Systematic Observations Financing Facility

Investment Phase:
Annual Narrative Report

Republic of Maldives
Year 1

Systematic Observations
Financing Facility

Weather and climate data for resilience

General Information

Country	The Republic of Maldives	
Implementing Entity	United Nations Environment Programme (UNEP)	
Agreement effectiveness date	03 April 2024	
Duration	60 months	
Anticipated end date	01 April 2029	
Reporting period	**From:** 03 April 2024	**To:** 31 March 2025
Approved amount	• Total: USD 4,907,326 • Implementing Entity (UNEP): USD 4,436,526 • World Meteorological Organization: USD 470,800	
Disbursed amount	• Total: USD 4,149,791 • Implementing Entity (UNEP): USD 3,992,873 • World Meteorological Organization: USD 156,918	
Signature of Implementing Entity	 Jochem Zoetelief, UNEP, 30.04.2025	

Summary

Highlights of key achievements

Key achievements have been made in capacity building, project coordination, and infrastructure planning, laying a solid foundation for the next stages of implementation. Project coordination and institutional setup are progressing through formal agreements and strengthened engagement among key stakeholders including the Maldives Meteorological Service (MMS) as Executing Entity, the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES) as Technical Partner, in coordination with, the Finnish Meteorological Institute (FMI) as the Peer Advisor.

While delays in establishing the Project Management Unit (PMU) by the Maldives Meteorological Service (MMS) and some procurement steps may take additional time, several significant steps are underway. These include the completion of the first Refresher Training for MMS staff; the development and ongoing review of training materials for the next session in 2025; specifications for a new land-based station and the upgrading of four existing surface weather stations and procurement documents for automated weather stations (AWS) are currently under review by MMS in consultation with FMI; and MMS's ongoing work to establish its PMU to support project implementation.

The first project coordination meeting in December 2024 brought project partners together to align reporting mechanisms, implementation logistics, and next steps. However, the establishment of MMS's Project Management Unit (PMU) is taking longer than expected due to pending government approval of its structure. The Inception Workshop under **Output 1.1 – National consultations, including with CSOs and other relevant stakeholders**, originally planned for an earlier date, is now expected to take place in the first week of June 2025.

Under Output 1.3 – NMHS human capacity required to operate the GBON network developed, a refresher training program for MMS staff was conducted by RIMES in November 2024 in Malé, strengthening the skills of 22 MMS staff, with a gender distribution of 20% female and 80% male, including six participants from three regional meteorological offices. The training covered Automated Weather Station (AWS) operations, metadata management, instrument calibration, Numerical Weather Prediction (NWP), and the WMO Information System (WIS). Participants gave positive feedback for its relevance, effectiveness, impact and sustainability. To build on this progress, a subsequent training session focusing on AWS installation, operation, and maintenance aligned with Global Basic Observing Network (GBON) standards is

planned for early 3rd quarter of 2025. RIMES has developed the curriculum and training materials for the session.

Under Outcome 2 – GBON infrastructure in place, technical specifications for one new land-based station and for upgrading four existing surface weather stations have been defined. These specifications and the procurement documents for the new land-based station are currently under MMS and FMI review, with finalization expected by the end of the first quarter of 2025. Once approved, there will be a UNEP procurement capacity building workshop to share best practices on vendor selection and procurement will follow and are expected to begin in the second quarter of 2025. MMS staff will receive training from the vendor after the new equipment is installed. The training will focus on the operation and maintenance of the newly installed weather stations. Additionally, under **Outcome 3 – Sustained compliance with GBON**, specifications for spare sensors for AWS maintenance are under review and awaiting MMS approval to initiate the procurement process.

The technical partner, RIMES has noted that potential delays may arise due to factors including government payment restrictions in the Maldives, which could complicate vendor selection and procurement processes, as well as limited availability of qualified vendors capable of meeting the project's long-term maintenance and cost-efficiency requirements. However, with strengthened coordination between UNEP, MMS, RIMES and FMI, the project is well positioned to move forward with the planned activities.

Challenges and Lessons Learned

As the project remains in its early stage, only a limited number of challenges have emerged. One has been the prolonged approval process by the Government of the Republic of Maldives for the structure and establishment of the Project Management Unit (PMU) under the Maldives Meteorological Service (MMS). The inception workshop is now expected to take place in the first week of June 2025, followed by the formal establishment of the MMS's PMU.

