General Information

Fund	MPTF_00281: The Systematic Observations Financing Facility
FMP Record	MPTF_00281_00019: Tanzania Investment Funding Request
MPTFO Project Id	
Start Date	
End Date	

Applicants

Status	Contact Type	Name	e-mail	Position	Telephone
Active: 08-Apr-2024 2:34:00 AM	Project Manager	Aaron Cunningham	aaron.cunningham@undp.org		

Signatories

Signature Process	Role	Name of Organization	Name	User Email
Digital	Signatory	UNDP: UNDP (United Nations Development Programme (UNDP))	Mr Shigeki Komatsubara	shigeki.komatsubara@undp.org
Digital	Signatory	WMO: WMO (World Meteorological Organization)	Celeste Saulo	csaulo@wmo.int

Contacts

Contact Type	Name	e-mail	Position	Additional e-mail	Telephone
No data available.					

Description

The **Global Basic Observing Network (GBON)** is an international agreement that responds to the most essential data requirements of global weather and climate prediction models that are not met by satellite systems. Based on a global optimal design, GBON sets clear requirements to countries for collecting and internationally sharing surface-based observations of the most essential weather and climate variables i.e., atmospheric pressure, temperature, humidity, wind speed, precipitation, and snow depth. **Tanzania's Investment Funding Request**, through the **Systematic Observations Financing Facility (SOFF)**, endeavours to bolster Tanzania's meteorological infrastructure to align with the GBON standards and advance weather forecasting capabilities.

Spanning from July 2024 to December 2027, the project has a total budget of USD 13,926,170, with USD 9,026,278 provided by the SOFF and an additional USD 4,899,892 contributed in-kind by the Tanzania Meteorological Authority (TMA).

At its core, the project aims to establish nine new surface stations, upgrade 18 existing ones, and procure and install four Upper Air stations, with TMA funding one and SOFF covering the remaining three. Upgrades also encompass converting the existing Julius Nyerere International Airport station in Dar Es Salaam to meet GBON standards.

Furthermore, the project encompasses comprehensive **Operations and Maintenance (O&M)** for all 27 surface stations and 5 Upper Air stations, ensuring steady operations, data integrity, and swift response to downtimes. There is also a focus on ICT upgrades to facilitate reliable data exchange and storage, alongside efforts in capacity building and human resource development to enhance data exchange efficiency across GBON stations.

In synergy with existing government-led initiatives, the project integrates with national meteorological infrastructure modernisation efforts, human capacity development, and policy frameworks addressing climate change response. Its global collaboration extends to contributing to weather forecasting models, improving forecast accuracy, and participating in international climate resilience initiatives like the Climate Investment Funds (CIF) NPC program and UNDP'S CIRDA program.

By aligning with national climate change strategies and global early warning initiatives, the project will help strengthen Tanzania's meteorological and supports its broader climate resilience goals and international cooperation endeavours.

Universal Markers

Gender Equality Marker	Risk
• GEM1 - The Key Activity contributes to GEWE in a limited way	• Low Risk

Optional Markers

WB Income Category	• Lower Middle Income
UN LDC	• Yes
Small Island Developing States (SIDS)	• No

Fund Specific Markers	**SOFF Phases**	**SOFF Phases** • Investment Phase
	EW4All	**Early Warnings for All initial focus countries** • No
	Fragile and conflict-affected situation	**Fragile and conflict-affected situation** • No
	Peer advisor	**Peer advisor** • Danish Meteorological Institute (DMI) [Denmark]

Geographical Scope	**Geographical Scope**	**Name of the Region**	**Region(s)**	**Country**
	• Country		• Africa	• United Republic of Tanzania

Participating Organizations and their Implementing Partners	**Participating Organizations**	**Government/ Multilateral/ NGO/ Other**	**New Entities**	**Implementing Partners**
	• UNDP - UNDP (United Nations Development Programme (UNDP)) • WMO - WMO (World Meteorological Organization)			Tanzania Meteorological Organisation (TMA)

