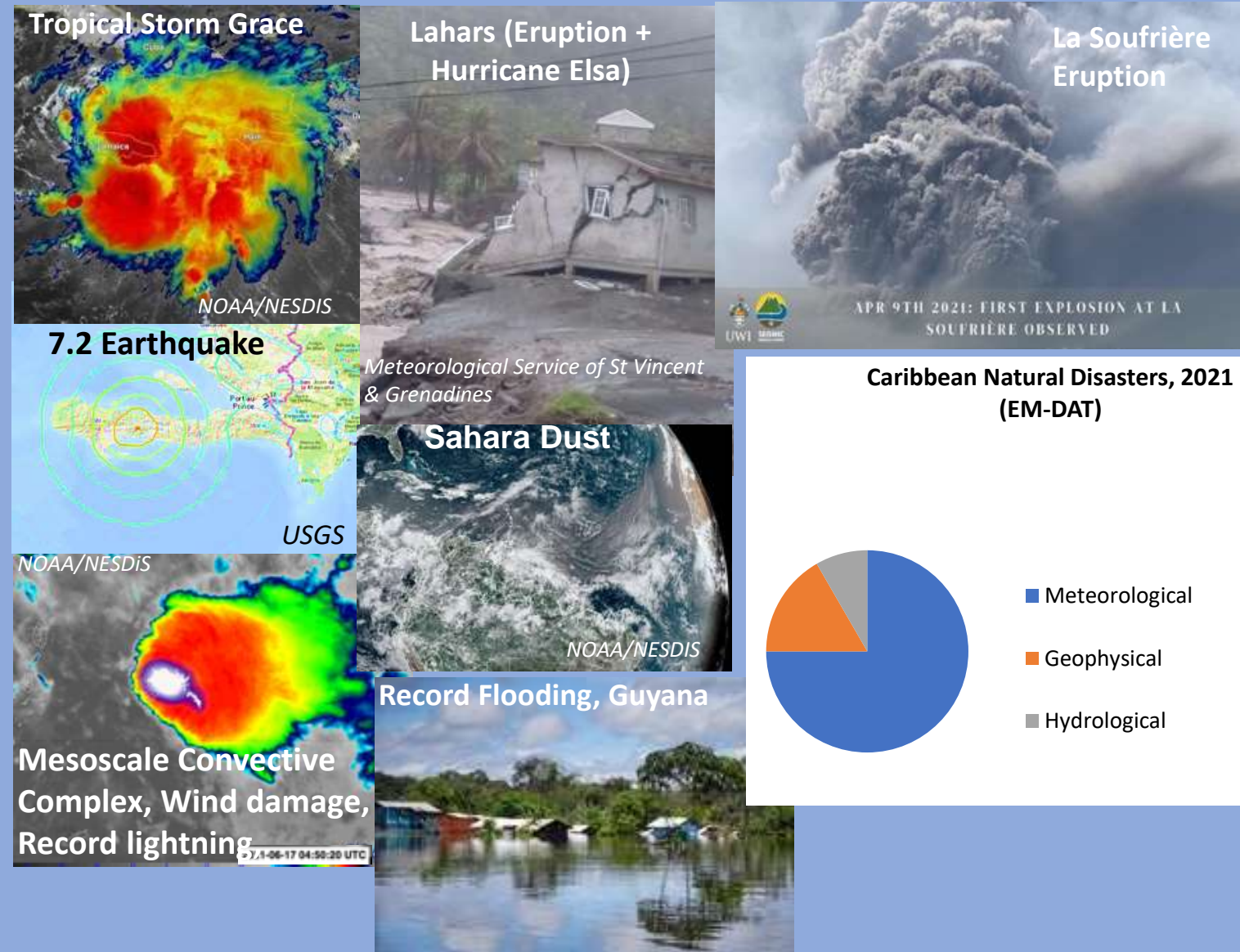


# The Caribbean, A Multi-hazard Zone

## Epitomized by 2021

- Eastern Caribbean (volcanic eruption, heavy rain, severe thunderstorms, flash floods, record flooding, tropical cyclones)
- Western Caribbean (tropical cyclones, storm surge, severe thunderstorms, heavy rain, hail, floods, earthquake)
- Also Saharan Dust outbreaks
- COVID-19 pandemic
- **MHEWS requires - Cooperation & collaboration across disciplines, countries, sectors**
- CDEMA, CMO (HQ & CIMH), WMO, NOAA, UNESCO-IOC & IHP, UWI, Meteo-France, CCCCC, ACS, etc....