Another area of challenge is related to procurement. These activities are being led by the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES), based on its in-country experience and technical capacity. RIMES has noted constraints that may affect the pace of procurement, including government payment restrictions in the Maldives, which could influence vendor selection, as well as a limited pool of qualified vendors able to meet the project's long-term maintenance and cost-efficiency requirements. However, these challenges have not caused delays to date. RIMES has already developed the technical specifications for one new land-based station and for the upgrade of four existing surface weather stations. These specifications, along with the procurement documents for the new station, are currently under review by MMS

and the Finnish Meteorological Institute (FMI), with finalization anticipated by the end of the first quarter of 2025.

Capacity-building efforts have progressed well; however, gender representation in the initial training activity was low, with female participation at 20%. The Maldives Meteorological Service (MMS) team engaged in the SOFF programme includes 70 staff – 50 male (71.4%) and 20 females (28.6%), which reflects the current staffing context. Taking this into consideration, the target for female participation in future training has been adjusted to 30%. Efforts will be made to encourage broader participation in upcoming training activities.

Next Steps

The next stage of the project will focus on finalizing institutional arrangements, progressing procurement activities, and preparing for infrastructure installation and upgrades.

- The Project Management Unit (PMU), which is being established by MMS, is expected to be in place before the Inception Workshop, which is tentatively scheduled for the first week of June 2025. Once established, the PMU will support steady project coordination, procurement, and financial management.
- Procurement will move forward in Q2 2025, following the finalization of AWS technical specifications by MMS and the Finnish Meteorological Institute (FMI). The process will focus on the procurement and installation of one new AWS station, upgrades to four existing AWS stations, and the procurement of spare sensors for AWS maintenance.
- Capacity-building activities will continue, with a follow-up training planned for early Q3 2025 to equip MMS staff with skills in AWS installation, operation, and maintenance. The training materials and curriculum are currently under review. Gender inclusion in training programs remains a priority, with efforts to ensure at least 30% female participation in upcoming sessions.
- MMS will also conduct a site survey at Maafaru to finalize a location for AWS installation and obtain necessary clearances.
- Strengthening coordination between UNEP, MMS, RIMES, and the Peer Advisor will be essential. Regular monthly coordination meetings are planned to support timely decision-making, improve reporting structures, and streamline implementation.

Progress of implementation

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
1. GBON institutional and human capacity developed														
1.1 **National consultations**, including with CSOs and other relevant stakeholders conducted	# of inception workshops held	1	1	1	1	1						Not Yet Started	Tentatively scheduled for the first week of June 2025.	Delayed due to the prolonged approval process for the Project Management Unit (PMU). Preferred to hold this workshop after the recruitment of the MMS project manager.
	% female participation in the inception workshops	50	50	50	50	50						Not Yet Started	Tentatively scheduled for the first week of June 2025.	
	# of stakeholder workshops held		1	1	1	1						Not yet started	Planned to be held along with the inception workshop in June 2025.	
	# of high-level events held	1				1						Not yet started		
	# of gender workshops held		1	1								Not yet started		
	% female participation in the stakeholder workshops		50	50								Not yet started	June 2025.	
1.2 **NMHS institutional capacity** required to operate the GBON network developed	Years in which the organizational strategy will be drafted		X	X	X							Not yet started		
	Years in which gender policy will be drafted			X	X							Not yet started		
	Years in which stakeholder engagement plan will be drafted		X									Not yet started		
	# of staff salaries paid	9	9	9	9	9						Not yet started		The PMU structure was submitted to the Ministry of Finance for approval on 11

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
1.3 **NMHS human capacity** required to operate the GBON network developed														December 2024. The ToRs for some PMU staff were submitted on 8 January 2025, and all PMU staff ToRs were provided to the Ministry upon request on 5 February 2025. The staff recruitment process will commence as soon as the Finance Ministry approves the PMU structure.
	Years in which trainings will be conducted	X	X	X	X	X	1					On-track	The Refresher Training Program (November 24–28, 2024) at the Maldives Meteorological Office strengthened MMS staff capabilities in NWP, AWS operations, WIS, metadata management, and instrument calibration. A total of 22 participants (20% female) attended, with high satisfaction scores (4-5) in relevance, coherence, effectiveness, impact, and sustainability. The 2025 Refresher Training Program is planned, focusing on AWS installation, operation, and maintenance to meet GBON standards. The curriculum, under review by MMS and FMI, will integrate theoretical training with hands-on practical activities,	Efforts will be made to enhance female participation through targeted outreach and recruitment strategies.

