

Early Warning System Programming and Investment Opportunities in MALDIVES

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Early Warning System Investment Planning Workshop

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What are the policies/roadmap/strategies that prioritize Early Warning System and Climate Information Services in your country?

Scaling Up Early Warning Systems Implementation Roadmap

Maldives 2023 - 2027

Early Warnings
to All







EW4All initiative is nationally lead by **Climate Change Department** (MoTE)

NDMA, pillar 1: Disaster Risk Knowledge

MMS, pillar 2: Detection, Monitoring, Analysis, and Forecasting

NCIT, pillar 3: Warning Dissemination, and Communication

MRC, pillar 4: Preparedness and Response Capabilities

Ministry of Climate Change,
Environment and Energy

MALDIVES' FIRST BIENNIAL TRANSPARENCY REPORT

TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE
CHANGE (UNFCCC) UNDER THE PARIS AGREEMENT

Addresses need for improved climate monitoring and early warning systems

- Monitoring Climate and Extreme weather Events
- Impact-Based Weather Forecasting
- Tools and Technology



Update of Nationally Determined Contribution of Maldives

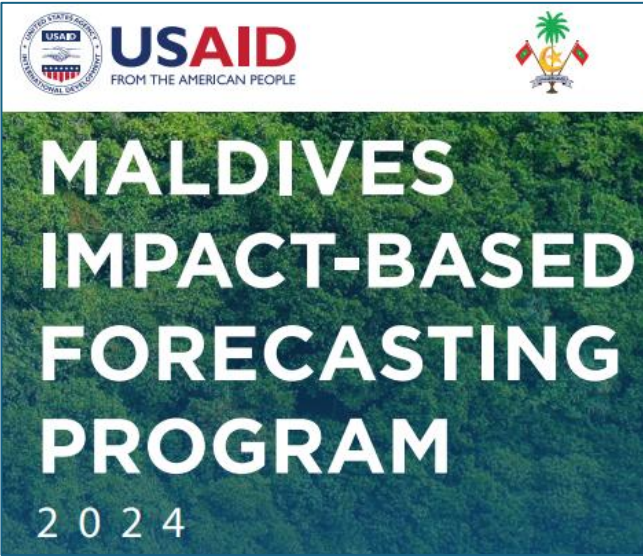
Early Warning and Systematic Observation

Promote research to understand past and future climate trends and their associated impacts.

Continue strengthening and expansion of the meteorological network and early warning systems to cover the entire archipelago.

Improve the climate and weather forecasting tools for decision making. ? Strengthen the early warning systems and risk management tools.

What are the policies/roadmap/strategies that prioritize Early Warning System and Climate Information Services in your country?



- Risk Identification
- Weather and Climate Modeling
- Dissemination and Communications
- Response and Early Actions
- Sustaining IBF
- IBF Implementation Plan

- National Adaptation Plan (NAP) 2023–2030 – Prioritizes multi-hazard early warning systems (EWS) for climate resilience.
- The Fifth Tourism Master Plan (2023–2027) outlines sustainable tourism strategies that include resilience-focused measures such as renewable energy adoption, improved waste management, and protection of ecosystems—all key to enhancing climate resilience in the tourism sector



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Climate Emergency Act



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Disaster Management Act

COUNTRY HYDROMET DIAGNOSTICS

Informing policy and investment decisions for high-quality weather forecasts, early warning systems, and climate information in developing countries.

October 2023

Maldives Meteorological Service (MMS) Peer Review Report



Has Climate Information Services been piloted or operationalized for any sector in your country (agriculture, water, energy, transport, tourism, or others)? What challenges did you encounter and lessons learned from these?

Sector	Institutional Arrangement of Climate Service Delivery	Challenges	Lessons Learned
Water Sector (Probable Area for Rain Harvesting)	Delivery via Mobile App	Limitation on NWP model resolution for location island specific forecast.	Lack of awareness on its application and interpretation of forecast uncertainty in terms of temporal and spatial resolution was not properly communicated to the user sector.
Tourism Sector	On request basis	Some information published in website, user community not aware of the existence of these information	Need regular community engagement and awareness programs on how these information can be applied.
Construction, projects design, academia and research community	On request basis data and information as provided	Challenges in data and information customization of specific request.	Need better solution for data and information management system.
General User Community	Seasonal and sub-seasonal Climate Outlook forecast published in website.	Generalised, technical terminology	Stronger community engagement improves EWS effectiveness; digital platforms (SMS, apps) significantly increase reach. Need to aware user communities on how it be best applied for planning.