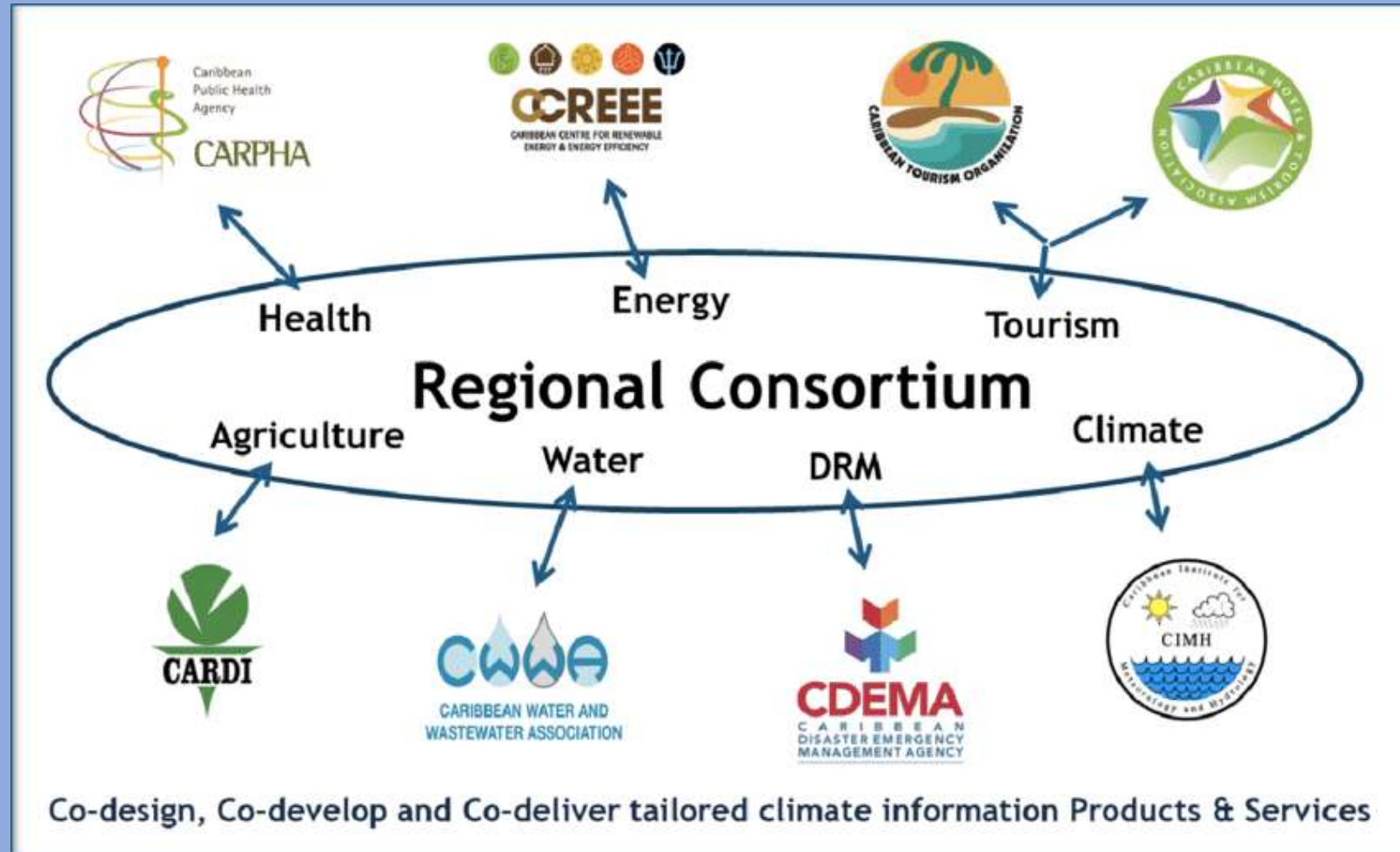


# Early Warning Information Systems Across Climate Timescales

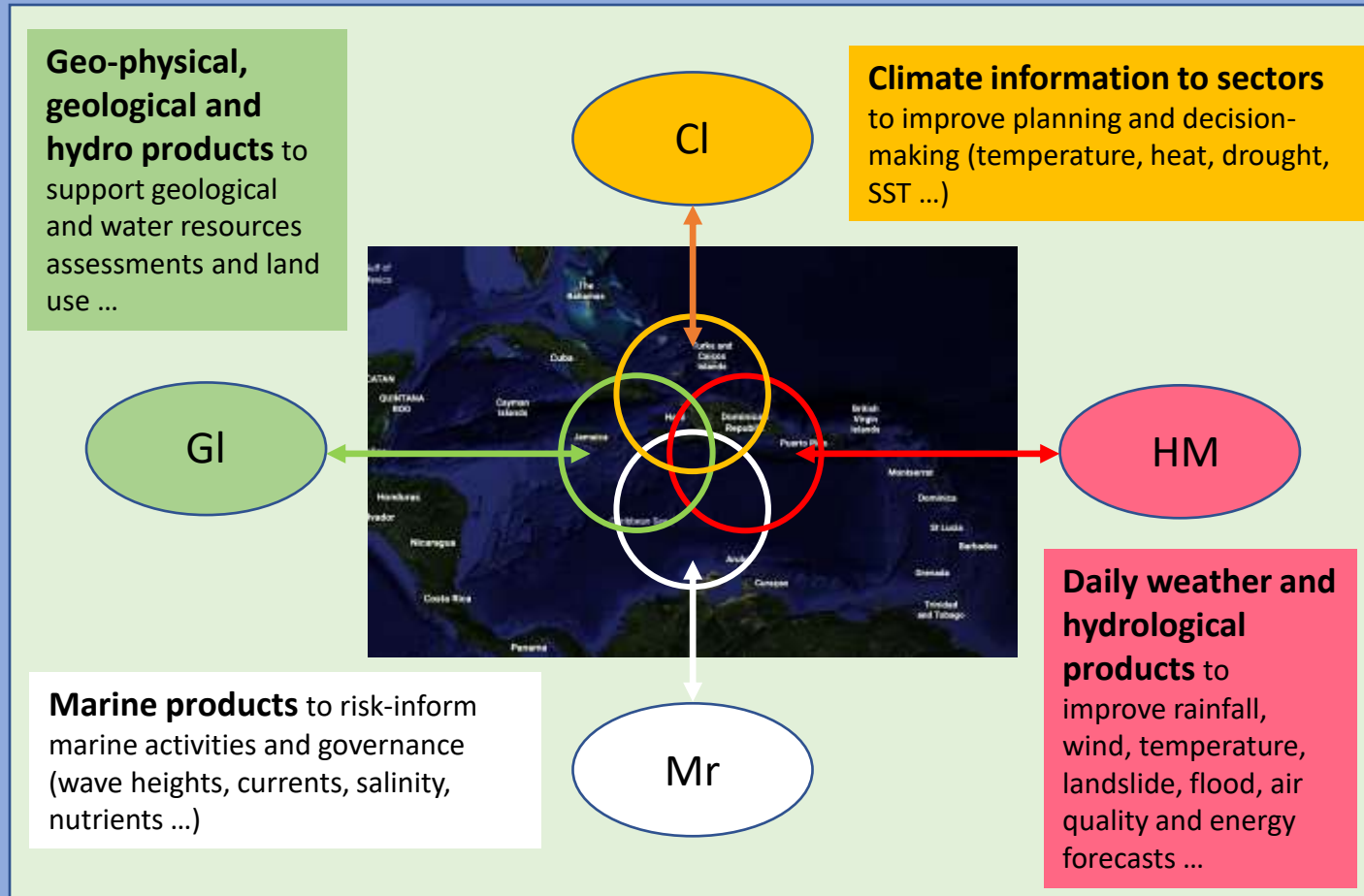
## REGIONAL PARTNERS – DATA SHARING, CO-DESIGN, CO-DEVELOP, CO-DELIVER

Courtesy, Dr David Farrell  
Caribbean Institute for  
Meteorology & Hydrology

Technical Organ of CMO  
and Regional Institution



# Caribbean Multi-Hazard Early Warning Systems



**CIMH Current Support to Caribbean MHEWS Integrative Framework for Climate Resilient Development**

**MHEWS Achievability** requires

- Integrative framework
- **DATA SHARING – REAL-TIME & ARCHIVES!!**
- Access to and development of **new technologies and knowledge**
- Development and nurturing of **new skills and thinking**
- Public, private and academic **partnerships for innovation, entrepreneurship and finance**

