Systematic Observations Financing Facility

Investment Phase:
Annual Narrative Report

Ethiopia
Year 1

Systematic Observations
Financing Facility

Weather and climate data for resilience

General Information

Country	Ethiopia	
Implementing Entity	UNDP	
Agreement effectiveness date	19 August 2024	
Duration	36 months	
Anticipated end date	19 August 2027	
Reporting period	**From:** 19 August 2024	**To:** 31 December 2024
Approved amount	USD 9,956,802.60	
Disbursed amount	USD 6,457,817	
Signature of Implementing Entity	Mrs. Wubua Mekonnen, DRR/P OIC and CRES Unit TL, UNDP Signed by: Wubua Mekonnen 2208A990FE3B48B...	

Summary

The formalization of project governance completed. The Project Document (ProDoc), Letter of Agreement (LOA), and the 2024–2025 Annual Work Plan (AWP) jointly prepared, reviewed, and signed by the Ethiopian Meteorology Institute (EMI), the Ministry of Finance, and UNDP. The above foundational documents developed through extensive technical and strategic consultations to ensure alignment with national priorities, UNDP quality assurance standards, and SOFF's operational requirements. The project implementation period agreed upon as August 2024 to August 2027 as per the signed ProDoc, providing a realistic timeline to deliver results. This milestone marks a critical step in formalizing the project's governance and enabling the commencement of implementation activities. Concrete efforts have been made to establish project governance structures to ensure strategic oversight. The TORs for the PSC and TTT have been finalized, and nominations from the relevant entities completed.

The Project officially launched through a high-level Inception Workshop (IW). The IW for the Project successfully conducted from November 6-8, 2024, in Addis Ababa and Adama, Eastern and Central Oromia Regional Meteorological Service Center. The workshop brought together over 100 participants, including key stakeholders from EMI, EMI- Regional Meteorological Service Centres (RMSCs), UNDP, MET Norway, WMO, and government representatives, to formally launch the project and to acquaint stakeholders with the general SOFF initiative and its implementation in Ethiopia. Key

discussions focused on finalizing the Terms of Reference for the Project Steering Committee and Technical Task Teams, reviewing the Annual Work Plan (AWP), and developing a joint action plan to accelerate implementation. Critical decisions were made regarding site relocation for GBON stations, procurement of equipment, and sustainability planning to ensure Ethiopia meets WMO's GBON compliance requirements. The IW successfully established a common understanding among key stakeholders regarding the Ethiopia GBON-SOFF project, its objectives, implementation framework, and expected outcomes, strengthening coordination mechanisms for efficient project execution. The discussions emphasized the critical role of systematic observations in enhancing national and global weather forecasting, early warning systems, and climate adaptation capabilities. Tweet/X post and an article about the event have been published on both the UNDP and SOFF websites/platforms for communication and advocacy.

GBON institutional and human capacity strengthened. First, the project management structure was established, with a particular focus on institutional capacity-building through recruitment and staffing to ensure effective project management and oversight. Two Programme Specialists and one Programme Associate deployed by UNDP Ethiopia CO since to provide technical, oversight and operational support. Simultaneously, the recruitment process for EMI's Project Management Unit (PMU), comprising the Project Manager, Finance Officer, and M&E Officer completed. The selected PMU team members fully onboarded marking a crucial step in establishing the project's national execution structure and enabling day-to-day coordination and implementation. EMI-Technical Task team formulated to provide technical support of project implementation. **Second,** a one-day Stakeholder Consultation Workshop, followed by station and service visits, was successfully conducted at both national and regional levels. The workshop served as a key platform to raise awareness of the EMI services and their relevance to stakeholders' wellbeing and the project's objectives. It provided an overview of the project components, outputs, outcomes, AWP, and Strategic Results Framework, while outlining the initial roles expected from stakeholders. Participants were also briefed on their responsibilities—such as providing station sites, supporting data transmission, and safeguarding infrastructure—and the broader importance of contributing to the GBON to strengthen climate resilience. As a result of the workshop, stakeholders are better informed about the project's scope and purpose; roles and responsibilities were clearly communicated and understood; and a joint acceleration plan was formulated to support effective implementation. Third, the project has also prioritized international collaboration and technical capacity building through a high-impact learning mission to Europe. From 4–13 December 2024, EMI and UNDP representatives participated in a study tour to MeteoSwiss and WMO HQ in Geneva, as well as to the German Weather Service (DWD) and EUMETSAT in Germany. The mission focused on experience-sharing in early warning systems, GBON-compliant data exchange, and institutional practices. The team engaged with technical experts and policy-makers to explore pathways for technology transfer and bilateral cooperation. A comprehensive mission report developed to ensure learnings are translated into strategic improvements in national service delivery.