Programme and Project Cost	**Participating Organization**	**Amount (in USD)**	**Comments**
	Budget Requested		
	UNDP	$8,437,337.00	The Investment phase budget excluding the Peer Advisory fee.
	WMO	$630,166.87	Peer Advisory fee ($588,941) + 7% of the Peer Fee ($41,225.87)
	Total Budget Requested	**$9,067,503.87**	

Tranche 1		Tranche 2		Tranche 3	
UNDP (60%)	$5,062,402.20	UNDP (40%)	$3,374,934.80	UNDP (0%)	$0.00
WMO (33.33%)	$210,034.62	WMO (33.33%)	$210,034.62	WMO (33.34%)	$210,097.63
Total:	**$5,272,436.82**	**Total:**	**$3,584,969.42**	**Total:**	**$210,097.63**

	Other Sources (Parallel Funding)	
	In-Kind contribution from TMA	$4,899,892.00
	Total	**$13,967,395.87**

Thematic Keywords		
Programme Duration	**Anticipated Start Date**	30-Jun-2024
	Duration (In months)	42
	Anticipated End Date	30-Dec-2027

Narratives

Title	Text

Close the most significant data gaps

According to the GBON National Gap Analysis conducted in Tanzania, to achieve the desired GBON spatial resolution of 200km by 200km, a minimum of 27 surface stations and 5 Upper Air stations are required. To meet the surface station target, nine new stations need to be established, and 18 existing stations need upgrades. Out of these 18 stations, the government of the United Republic of Tanzania has allocated funds to upgrade 11, while the remaining 7 station upgrades are expected to be covered by the SOFF project. O&M for all 18 stations have been included in the SOFF budget.

For Upper Air stations, four new stations are needed, out of these stations; Procurement and installation of one UA station will be funded by TMA while the remaining three are expected to be funded by SOFF project O&M for all four stations have been included in the SOFF project budget. The existing station located at Julius Nyerere International Airport in Dar Es Salaam, currently reports data once a day. This station is also proposed to be upgraded under support of SOFF project, with the main projected cost to be an increase in consumables needed for the station to report twice a day.

- **Table 1.** GBON National Contribution Target from National gap analysis

Type of station	**Baseline (Results of the GBON National Gap Analysis)**				**GBON National Contribution Target**	
	Target (# of stations)	**GBON-compliant stations**	**Gap**		**New**	1. **To improve**
			New	**To improve**		
Surface	27	0	9	18	9	18
Upper-air	5	0	4	1	4	1

To ensure smooth operation of the stations, homogeneity of data, and timely attendance to downtime, we strongly recommend funds for Operations and Maintenance for all Stations (27 Surface Stations and 5 Upper air Stations) come from SOFF. In order to meet GBON compliancy of two (2) ascends per day, additional ascend at 0300 am local time is required. Operating a night ascend for Upper air is quite a challenge taking into consideration number of staff at night shift, manual filling of hydrogen gas and sometimes with limited visibility. Therefore, to facilitate a night ascend as required by GBON an auto-sonde is required.

Increase in number of stations, frequency of data transmission and monitoring of the stations will require an upgrade of the existing telecommunication infrastructure to enable reliable data collection, exchange, and storage. Moreover, the expansion of network will require decentralizing operations for enhancing maintenance of stations by establishing cluster zones whereby an engineer will be located to oversee stations within the zone.

Additionally, the GBON National Contribution Plan for Tanzania emphasizes the importance of capacity building, data communication, dissemination, infrastructure maintenance, and human resources to ensure efficient and sustainable data exchange across all designated GBON stations. The plan also highlights the operational costs that need to be addressed to facilitate the rapid and sustainable exchange of data.

Target easy fixes

Out of the 27 targeted surface stations, 18 stations currently exist and require upgrades. The government of the United Republic of Tanzania has allocated funds to upgrade 11 of these stations, while the remaining 7 stations are expected to be upgraded through the SOFF project. Additionally, among the 5 targeted Upper Air Stations, one is existing located at Julius Nyerere International Airport in Dar Es Salaam. Currently this station reports data once a day, hence, will require an upgrade to be GBON compliant. This upgrade has been budgeted as part of the SOFF project. One of the four required new stations will be procured and installed through Tanzania government funding. O&M for this station has been budgeted under SOFF.