- Hazardous events may occur alone, **simultaneously, cascading or cumulatively** over time and space

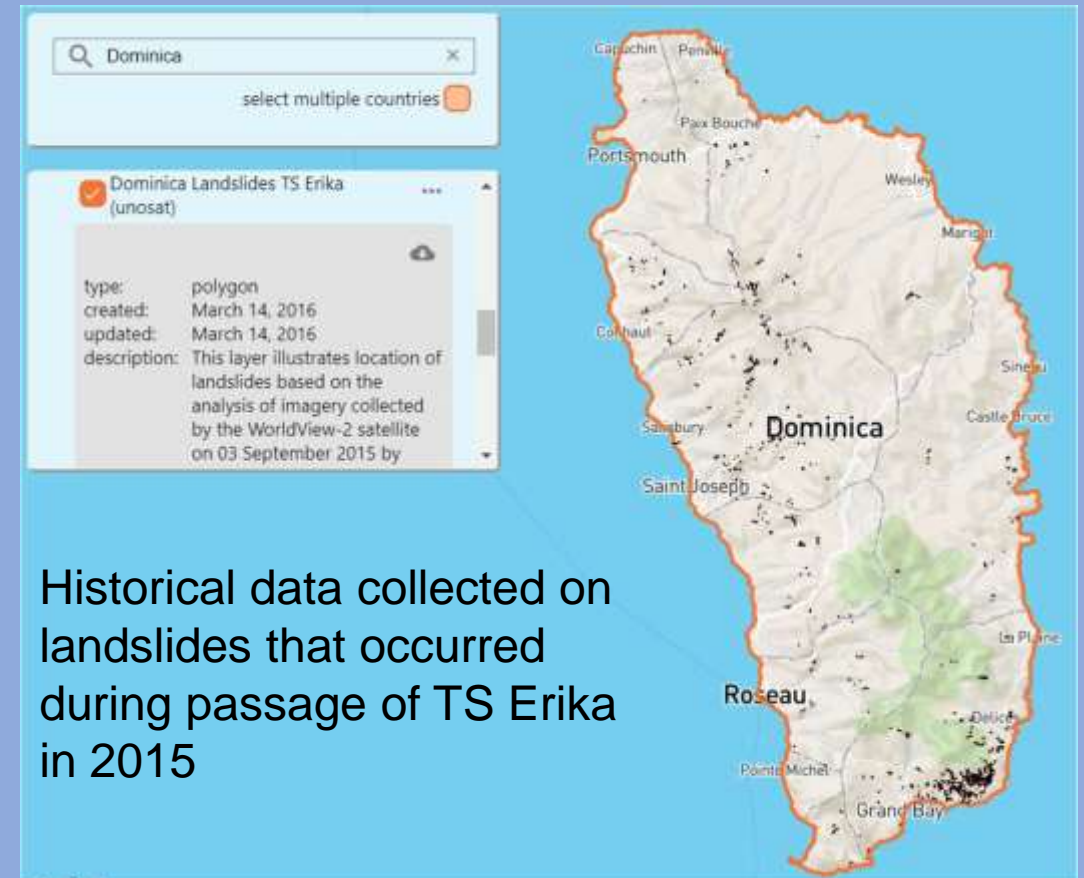
*Modified from CIMH*





- **Regional Early Warning System Consortium**
- Strategic Roadmap
- Regional CDM programme
- National imperative
- Sustainability of financing