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
													supported by RIMES experts to enhance long-term meteorological capacity.	
2. GBON infrastructure in place														
2.1 **New land-based stations** and related equipment, ICT systems, data management systems and standard operating practices in place	# of new stations installed as per the GBON National Contribution Plan		1									On-track	Although this activity is scheduled for Year 2, RIMES has initiated preparatory work by developing technical specifications for the new land-based station, indicating that the activity is on track. Technical specifications for one new land-based AWS station, including sensors, loggers, ICT systems, and basic instrumentation training, are being developed under the GBON National Contribution Plan. The specifications are under review by MMS and FMI and are expected to be finalized by the end of Q1 2025, with the procurement process, including vendor selection and contract award, set to begin in Q2 2025. The next steps involve reviewing vendor qualifications to ensure compliance with equipment standards	Delays in procurement and installation may pose a risk to project timelines. Stronger collaboration between UNEP, MMS, the Peer Advisor, and technical partners will be essential to ensuring smooth execution and preventing delays.

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
													and proceeding with a site survey at Maafaru to confirm the installation location and obtain necessary clearances.	
2.2 **Improved land-based stations** and related equipment, ICT systems, data management systems and standard operating practices in place	# of stations improved as per the GBON National Contribution Plan		4									On-track	Although this activity is scheduled for Year 2, RIMES has initiated preparatory work by developing technical specifications indicating that the activity is on track. Technical specifications for sensors, loggers, ICT systems, and basic instrumentation training to upgrade four surface weather stations under the GBON National Contribution Plan are under review by MMS and FMI, with finalization expected by the end of Q1 2025. Procurement, including vendor selection and contract award, will begin in Q2 2025 to ensure timely upgrades in line with GBON standards.	Awaiting PMU formulation before proceeding
2.3 **New upper air stations** and related equipment, ICT systems, data management systems and standard operating practices in place	# of new stations installed as per the GBON National Contribution Plan											Not yet started		
2.4 **Improved upper air stations** and related equipment, ICT systems, data	# of stations improved as per the GBON National Contribution Plan			1								Not yet started		

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
management systems and standard operating practices in place														
3. Sustained compliance with GBON														
3.1 **GBON land-based stations' commissioning period completed**, country-specific standard cost for operations and maintenance established, and data sharing verified by WMO Technical Authority	# of stations commissioned as per the GBON National Contribution Plan		5	5	5	5						On-track	In Q1 2025, RIMES is developing technical specifications for spare sensors to support the maintenance of five AWS, ensuring compatibility with both new and upgraded stations. The specifications include installation training to ensure the sensors are correctly installed and maintained in line with GBON standards, supporting uninterrupted station operations. RIMES plans to submit the specifications to MMS and FMI for review by mid-March 2025. Once approved, the procurement process will proceed, including supplier selection, contract finalization, and warranty negotiations to ensure long-term availability of spare parts.	
3.2 **GBON upper air stations' commissioning period completed**, country-specific standard cost for operations and maintenance established,	# of stations commissioned as per the GBON National Contribution Plan			1	1	1						Not yet started		

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
and data sharing verified by WMO Technical Authority														

Gender

The project contributes to gender inclusion in meteorological services and aims to promote equal opportunities in capacity building and participation. The Maldives Meteorological Service (MMS) team engaged in the SOFF project includes 70 staff, of whom only 28% are women. In this context, the target for female participation in training has been adjusted to 30%. Efforts are underway to increase women's involvement in training activities, and MMS and RIMES will continue to strengthen outreach and engagement strategies to address the gender gap observed in the first training session, aiming to achieve at least 30% female representation in upcoming sessions.

These gender considerations aim not only to ensure that both women and men benefit equally from capacity building opportunities, but also to promote inclusive participation in project decision making such as through representation on the project steering committee, the main governance mechanism of the project.

