



# Capacity Building on National and Subnational Planning for Sustainable Disaster Risk Reduction, Climate Change Adaptation, and Mitigation

## Session XII

# Early Warnings for All

January 30- February 1, 2024

Maldives National University Campus, Male Hybrid (MS-Teams)





# Early warning message dissemination Medium

Community **Viber** group with **36,000+** members



@MetMaldives  
26,000+ followers



@MetMaldives  
44,000+ followers

# Innovative solutions for Early Warning Message Dissemination



**Weather warnings**  
Malé

Moderate  
**Thunderstorms, Wind,  
Rough Seas, Gust,  
Torrential rain**

From: Wednesday 10, 16:00  
To: Wednesday 10, 20:00  
Area: From Kaafu Atoll to Dhaalu Atoll

Torrential rain and thunderstorms, with gusts of 40 mph and rough seas expected.

Updated: 2h 58m ago  
Sender: alert@meteorology.gov.mv

DIGITAL TERRESTRIAL TELEVISION BROADCASTING  
OPERATIONAL CAPACITY IMPROVEMENT PROJECT

# EWBS

### 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.

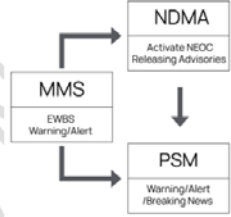


Figure-1: Inter-organizational Coordination Framework on Alert Issuance Protocol

### Cell Broadcast - how it works

Authority sends warning (e.g. storm, flood, forest fire)

Cellular radio stations in the affected area send out warning message

Customers receive warning message on the smartphone

Telefónica

### Design ideas from PSM

# Contribution of Early Warnings to Crisis Response and Preparedness:

**Today's Weather**  
Valid until 18:00 hrs, 31st December 2023  
*Advisory: All are advised to be cautious.*

☁ **Weather:** Scattered showers with a few heavy showers and thunderstorms are expected over the country.

🌀 **Wind:** East/southeasterly at 13 - 23 miles per hour in northern atolls, at 8 - 18 miles per hour in central atolls and at 5 - 15 miles per hour in southern atolls. Winds may gust to 40 miles per hour during showers.

🌊 **Sea:** Rough in northern atolls. Moderate in the central and slight in the south. Seas will be rough during showers.

🌊 **Wave height:** 4 - 7 feet (north and central), 3 - 5 feet (south).

**Tonight's Weather**  
Valid until 06:00 hrs, 1st January 2024  
*Advisory: All are advised to be cautious.*

☁ **Weather:** Scattered rain with isolated heavy showers and thunderstorms are expected over the country.

🌀 **Wind:** East/southeasterly at 13 - 20 miles per hour in the northern atolls, at 8 - 18 miles per hour in the central atolls and at 5 - 15 miles per hour in the south. Winds may gust to 40 miles per hour during showers.

🌊 **Sea:** Rough in the northern atolls, moderate in the central and slight in the south. Seas will be rough during showers.

🌊 **Wave height:** 3 - 7 feet (central and north), 2 - 5 feet (south).

**Yellow Alert**

- From Noonu Atoll to Laamu Atoll
- 31/13:00 hrs - 31/17:00 hrs
- Torrential rain and thunderstorms with gust winds of 45 mph and rough seas expected.
- 31 December 2023

**Orange Warning**

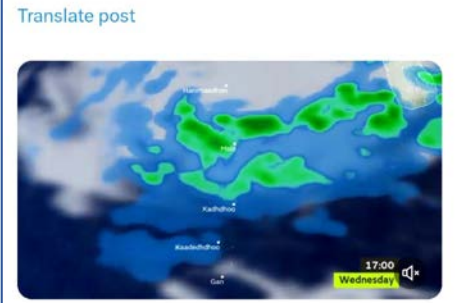
- From Kaafu Atoll to Alif Dhaal Atoll
- 31/15:15 hrs - 31/17:30 hrs
- Torrential rain and thunderstorms with possible flooding expected.
- 31 December 2023