GBON infrastructure is in process. Technical preparation and procurement planning for observation infrastructure is in progress. The specifications for 13 new land-based station and the upgrade of 16 existing land-based stations submitted for UNDP to initiate the procurement process, following the review and clearance by the MET Norway. In

parallel, the draft specifications for new upper-air stations and the upgrade of upper-air stations submitted to MET Norway and are currently under technical review and clearance. Early field readiness has been demonstrated through on-site testing and data preparation activities. EMI technical teams conducted field visits to remote new AWS locations to perform live communication signal tests using AWS-RTU. Furthermore, metadata for five upper-air station locations has been compiled and submitted to the EMI-OSCAR focal point for registration with the WMO OSCAR/Surface database, contributing directly to global GBON compliance.

Sustain compliance with GBON is in progress. The specifications for three field vehicles to support mobile calibration operations have been finalized and submitted to UNDP for procurement. In parallel, progress has been made in establishing a sustainable national calibration capacity through technical collaboration with MET Norway. Both EMI and MET Norway agreed to conduct a joint audit to assess the existing and potential capacities of EMI and the National Calibration Center. Based on this assessment, a phased approach has been proposed for establishing a nationally accredited meteorological calibration laboratory, beginning with with limited calibration chambers like climate chamber and pressure chamber. The experience of Bangladesh, including its calibration specifications, will serve as a key benchmark in this process. Additionally, the high-standard, accredited calibration laboratory of the China Meteorological Administration (CMA) has been recognized as a model for best practices. MET Norway, which serves as the Peer Advisor for Bangladesh under the SOFF initiative, has prior experience collaborating with CMA on capacity-building activities. This established partnership could be leveraged to extend similar support to EMI, further strengthening Ethiopia's national calibration capacity through South-South and triangular cooperation.

Progress of implementation

Output	Indicator	Target			Actual			Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y1	Y2	Y3			
1. GBON institutional and human capacity developed										
1.1 **National consultations**, including with CSOs and other relevant stakeholders conducted • Inception workshops at the national and sub-national level • Stakeholder engagement workshops on implementation • Consultative workshop at 11-RMSC's on station security with key stakeholders	# of inception workshops held	1			1			Achieved	Inception workshop successfully organized on November 6-7, 2024	
	# of stakeholder workshops held	1			1			Achieved	Stakeholder Workshop organized in February 2025	
	# of sub national workshops	1	1	1				On-track	Sub national Stakeholders Workshops planned and will be scheduled during the installation of external fences in Q3 2025. (the project kicked start on August 2024, thus the status of project implementation is on-track)	
1.2 **NMHS institutional capacity** required to operate the GBON network developed • Establish a full staff PMU and a project execution team, including project management and stakeholder management skills to support the execution of the project. • Promote gender equality by establishing thresholds for female participation in SOFF related activity 50 % of all participants in SOFF-related and supported trainings; SOFF consultations, planning workshops; staff for operating and maintaining GBON stations; and decision-making and project management positions where applicable will be women.	# of project staff	5			6			Achieved	2 Programme Specialist and 1 Programme Associate deployed by UNDP Ethiopia CO to provide technical, oversight and operational support. Project Management Unit members, comprising the Project Manager, Finance Officer, and M&E Officer have been fully onboarded marking a crucial step in establishing the project's national execution structure and enabling day-to-day coordination and implementation following the recruitment process.	
	% female participants in the workshops		25%					On-track	25% of female participants attended the inception workshop and stakeholder consultation workshops	

