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# **Investment Phase:** Annual Narrative Report

## **Mozambique**

Year 1

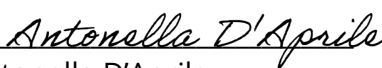
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Systematic Observations  
Financing Facility

**Weather  
and climate  
data for  
resilience**



## General Information

<b>Country</b>	Mozambique	
<b>Implementing Entity</b>	United Nations World Food Programme	
<b>Agreement effectiveness date</b>	28 March 2024	
<b>Duration</b>	60 months	
<b>Anticipated end date</b>	01 May 2029	
<b>Reporting period</b>	<b>From:</b> 01 May 2024	<b>To:</b> 31 March 2025
<b>Approved amount</b>	Total: USD 7,865,565 Implementing entity: USD 7,479,919 Peer advisor: USD 385,646	
<b>Disbursed amount</b>	Total: USD 5,364,491.97 Implementing Entity: USD 5,235,943.30 Peer advisor: USD 128,548.67	
<b>Signature of Implementing Entity</b>	 Antonella D'Aprile Country Director	

## Summary

Mozambique's National Meteorology Institute (INAM), the South African Weather Service (SAWS) and the World Food Programme (WFP) officially started the implementation of the investment phase of SOFF activities for Mozambique in May 2024. During this month, a **four-day workshop** was held in Maputo with the objective to plan in detail all the activities to be conducted during the first year of implementation. This included a detailed plan for site assessments for the upper-air and land-based stations, a procurement plan, an Information and Communication Technologies (ICT) capacity strengthening needs assessment and a schedule and methodology for national and provincial consultation exercises with civil society.

INAM and WFP worked on the Memorandum of Understanding (MoU) to be signed between both institutions for SOFF activities. The **MoU was approved and signed** in July 2024.

The **SOFF launch event** took place in August, jointly with the launch of the Early Warning 4 All Roadmap, having the honour of being kicked off by the President of the Republic.

Between August and September, all four **assessments of the upper-air stations** were carried out. Contrary to what was initially described in the National Contribution Plan (NCP), it was assessed that the existing buildings are not fit for rehabilitation and that it will be safer and more cost efficient to build new upper-air stations at each one of the four sites. Two main challenges are being dealt with at the moment – 1) finding a company with experience in building upper-air stations to ensure that the final building design is compliant with World Meteorological Organisation (WMO) requirements, ensuring accurate placement and structural integrity and 2) the site at Tete province will be more challenging to build on, due to Mozambique's National Meteorology Institute (INAM) land being on a rocky surface with no access to water and unstable electricity. Challenge 1 will be overcome by disseminating the tender on the SOFF website, ensuring that it will reach relevant service providers and for challenge 2 we are looking at different solutions and costs.

A visit to the South African Weather Service (SAWS) upper-air station and Automatic Weather Station (AWS) in Durban took place in the first week of December 2024. This visit was highly appreciated by INAM to have a better understanding of the workflow at an upper-air station, as the upper-air stations in Mozambique have long been non-operational and abandoned. During this visit, INAM had the opportunity of also assisting to the installation of the AWS, receiving recommendations and advice on this procedure by the peer advisor.

One mock assessment on an **AWS** was carried out in Dondo, Sofala province, in September, to train INAM staff on how to conduct an AWS assessment. Sites for the installation of the new AWS's were assessed in Tete, Nampula, Beira and

Mapulanguene. Field assessments of all 21 selected AWS were carried out. These assessments showed a significant gap between what was described in the NCP and the reality, with more components needing replacement or rehabilitation than initially expected.

**Mapping of the ICT infrastructure** at INAM's HQ was being carried out to assess the exact gaps and needs in order to have an ICT infrastructure that will support Global Basic Observing Network (GBON) requirements both for land and upper-air observations.

WFP is in the process of registering weather equipment providers to ensure a competitive, transparent and sustainable procurement process throughout the GBON implementation through SOFF support.

## 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 <b>National consultations</b> , including with CSOs and other relevant stakeholders conducted	# consultation workshops with CSOs	5 consultation workshops	6 consultation workshops with CSOs conducted				1 national consultation, 4 provincial consultation and 2 community consultation					Achieved	The national launch event and national consultation took place on the 21 <sup>st</sup> and 22 <sup>nd</sup> of August 2024. Consultations with relevant government entities and airport authorities were carried out during the upper-air station assessments carried out in Nampula, Beira and Tete. The purpose of these was to introduce the planned activities under SOFF and address any existing related concerns, such as security	