**Maldives Meteorology**  
@MetMaldives

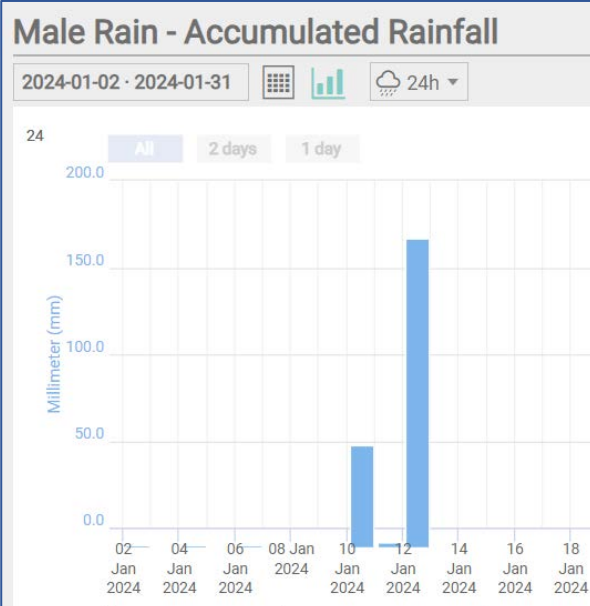
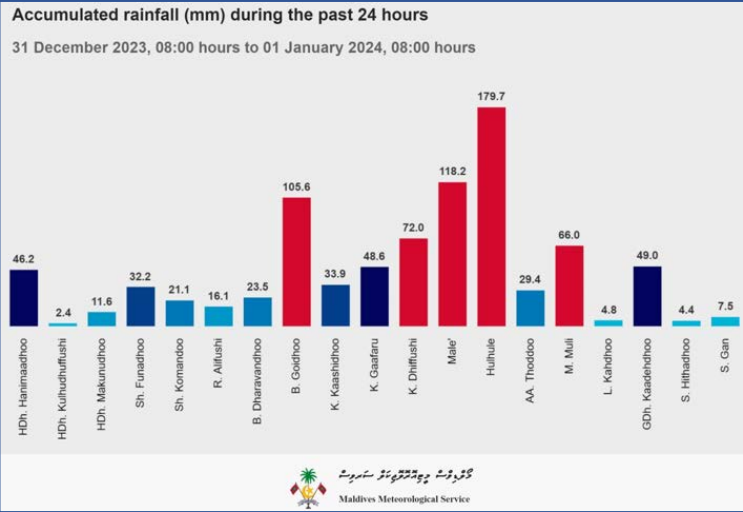
☁ **Weather:** Scattered rain with isolated heavy showers and thunderstorms are expected over the country.

🌀 **Wind:** East/southeasterly at 13 - 20 miles per hour in the northern atolls, at 8 - 18 miles per hour in the central atolls and at 5 - 15 miles per hour in the south. Winds may gust to 40 miles per hour during showers.

🌊 **Sea:** Rough in the northern atolls, moderate in the central and slight in the south. Seas will be rough during showers.



19:42 · 09 Jan 24 · 1,485 Views



**First Responders**  
47 participants

Friday, January 12, 2024

4:30 PM

4:30 PM

L.Maamendhoo, fenboduvanee, 2 geyakahfen vadhefi, mihaaru L. Kahdhhdhoo in team eh pump aai eku furuvaalane



**ESCAP** Risk and Resilience Portal  
An Initiative of the Asia-Pacific Disaster Resilience Network

**HAZARD** [Close]

Search

**GEO**

Multi-hazard

**HAZARD** Sea Level Rise

Drought

**GUIDED TOUR** Floods

Surface Wind

**Legend** [Close]

LEFT MAP  RIGHT MAP

**LEGEND** Sea Level Rise (Units: m)

Opacity 50%

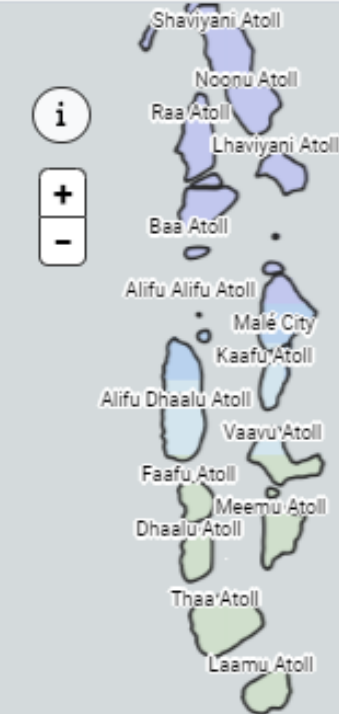
- 0.929 - 0.934
- 0.934 - 0.940
- 0.940 - 0.946
- 0.946 - 0.953