Are your country’s Climate Information and Early Warning System priorities articulated in ADB’s Country Program Strategy (CPS) and programming pipeline/projects in your country?

ADB CPS Priority/ Strategic Objective	ADB Programming Pipeline/ Projects
<p>Strategic objective 3: Improve quality of life of island communities while ensuring environmental sustainability</p> <p>Environmental protection, climate change adaptation, and disaster risk management. (i) Conduct capacity-building, knowledge activities, policy dialogue, and related activities on preserving the marine environment, climate change adaptation, and disaster risk management</p>	<p>Enhancing Climate Resilience and Food Security Project</p> <p>Executing agency: Ministry of Finance and Planning Implementing agency : Climate Change Department, Ministry of Tourism and Environment (MoTE)</p> <ul style="list-style-type: none">▪ Procurement and installation of weather radar at Addu City▪ Repair, Upgrade and Maintenance of Hulhule existing RADAR▪ Capacity Building training program▪ Pilot agro-weather forecasts and crop management advisories▪ Other Adaptation support for Kulhudhuffushi City and Ministry of Agriculture and Animal Welfare.▪ will also support Maldives' efforts to build climate resilience focusing on the interlinkages between human settlement and agri-food systems.

Ongoing/pipeline Projects for improving Climate Service and Early Warning System

Indicative Project/ Investment Title	Timeframe	Sectors Involved	Implementing Agency
Tailored Intelligence for Actionable Early Warning Systems—Maldives	May 2025 – April 2027	MMS	UNDP, Global Development and South-South Cooperation Fund
SOFF-funded UNEP investment phase in Maldives	Oct 2024 - Sep 2028	MMS, CCD	Implementing Entity – UNEP Executing Entity – MMS
Establishment of X-band RADAR	June 2025 – Oct 2027	MMS, CCD	
"Toward Risk-Aware and Climate-resilient communities (TRACT)"	2025 - 2030	MMS, NDMA, NCIT, MRC	GCF funded project Implementing Entity – UNEP Executing Entity – CCD and MMS

What potential Climate Information and Early Warning System sectoral investments could your country and ADB work together?

Indicative Project/ Investment Title	Timeframe	Sectors Involved	Implementing Agency
Tourism Sector Resilience program		Tourism Industry, Ministry of Tourism, NDMA	Ministry of Tourism supported by NDMA
Smart Fisheries EWS: Mobile-based forecast and alert system for fishers.		MMS, Fisheries	
Empowering communities through Risk Knowledge and Awareness. Setting Up a National Campaign to promote disaster risk and climate change Awareness- all inclusive		NDMA, Ministry of Tourism and Environment and State-Owned Enterprises, etc.	NDMA
Establish an Early Warning National Alert System - Cell broadcast Technology		NDMA, NCIT and Ministry of Homeland Security	NDMA and NCIT

What measures and reforms are needed to ensure sustainability of the identified Climate Information and Early Warning System investments?

Indicative Project/ Investment Title	Institutional Arrangement	Policy Reform	Budget Reform
Tourism Sector Climate Resilience Program	Ministry of Tourism; Island Councils	Integrate EWS requirements into tourism licensing regulations	Introduce climate adaptation levy for tourism operators
Smart Fisheries EWS	Ministry of Fisheries, Marine Resources & Agriculture; Fishermen's Associations	Mandate use of certified weather-alert apps for fishing operations	Create subsidy program for EWS equipment for fishing vessels
Scale up Hushiyaaru Campaign – National Campaign to promote DRR awareness (all-inclusive)	National Disaster Management Authority; Ministry of Education; NGO's, Government Ministries, Local Councils	Incorporate DRR awareness and EWS education into school curricula and Teaching courses and Training the teachers	Secure annual public awareness campaign funding from national and local budgets

Thank You