Furthermore, MMS ensures that SOFF operations comply with the Maldives Civil Service Regulation 2014 (Regulation No.: 2014/R-311), which prohibits discrimination based on gender, race, language, social standing, disability, or political opinion. This regulation provides the foundation for promoting gender equity and non-discrimination within public service institutions.

Social and environmental safeguards

The project adheres to national and international environmental and social safeguard standards, including UNEP's Environmental and Social Sustainability Framework (ESSF) and the Maldives' regulatory requirements. These safeguards ensure that project activities minimize environmental impact, promote social inclusion, and mitigate potential risks during implementation.

During the current preparatory period, the technical partner, the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES), is focusing on establishing foundational frameworks and documentation to support ongoing and future compliance with safeguard principles. A key area of work involves aligning the procurement process for critical equipment—including Automated Weather Stations (AWS) and ICT systems—with international environmental standards. This ensures that all equipment and infrastructure installations are planned in accordance with recognized environmental best practices. Moving forward, RIMES is committed to systematically integrating environmental and social considerations throughout the design, installation, and operation of project infrastructure. Compliance with UNEP's ESSF will be monitored and assessed throughout project execution.

Although no specific environmental concerns have been raised in this reporting period, AWS installation and station upgrades must comply with both UNEP's ESSF and Maldives' environmental regulations, including land use, site selection, and impact mitigation measures.

Civil society and private sector participation

During the early stage of the Investment Phase, engagement with the private sector focused on laying the groundwork for vendor participation in procurement processes. RIMES is working closely with MMS and FMI to develop procurement documentation, ensuring alignment with project requirements and establishing the foundation for vendor engagement in the next stage of the project. The procurement process prioritizes critical infrastructure components, including AWS and ICT systems, with formal agreements with private-sector vendors expected to be finalized in the upcoming implementation phase.

Meanwhile, MMS engaged with the civil aviation sector to facilitate project implementation in airside zones and other restricted areas. These partnerships ensured that clearances and permissions for weather station installations were secured where access requirements are sensitive.

While direct civil society participation has not been reported during this reporting period, stakeholder engagement will continue to expand as the Investment Phase progresses. Opportunities for broader engagement with civil society organizations and private-sector entities are planned as part of output 1 to enhance meteorological infrastructure, raise public awareness, and strengthen capacity-building efforts.

Complementary financing and leverage

While the SOFF project in the Maldives is in its early stages, efforts are underway to align its objectives with other climate resilience initiatives, ensuring complementarity and long-term sustainability.

The proposed GCF-funded UNEP "Toward Risk-Aware and Climate-Resilient Communities (TRACT)" project, currently at the concept note approval stage, aims to strengthen climate services and multi-hazard early warning systems in the Maldives. As both a GCF Accredited Entity and a SOFF Implementing Entity, UNEP is working to maximize synergies between SOFF investments and the proposed GCF-funded project.

During the first national consultation in July 2023, UNEP provided technical support to align SOFF objectives with broader climate adaptation strategies. Future discussions

will focus on ensuring complementarity between SOFF-funded capacity-building efforts and UNEP's GCF proposal.

While SOFF support focuses on surface-based and upper-air observations, the proposed GCF project could complement these efforts by investing in marine meteorological stations, which fall outside SOFF's current scope. Data from these stations would further enhance NWP capabilities and support climate monitoring efforts in the Maldives.

Implementation of grievance redress mechanism

No formal grievances have been reported regarding SOFF implementation in the Maldives during the reporting period.

The grievance redress mechanism follows UNEP's sustainability framework, which provides stakeholders with an avenue to raise concerns regarding project activities. This mechanism is structured under UNEP's Stakeholder Response Mechanism (SRM), managed by the Independent Office for Stakeholder Safeguard-related Response (IOSSR).

Stakeholders adversely affected by the project can file complaints through the online project concern form, email, or by mail to the IOSSR.

Success stories

- MMS News: https://www.facebook.com/share/p/19ykyhdQc6/
- RIMES News: https://www.facebook.com/share/p/18TuoYycL4/

Attachments:

- 2025 Semi-Annual Progress Update – click here
- Country Peer Advisor Report – click here