**RESET**

**CUSTOMISE**

### Maldives - Sea Level Rise

Historical, Sea Level Rise



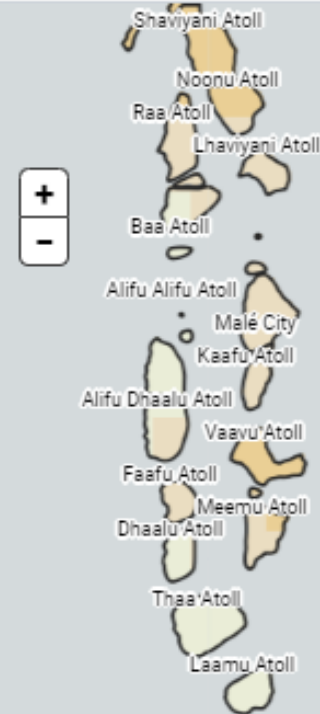
100 km 50 mi Gaafu'Alifu Atoll Gaafu Dhaalu Atoll

**MAP** CHART TABLE METHODOLOGY

Gnaviyani Atoll

### Maldives - Sea Level Rise

Near-term (2021-2040) - SSP2, Sea Level Rise



100 km 50 mi Gaafu'Alifu Atoll Gaafu Dhaalu Atoll

Gnaviyani Atoll



# Awareness and Outreach



# 8TH NATIONAL MONSOON FORUM

10 MAY 2023

LAAMU FONADHOO, MALDIVES



MALDIVES  
METEOROLOGICAL  
SERVICE

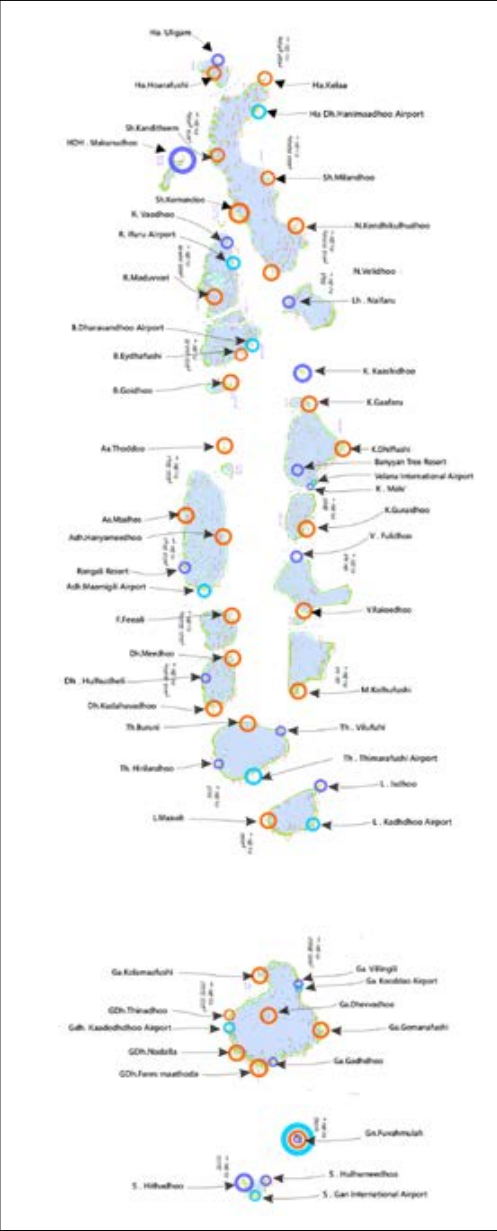


# Ongoing/ upcoming programs contributing to EW4All – pillar-II