Courtesy, Ms Elizabeth Riley  
Executive Director, CDEMA

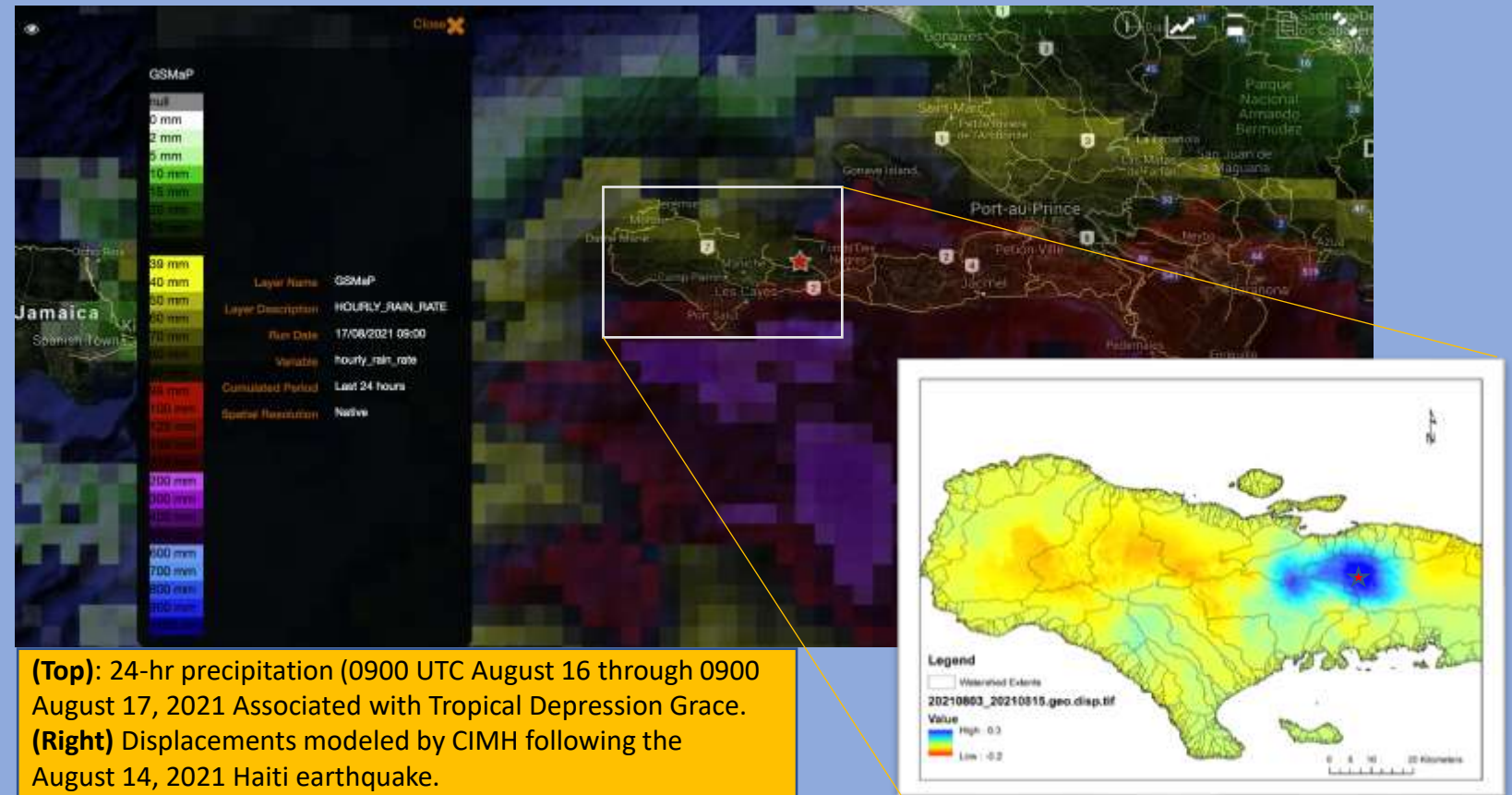


# Caribbean MHEWS – Haiti Example

CIMH's Rainfall Predictions for Tropical Depression Grace, Related Impact-based Forecast, and Risk Assessment for Earthquake-Impacted Haiti => Early Warning Meeting with CDEMA and Haitian Officials

MHEWS - integrating **seismic hazard** and with **severe weather, marine forecast - cascading impact.**

- (i) Threat to already vulnerable displaced population living outdoors
- (ii) Posed flood and landslide threats due to unstable slopes and displaced soils
- (iii) Potential storm surge



*Modified from CIMH*

# NMS & NDO Coordination in CMO & CDEMA Member States

## Regional Forecasting Arrangements through CMO



Testing of the SOPs for Multi-Hazard  
Warning Coordination &  
Communications in the Caribbean