Output	Indicator	Target			Actual			Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y1	Y2	Y3			
1.3 **NMHS human capacity** required to operate the GBON network developed • Experience sharing and capacity building on GBON/SOFF key components for EMI leadership • Experience sharing and SOP development on IT infrastructure for effective GBON and SOFF implantation • Recruitment of observers, ICT and project management staff • Training in cellular and satellite communications and router configuration • Training in weather station maintenance • Participation in the regional trainings	# of experience sharing	1	1					On-track	1 visit and study tour conduced for experience sharing and capacity building in 2024.	
	# of employed staff	3	5		1			On-track	1 EMI staff participated and trained from the visit and study tour activity. (The project kicked start on August 2024, thus the status of project implementation is on-track)	
	# of trainees	5	5					On-track	The relevant trainings planned and will be organized in Q3 2025. (The project kicked start on August 2024, thus the status of project implementation is on-track)	
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		7	6				On-track	The specifications for 13 new land-based station submitted for UNDP to initiate the procurement process, following the review and clearance by the MET Norway.	***Challenges/Issues*** Following comprehensive consultations with the EMI Regional Meteorological Service Center (RMSC) during the inception workshop, it was identified that some station sites for both surface and upper-air observations, initially selected during the readiness phase, need to be relocated. The adjustments are necessary to ensure
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		8	8				On-track	The specifications for the upgrade of 16 existing land-based stations submitted for UNDP to initiate the procurement process, following the review and clearance by the MET Norway.	
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		2	1				On-track	The draft specifications for new upper-air stations submitted to MET Norway and are currently under technical review and clearance.	

Output	Indicator	Target			Actual			Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y1	Y2	Y3			
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		1	1				On-track	The draft specifications for the upgrade of upper-air stations submitted to MET Norway and are currently under technical review and clearance.	better infrastructure, security, and optimal open-air station exposure, which will enhance the delivery of high-quality and reliable data during the compliance phase of the SOFF project. These changes are aligned with the project's objective of improving the availability of essential surface-based observational data. Importantly, the relocation will not incur any additional cost, as the required infrastructure at the airport sites is minimal. ***Measures Taken*** • UNDP, in coordination with MET Norway and EMI, discussed the issue and confirmed that technically there are no objections to the site changes, given the quality improvement and absence of additional cost implications. • UNDP CO received go-ahead from the SOFF Secretariat via email to proceed with the newly proposed sites.
3. Sustained compliance with GBON										

Output	Indicator	Target			Actual			Status	Milestones achieved	Challenges and risks
		Y1	Y2	Y3	Y1	Y2	Y3			
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		17	12				On-track	The specifications for three field vehicles to support mobile calibration operations finalized and submitted to UNDP for procurement. In parallel, progress has been made in establishing a sustainable national calibration capacity through technical collaboration with MET Norway.	
3.2 **GBON upper air 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		2	3				On-track		

Gender

In alignment with the UNDP Gender Equality Strategy, gender considerations have been integrated into the SOFF Investment Phase in Ethiopia to promote inclusive and equitable outcomes. Two key outputs within the results framework reflect this commitment:

- ***Output 3.1:*** *Integrated and gender-responsive climate and disaster risk governance systems strengthened to reduce risks and vulnerabilities, improve early warning systems (EWS), and enable rapid recovery.*
- ***Output 3.4:*** *Action on climate change adaptation and mitigation scaled-up, funded, and implemented across sectors.*

Both outputs are tagged with a GEN2 gender marker, signifying that gender equality is a significant objective of the activities.

To operationalize the Gender Policy, SOFF has adopted concrete measures to promote women's participation and leadership. Specifically, a threshold of 50% female participation has been set across all SOFF-related and supported trainings, consultations, planning workshops, and staffing for the operation and maintenance of GBON stations. This also extends to decision-making and project management roles where applicable. These efforts ensure that women not only benefit from improved climate and weather services, but are also meaningfully engaged in shaping, implementing, and sustaining these systems.

UNDP as Implementing Entity, will continuously monitor and report of sex-disaggregated data will further guide gender-responsive implementation.

Social and environmental safeguards

The execution of SOFF activities in Ethiopia is guided by UNDP's revised Social and Environmental Standards (SES), which came into effect on 1 January 2021. These standards ensure that social and environmental sustainability is systematically mainstreamed across all phases of the project cycle.

In line with SES requirements and national legal frameworks, a Social and Environmental Screening Procedure (SESP) undertaken as part of project preparation. This process identified potential environmental and social risks and corresponding mitigation measures, which have been incorporated into the project's design and reflected in the UNDP risk register. Project risks are monitored and updated quarterly through UNDP's corporate system (Quantum), with oversight by the Programme Specialist and the Programme Management Support Unit (PMSU).