**SOFF**  
Systematic Observations Financing Facility

**Weather and climate data for resilience**





# Ongoing/ upcoming programs contributing to EW4All – pillar-II



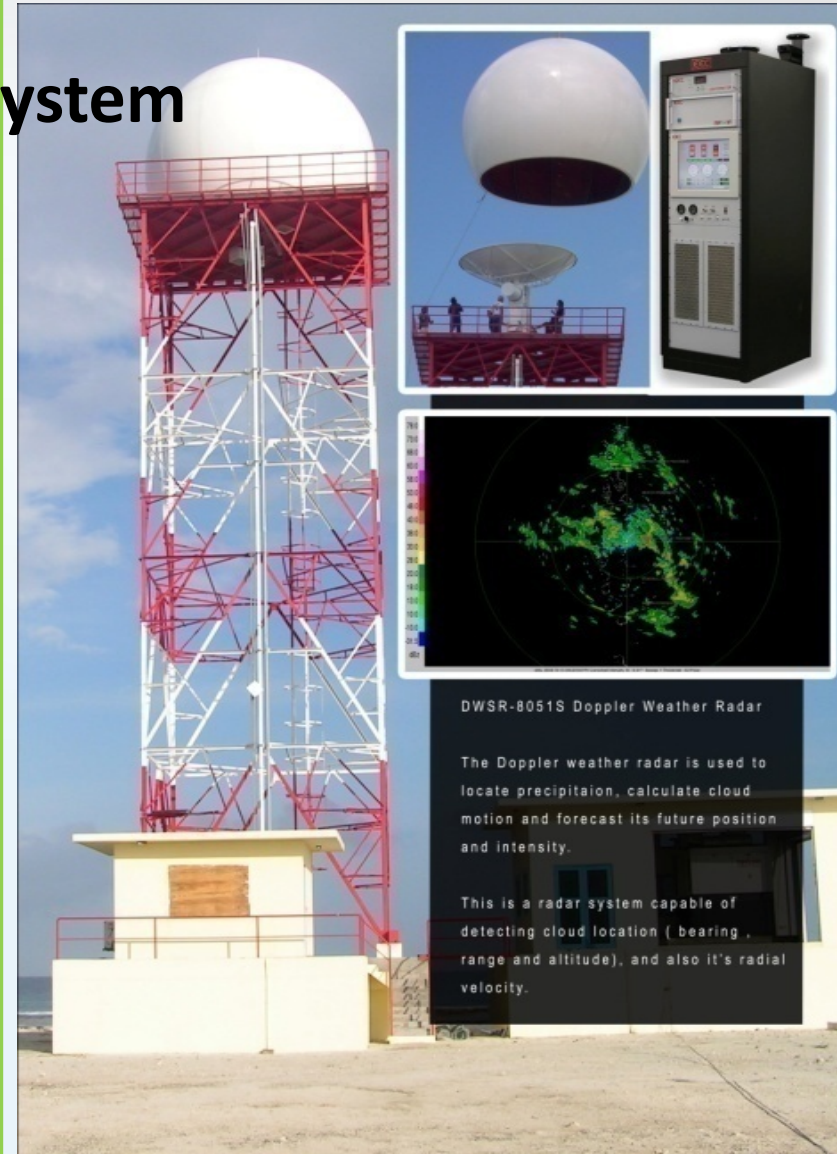
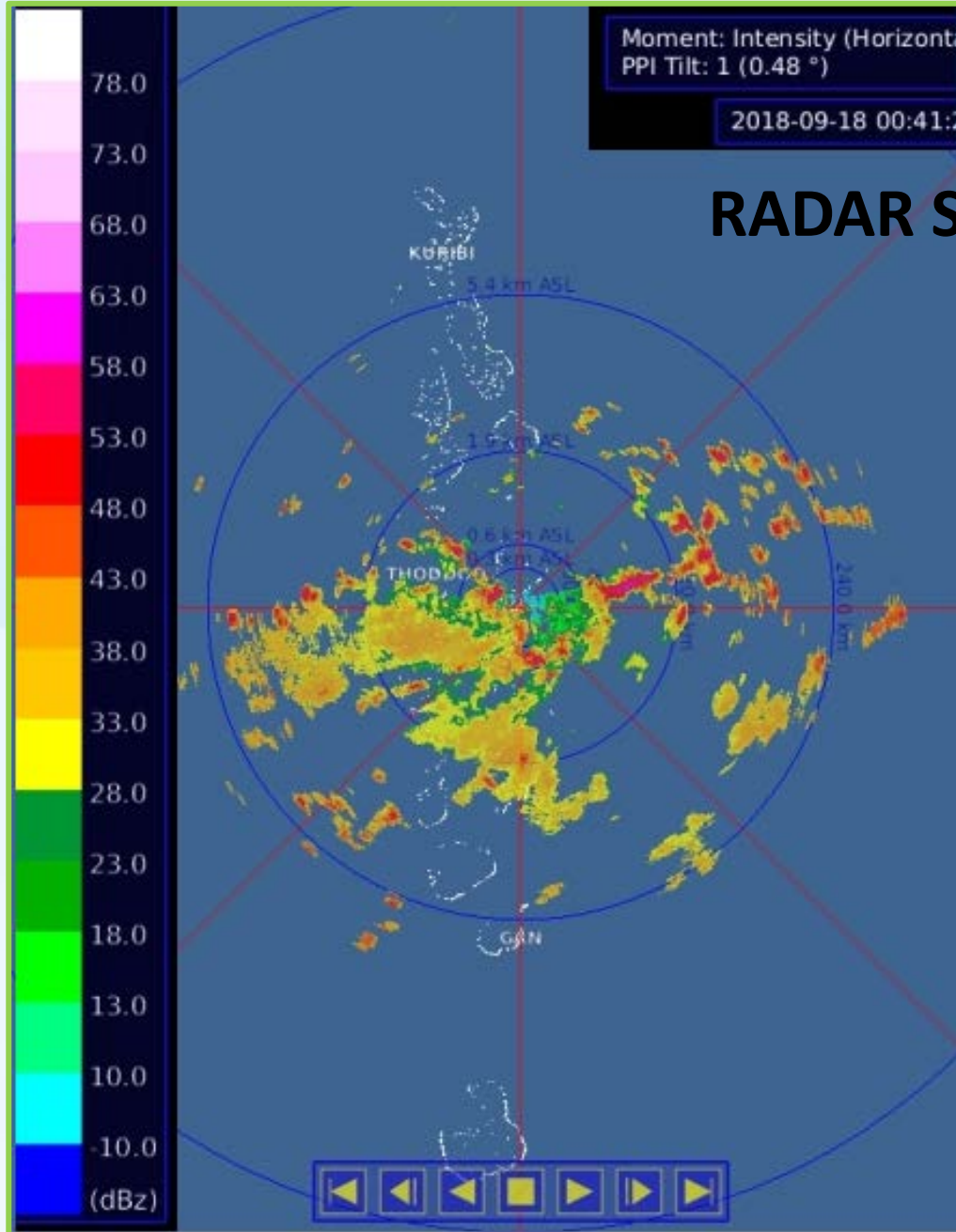
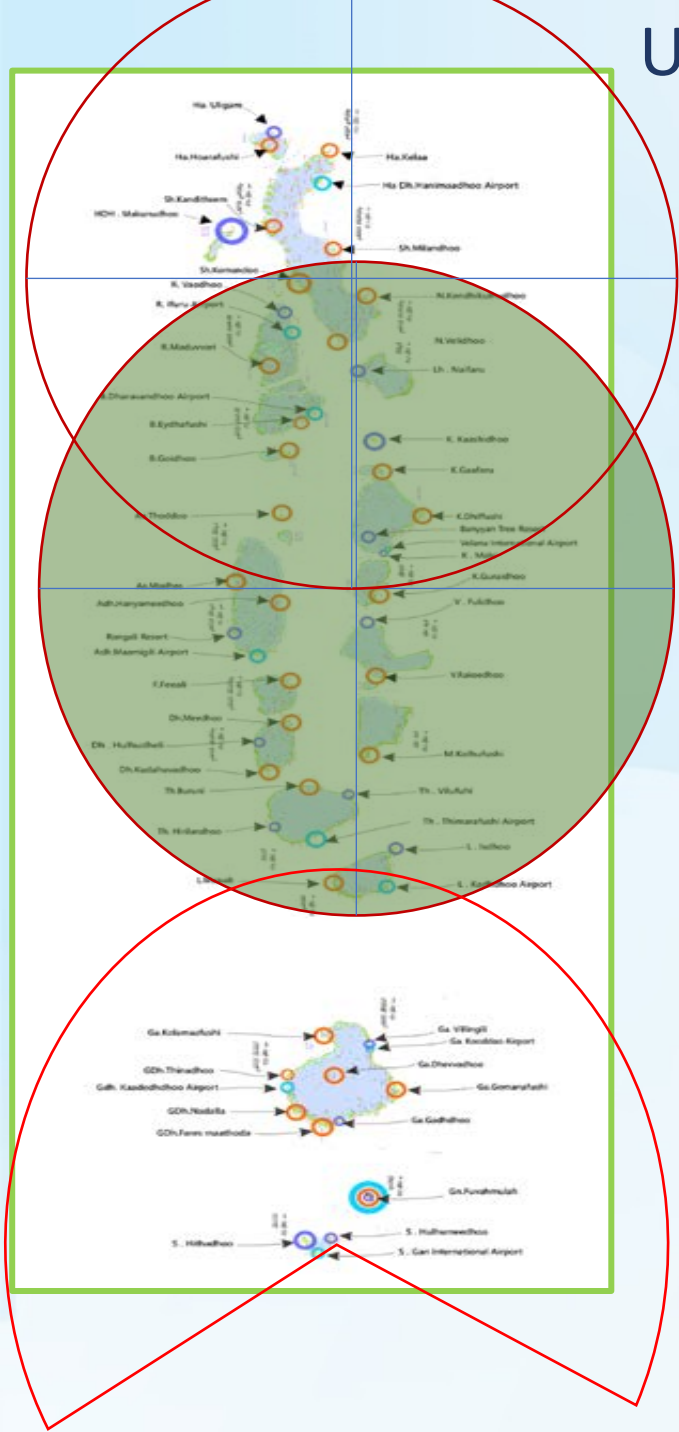
## Deliverables