Virtual Briefing and Table-Top  
Exercise

26 & 27 July 2022

RSMC <=> NMHSs

NMHS <=> NDO

NDO <=> CDEMA  
(escalate based on  
Level of Impact)

CIMH ->CDEMA  
under UNDP  
programme

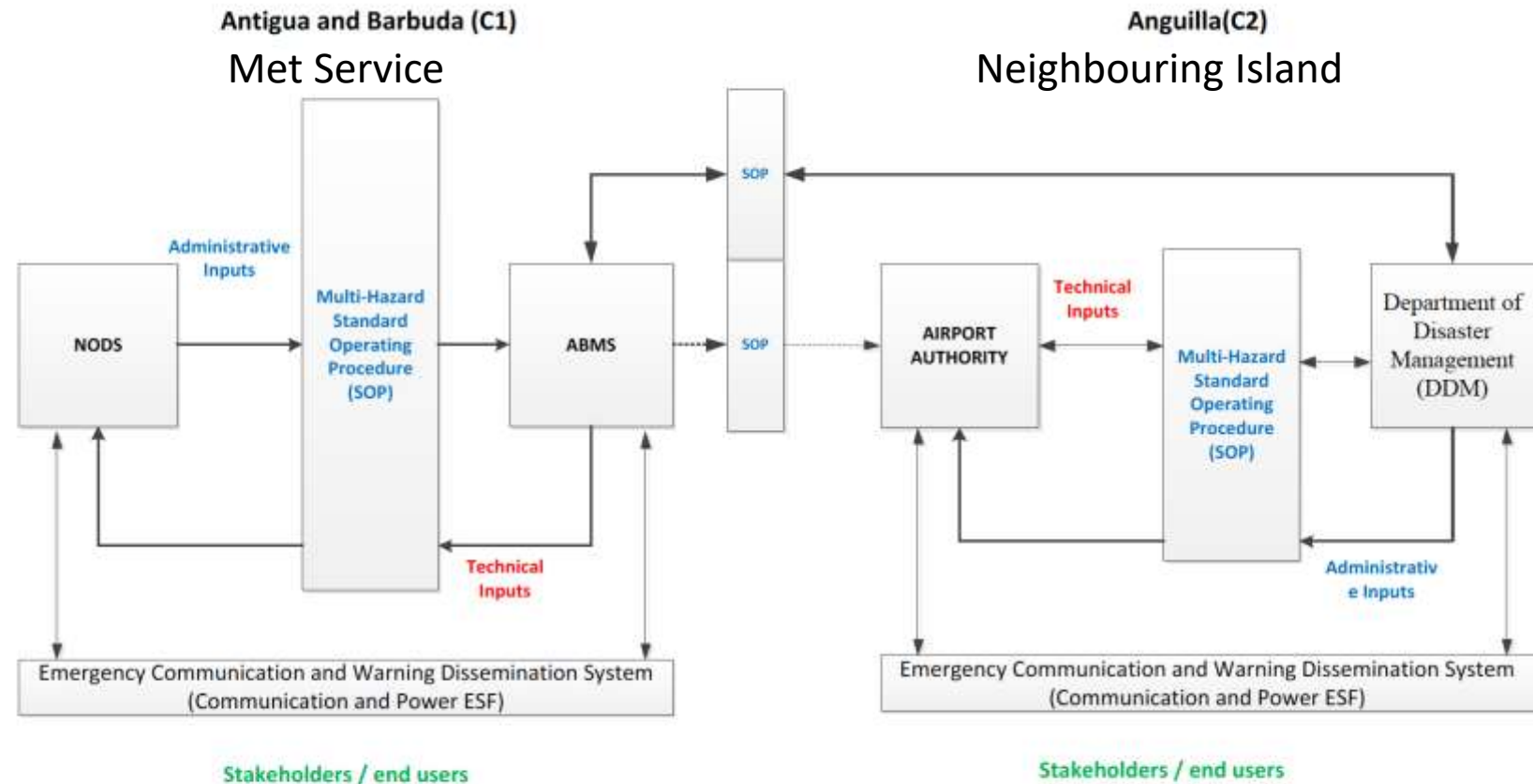


Figure 4 ABMS (Antigua and Barbuda) supporting the Department of Disaster Management (DDM) in the Anguilla for Weather Forecast and Warnings