Practical measures will be embedded in the technical design and operational modalities of the project in the upcoming activity implementation to ensure environmentally responsible implementation following the requirement of SOFF Investment Phase Funding Request document. These include:

- *Sustainable procurement practices, such as selecting vendors with environmental certifications and ensuring the equipment procured is durable and sustainable over its life cycle;*
- *Use of renewable energy, notably the deployment of solar panels to power observation networks;*
- *Emissions reduction strategies, including minimizing field visits, using hybrid vehicles where feasible, and enhancing remote diagnostics to reduce the need for travel;*
- *Preventive maintenance plans to extend equipment lifespan and reduce environmental impact from frequent replacements;*
- *Local capacity building, such as training EMI staff and remote station personnel for basic maintenance, reducing reliance on external contractors and unnecessary travel;*
- *Innovative environmental solutions, such as EMI's exploration of hydrogen gas production for upper-air observations—a cleaner and potentially regionally scalable solution.*

Civil society and private sector participation

Currently there are no private sector operators providing meteorological observations or data services in Ethiopia, thought there are some who operate stations for their own use. According to the SOFF operational manual definition of the basic business models, Ethiopian GBON infrastructure is "Fully public: Fully State/NMHS owned and operated GBON infrastructure". Therefore, the whole implementation of SOFF in Ethiopia is directly owned by EMI, except that key stakeholders, such as local administrators and local NFCS key partners shall have a significant role in securing the AWS installation site as well as ensuring stations security as well as beneficiary of the climate service. Thus, they will be engaged in the whole process of SOFF implementation, among others, via workshops, public sensitization processes.

Private sector involvement in SOFF implementation in Ethiopia would mainly be by participating in the open competitive procurement process to carry some of the civil works. In addition, civil society participation will be explored during implementation in the awareness creation to the general public on the important of climate services in climate change adaptation, so that the public in general give protection to the safety and security of the land based GBON stations, as well as make the best use of climate services for the best of their livelihood.

Complementary financing and leverage

As complementary financing and leverage, UNDP is supporting Ethiopia in coordinating the multi-stakeholder effort that led to the successful approval of the 'Advancing Early Warnings for All (EW4ALL)' project by the Green Climate Fund (GCF), securing USD 13 million over five years period, starting in 2025. This project positions Ethiopia at the forefront of global efforts to ensure that every person is

protected by early warning systems, and will significantly enhance national capacities across all four pillars of Early Warning Systems, namely: i) Disaster Risk Knowledge; ii) Detection, observations, monitoring, analysis and forecasting of hazards; iii) Warning Communication and Dissemination, and iv) Preparedness to respond.

Implementation of grievance redress mechanism

As of the current reporting period, no formal issues or complaints have been received in relation to the implementation of SOFF operations in Ethiopia.

UNDP CO has established project-level grievance redress mechanism and stakeholder response mechanism, esp. for those categorized on high risk and substantial risk level to respond for and social and environmental complaints in the programmes and projects implementation. UNDP will incorporate this mechanism to manage complaints and resolve conflicts in the SOFF operations.

During the reporting period, stakeholder engagement has been carried out in a participatory manner through stakeholders' workshops at national and regional levels, and regular coordination with the implementing partners, particularly the Ethiopian Meteorological Institute (EMI), Norway Meteorological Institute (MET Norway) and RMSCs, and other key stakeholders has helped ensure alignment and address any emerging concerns promptly.

UNDP remains committed to the successful establishment of the above-mentioned mechanism, and monitoring implementation closely and maintaining open channels of communication with all stakeholders to ensure timely identification and resolution of any issues that may arise.

Success stories

Tweets posted for SOFF approval and Launch event.
https://x.com/undpethiopia/status/1854524741404483745?s=46&t=HkVmGM6BeOSKxtfbM29sYQ
https://x.com/undpethiopia/status/1780576113518907639?s=46&t=HkVmGM6BeOSKxtfbM29sYQ

A web article about the SOFF Launch published
Ethiopia Launches SOFF Initiative to Enhance Climate Resilience | United Nations Development Programme

SOFF secretariat reposted the story on SOFF's website: https://un-soff.org/news/ethiopia-launches-soff-initiative-to-enhance-climate-resilience/