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
													concerns related to balloon launches.  A consultation with community leaders during the Chagalane and the Mapulanguene AWS assessment was conducted.	
	% women participants	At least 50% of participants are women					At least 26% are women					Delayed		The very limited number of women working at INAM is a serious challenge. However, women participation and leadership are encouraged at all times.
	Add indicator as per approved funding request	Stakeholders' engagement activities that involve CSOs focused on					CSOs focused on woman's empowerment invited to the national consultation (Associação de Mulheres, Gênero e					Achieved		

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
		woman's empowerment recommended in the NCP					Desenvolvimento (MuGeDe), Forum Mulheres, LeMuSiCa - Levante-se Mulher e Siga ao Seu Caminho)							
1.2 NMHS institutional capacity required to operate the GBON network developed	% capacity strengthening activities successfully implemented	30% of capacity strengthening activities successfully implemented	30% of capacity strengthening activities successfully implemented	20% of capacity strengthening activities successfully implemented	10% of capacity strengthening activities successfully implemented	10% of capacity strengthening activities successfully implemented						Achieved	Mapping of the capacity strengthening needs has been carried out.  ICT related needs will be carried out after the AWS assessments have taken place, due to ICT personnel also being part of the teams carrying out the assessments.  Initial AWS and upper-air measurements related needs will be carried out by the service provider during installation of	

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
													the equipment. It is crucial to point out that ongoing capacity strengthening, knowledge transfer and technical support is provided to the beneficiary through weekly update meetings and specific technical specific meetings.	
1.3 NMHS human capacity required to operate the GBON network developed	% training and capacity development for staff	50% training and capacity development for staff (human resources) 8 technicians to be trained for upper-air sounding, 4 to be trained for upper-air system, maintenance technicians and technologists,	80% training and capacity development for staff (human resources) 8 technicians to be trained for upper-air sounding, 4 to be trained for upper-air system, maintenance technicians and technologists,	100% training and capacity development for staff (human resources) 8 technicians to be trained for upper-air sounding, 4 to be trained for upper-air system, maintenance technicians and technologists,								Delayed	Year 1 was kept for assessments on equipment and training needed. Installation, maintenance (basic and advanced), ICT and data related trainings and upper-air sounding trainings will	



Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
		data staff IT staff support and OHS requirements completed.	data staff IT staff support and OHS requirements completed.	data staff IT staff support and OHS requirements completed.									be procured jointly with respective equipment and installation.	
	% women participants	At least 50% of participants in training and capacity building activities are women.	At least 50% of participants in training and capacity building activities are women.	At least 50% of participants in training and capacity building activities are women.			At least 5% are women					Delayed	There is one woman in a total of 17 INAM core staff at central level working on implementing SOFF.	The very limited number of women working at INAM is a serious challenge. However, women participation and leadership are encouraged at all times. Additionally, a strategy for INAM to encourage the hiring of more technical women will be discussed.
	% female representation in decision-making and project	Women represent at least 50% of decision-making and project management position	Women represent at least 50% of decision-making and project management position	Women represent at least 50% of decision-making and project management position			0%					Delayed		The very limited number of women working at INAM is a serious challenge.

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
	management positions	where applicable.	where applicable.	where applicable.										However, women participation and leadership are encouraged at all times. Additionally, a strategy for INAM to encourage the hiring of more technical women will be discussed. One academy-oriented awareness raising event is planned to enhance interest in the meteorology science career path, with specific sessions targeting female students.
	% women representation of staff for operating and maintaining	Women represent at least 50% of the staff for operating and maintain	Women represent at least 50% of the staff for operating and maintain	Women represent at least 50% of the staff for operating and maintain			At least 30% are women					Delayed		The very limited number of women working at INAM is a

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
	GBON stations	GBON stations.	GBON stations.	GBON stations.										serious challenge. However, women participation and leadership are encouraged at all times. Additionally, a strategy for INAM to encourage the hiring of more technical women will be discussed. One academy-oriented awareness raising event is planned to enhance interest in the meteorology science career path, with specific sessions targeting female students.
2. GBON infrastructure in place														

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
2.1 <b>New land-based stations</b> 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	3 of the 6 new GBON compliant AWS rolled out and transmitting by December 2024 as well as upgrade of the ICT systems and data management systems. Drafting of SOP for AWS and ICT systems.	The remaining 3 of the 6 new GBON compliant AWS rolled out and transmitting by December 2025 as well as upgrade of the ICT systems and data management systems. Drafting of SOP for AWS and ICT systems.	Physical assessment and monitoring of AWS and ICT system performance implementation of the SOP.	Monitoring of AWS and ICT system performance and implementation of the SOP.	Monitoring of AWS and ICT system performance and implementation of the SOP.	21 AWS assessments carried out					Delayed	Ongoing procurement processes of registering WMO compliant service providers. Once all AWS and site assessments have been carried out, a tender will be launched for the procurement of the new stations.	A big gap between the National Contribution Plan (desktop assessment) and the reality on the ground was found and thus, detailed assessments at each of the AWS had to be carried out to better inform procurement needs. Due to the political instability and related insecurity between October and December, these assessments were delayed. This was done to ensure one big procurement instead of multiple small

