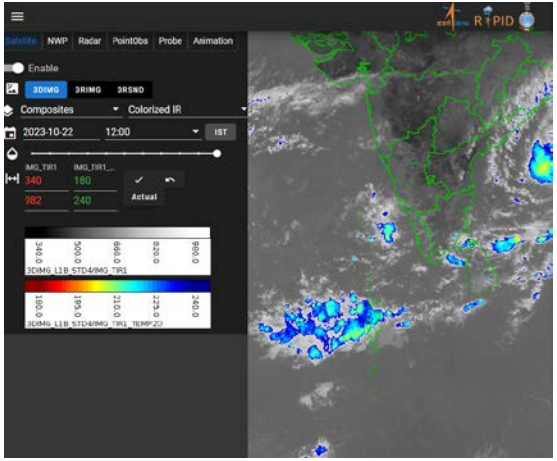


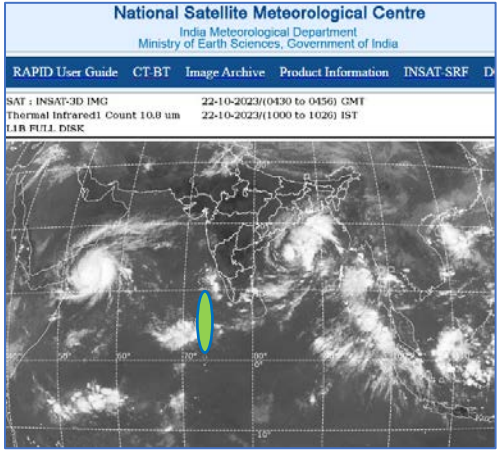




http://rsapp.nsmc.org.cn/





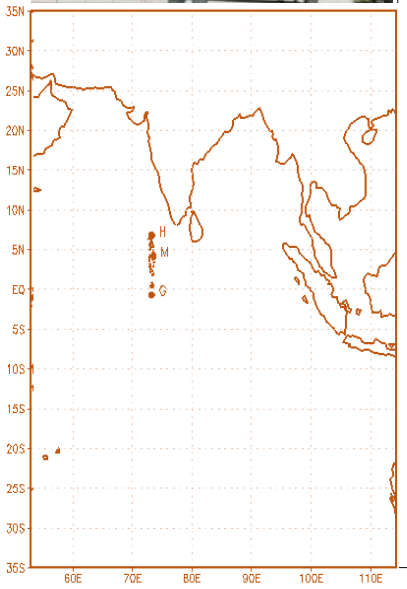


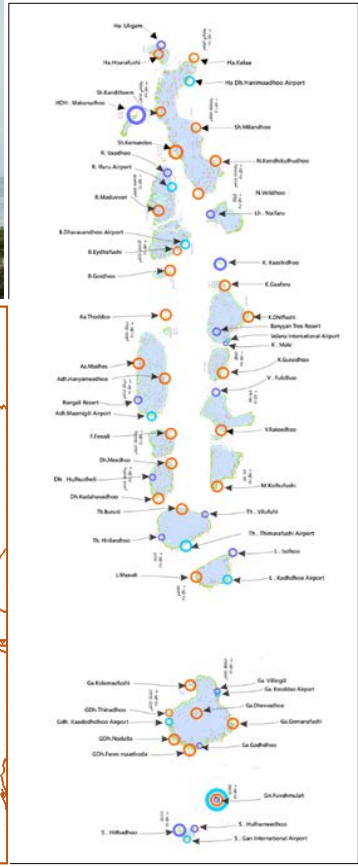
Gaps & Challenges

➢No proper mechanism for Accessing LEO Data, especially ASCAT wind data. These are vary important to estimate sea state based on prevailing wind speed over ocean where there is huge data gap of in-situ observation.

➢We also have limited expertise on BigData handling and data visualization for local application.

➢We need to explore the applicability of remote sensing technology and satellite-based Earth Intelligence observations to fill the data gaps in the data sparse area in and around Maldives.





Thank you

Maldives
...the sunny side of life

Photo Credit : https://visitmaldives.com