1. Demonstration of impact-based forecasting model in Maldives
2. Improved climate information services delivery through provision of the agrometeorological services to island communities
3. Improved local weather application (Moosun)

# Upcoming programs contributing to EW4All – pillar-II

ADB and Government of Italy

## RADAR System



# GCF Project: Towards Risk-Aware & Climate Resilient Communities (TRACT) – Strengthening Climate Service and Impact Based Multi-Hazard early warning in Maldives.

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. <u>Aminath</u> Shauna Minister of Environment, Climate Change and Technology Green Building, <u>Handhuvaree Hinu</u> , <u>Maafannu, Malé</u> , 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

## Objectives

- 1 – Strengthened delivery model for climate information services and MHEWS
- 2 – Enhanced observations, monitoring, modelling and impact-based forecasting
- 3 – Improved dissemination and communication of risk information and early warnings to the last mile
- 4 – Strengthened climate risk management capacity



Now the **UNEP-GCF “TRACT”** project has been **re-aligned** to cater many of the gaps and activities identified by the pillar leads in the **EW4Aall road map** which has been endorsed by the Government of Maldives.

*For example:*

- ✓ **Pillar-1:** Disaster Risk Knowledge: The TRACT project will help to produce dynamic, multi-hazard maps and operationalize Maldives’ disaster loss database.
- ✓ **Pillar-2:** Observations and Forecasting: The TRACT project will deploy ocean monitoring equipment and strengthen capacity for localized Numerical Weather Prediction (NWP) modelling and impact-based forecasting.
- ✓ **Pillar-3:** Warning Dissemination and Communication: The TRACT project will establish a central MHEWS platform and help to make communications more inclusive and accessible to all population groups.
- ✓ **Pillar-4:** Preparedness and Response: The TRACT project will help to scale up community-based disaster risk reduction and develop Early Action Protocols.

The TRACT project is designed to complement and build on existing capacities and initiatives (such as the UNDP/UNESCAP Joint SDG project etc).



Maldives  
Meteorological  
Service

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