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
														procurement s.
2.2 <b>Improved land-based stations</b> and related equipment, ICT systems, data management systems and standard operating practices in place	# of stations improved as per the GBON National Contribution Plan	7 of the 15 existing AWS upgraded to meet GBON requirements by December 2024. Drafting of SOP for AWS and ICT systems.	8 of the remaining 15 existing AWS upgraded to meet GBON requirements by December 2025 completed. Drafting of SOP for AWS and ICT systems.	Physical assessment and monitoring of AWS and ICT system performance and implementation of the SOP.	Monitoring of the AWS and ICT system performance and implementation of the SOP.	Monitoring of the AWS and ICT system performance and implementation of the SOP.	21 AWS assessments carried out					Delayed	Ongoing procurement processes of registering WMO compliant service providers. Once all AWS and site assessments have been carried out, a tender will be launched for the procurement of the new stations.	A big gap between the National Contribution Plan (desktop assessment) and the reality on the ground was found and thus, detailed assessments at each of the AWS had to be carried out to better inform procurement needs. Due to the political instability and related insecurity between October and December, these assessments were delayed.
2.3 <b>New upper air stations</b> and related	# of new stations installed as per the	Site survey and EIA for Tete conducted by	Construction of the upper-air building at Tete initiated	Upper-air building for Tete and installation of	Physical assessment of upper-air building for	Monitoring upper-air system performance	Site and building assessments conducted					On-track	Once we contract a consultant to deliver the	

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
equipment, ICT systems, data management systems and standard operating practices in place	GBON National Contribution Plan	September 2024 as well as upgrade of the ICT systems and data management systems. Drafting of SOP for upper-air systems.	by December 2025 as well as upgrade of the ICT systems and data management systems and procurement of the upper-air systems and peripherals. Drafting of SOP for upper-air systems.	the upper-air system and peripherals completed by December 2026.	Tete and installation of the upper-air system.	and implementation of the SOP.	for Maputo, Beira, Nampula and Tete.						final building design for the upper-air stations, we can move forward with the licensing and builder contracting. Building the new stations should take up to 6 months.	
2.4 Improved upper air 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	Site survey and EIA for Nampula, Beira and Maputo conducted by September 2024 as well as upgrade of the ICT systems and data management systems. Drafting of SOP for upper-air systems. Repairs of Nampula, Maputo and Beira Upper-air building by	Procurement and installation of upper-air equipment and peripherals for Maputo, Nampula and Beira by July 2025. Site survey and EIA for Nampula, Beira and Maputo conducted as well as upgrade of the ICT systems and data management systems. Implementation of SOP for	Physical assessment of upper-air building at Maputo, Nampula and Beira and installation of the upper-air system.	Monitoring upper-air system performance and implementation of the SOP.	Monitoring upper-air system performance and implementation of the SOP.	Site and building assessments conducted for Maputo, Beira, Nampula and Tete.					Achieved	After assessing the existing buildings to be improved, the conclusion was reached that these were too rundown and building new stations would be safer and cheaper.	

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
		December 2024.	upper-air systems.											
<b>3. Sustained compliance with GBON</b>														
3.1 <b>GBON land-based stations' commissioning period completed</b> , 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	Procurement of maintenance and test equipment as well as spare for AWS. 50% data availability attained.	Procurement of spares for AWS and calibration of the test equipment. 75% data availability attained.	Procurement of spares for AWS and calibration of the test equipment. 80% and above data availability attained.	Procurement of spares for AWS and calibration of the test equipment. 80% and above data availability attained.	Procurement of spares for AWS and calibration of the test equipment. 80% and above data availability attained.	21 AWS assessments carried out					Delayed	21 AWS assessments carried out by February 2025	A big gap between the National Contribution Plan (desktop assessment) and the reality on the ground was found and thus, detailed assessments at each of the AWS had to be carried out to better inform procurement needs. Due to the political instability and related insecurity between October and December, these assessments were delayed. Assistance to the peer advisor on

Output	Indicator	Target					Actual					Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
														data flow to the GTS was requested but delayed due to their systems being hacked.
3.2 <b>GBON upper air stations' commissioning period completed</b> , 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	n/a	50% data availability attained (2/4 stations)	80% data availability attained	Sustain 80% and above data availability attained	Sustain 80% and above data availability attained	n/a					Not yet started	Data will start being transmitted once the upper-air stations are built and equipment is installed.	Understanding of procurement processes, compliant building design and poor technical guidance has been a challenge



## Gender

Please indicate how the Gender Policy of your organization (Implementing Entity) was applied to SOFF Operations.

A gender awareness workshop with participation of INAM staff will be conducted during year 2 and community sensitization will have a special focus on how women perceive climate information.

The workshop for INAM will aim to build gender and self-awareness among women and men, provide a space for reflection and gender analysis, and introduce approaches to enhance participants' capacity to integrate gender considerations into their work

## Social and environmental safeguards

Please indicate how environmental and social safeguards standards are observed in the execution of activities.

Regarding the observance of environmental and social safeguards standards, it is important to note that the implementation of activities where these safeguards should be observed (i.e. building new upper-air stations) has not yet commenced.

However, WFP is committed to the rigorous application of its corporate Environmental and Social Sustainability Framework ([ESSF](#)). This framework, encompassing comprehensive principles, [standards](#), and tools, is designed to enhance environmental and social sustainability performance and mitigate potential negative impacts on the environment, people, and communities.

Prior to activity implementation, an Environmental and Social Risk Screening ([ESRS](#)) will be conducted. This screening will evaluate the suitability of proposed project activities and identify potential environmental and social risks, ensuring that appropriate mitigation measures are integrated into the project design and implementation plans.

## Civil society and private sector participation

Please indicate any engagements to date with civil society and private sector during Investment Phase implementation.

A national consultation was held during the Investment Phase launch in August, where civil society and private sector representation was present<sup>1</sup>. Civil society and government entities at each of the AWS and upper-air station locations were also engaged in consultations.

<sup>1</sup>Some of the entities present at the National Consultation:

Government of Mozambique

World Meteorological Organisation

World Food Programme

Food and Agriculture Organisation

UN Habitat

UNU WIDER

South African Weather Service

Embassy of Argelia

Embassy of Finland

Embassy of Italy

Embassy of Norway

Embassy of Tanzania

Mozambique's Technical-Scientific Commission on Climate Change (CTCMC)

Mozambique's Railway Representatives

National Association of Municipalities of Mozambique (ANAMM)

Save the Children

Association of People with Disabilities (ADEMO)

University of Eduardo Mondlane

Electricidade de Moçambique (EDM)

Integrated Development Agency (ADIN)

National School of Aeronautics (ENA)

Japan International Cooperation Agency

International Federation of Red Cross and Red Crescent

Forum of Mozambican Associations of People with Disabilities (FAMOD)

Civil Aviation Institute (IACM)

National Platform of Civil Society Organizations for Climate Change (PNOSCMC)

Mozambican Airlines (LAM)

Metropolitan Transport Agency (AMT)

CIMA Research Foundation

Woman Girl Association

National Institute for Fisheries and Aquaculture Development (IDEPA)

Italian Agency for Development Cooperation (AICS)

Institute of Social Communication (ICS)

Small-scale Aquaculture Development Project (PRODAPE)  
Association of Mozambican Youth with Disabilities (AJODEMO)  
Mozambican Association of Women with Disabilities (AMMD)  
Kulima – Integrated Development Solutions  
Association of Women, Gender and Development (MuGeDe)  
Women's Forum  
Livanningo  
LeMuSiCa - Stand Up Woman and Walk Your Way

## Complementary financing and leverage

Please indicate any complementarity with ongoing and future projects/programmes with other climate funds.

WFP has implemented [PRISM](#) (Platform for Real-time Impact Situation Monitoring) tailored to INAM's data and needs, with funding from NORAD. PRISM allows INAM to access satellite data integrated with land-based observations in an accessible and user-friendly manner, additionally offering the possibility of data download, on the fly analysis and Anticipatory Action trigger monitoring.

Funding from ECHO and FCDO have allowed for the development of thresholds and triggers for the implementation of Anticipatory Actions for tropical storms and droughts.

Funding from WMO will allow for the implementation of some activities under Pillar 2 of the Early Warning 4 All Roadmap, specifically the implementation of the Flash Flood Guidance System in Mozambique.

## Implementation of grievance redress mechanism

If applicable, please provide description of any issues or complaints received, along with the current status of their resolution.

Year 1 activities did not observe any issues or complaints. A [community feedback mechanism](#) can be put in place if deemed relevant.

## Success stories

Please share any success stories and links to news and publications relevant to Investment Phase implementation.

[Mozambique World Meteo Day 2025.mp4](#)