Create leverage	SOFF will complement previous, ongoing, and planned initiatives led by the Government of Tanzania in collaboration with other stakeholders and Partners including UNDP. The government's current initiatives to enhance weather and climate services, managed by the Tanzania Meteorological Authority (TMA), include the modernization of meteorological infrastructure through the procurement of modern meteorological infrastructure (weather RADARs, AVIMET, AWSs and calibration equipment) as well as the rehabilitation of existing stations. These efforts also involve human capacity development, transforming TMA into a fully autonomous institution via the enactment of the Tanzania Meteorological Authority Act No. 2 of 2019, and the development of relevant policies and strategies like the National Climate Change Response Strategy (2021-2026). SOFF investments will complement these initiatives by enhancing TMA capacity to observe, monitor and exchange meteorological data internationally. Additionally, SOFF Investments are aligned with UNDP's ongoing interventions in Tanzania as an Implementing Entity. UNDP has been supporting climate information and early warning system projects in 11 African nations, including Tanzania, through its "Climate Information for Resilient Development in Africa (CIRDA)" programme. This support was realized through the "Strengthening Climate Information and Early Warning Systems in Tanzania for Climate Resilient Development and Adaptation to Climate Change" project from 2014 to 2018, which included the procurement of 36 Automatic Weather Stations integrated into the TMA observation network. Some of these stations are at the end of their operational life span, while others need replacement of sensors. SOFF will upgrade 7 of these stations to be GBON compliant. Other Stations are located in geographical location that will not add a value to 200 by 200 km resolution. They might be considered for the future if the resolution will increase to 100 by 100 km. This SOFF investment will also leverage and compliment other initiatives including the Nature, People and Climate (NPC) investment program launched by the Climate Investment Funds (CIF). Tanzania's participation in the programme is through the Africa's Zambezi River Basin Region, which also includes Malawi, Mozambique, Namibia, and Zambia. This SOFF investment will significantly improve Tanzania's capacity to contribute to global weather forecasting numerical models and benefit from the improved accuracy to issue more accurate weather forecasts and early warnings to its population. UNDP played a pivotal role in developing Tanzania's Nationally Determined Contribution (NDC) in collaboration with various partners. This NDC prioritized all sectors vulnerable to climate change impacts. Moreover, UNDP provided support to Tanzania in preparing the National Climate Change Response Strategy 2021-2026. Currently, UNDP is actively engaged in the implementation of a GCF Readiness program on the national adaptation plan (NAP), which aims to integrate climate change considerations into development plans and policies. This initiative includes plans for enhanced support in disaster risk reduction (DRR), building upon previous efforts in the development of several policy and strategic documents, as well as capacity-building activities within the country. Furthermore, it also includes a component to support building framework for mobilizing climate change financing through the establishment of national climate change mechanisms in the Mainland and Zanzibar. UNDP will collaborate with the government to develop feasible programmes to mobilize resources from various sources to support the scaling-up of activities that will also have implications in advancing EWS in the country. Additionally, SOFF investments will contribute to Tanzania's contribution to the "United Nations Early Warning for All (EW4All)" initiative.

Maximize delivery capacity	UNDP has a proven track record of supporting meteorological activities across many countries globally including through the implementation of the GEF-supported programme titled "Climate Information for Resilient Development in Africa (CIRDA), which was implemented in Tanzania as the "Strengthening Climate Information and Early Warning Systems in Tanzania for Climate Resilient Development and Adaptation to Climate Change" project, from 2014 to 2018. In its role as the designated Implementing Entity for the SOFF project in Tanzania, UNDP brings a wealth of experience and expertise in essential project management areas. Here is a detailed outline of these capabilities: **Project Management:** UNDP boasts a dedicated team of project management professionals with a proven track record in the successful execution of complex projects. Their expertise includes project planning, monitoring, and evaluation, ensuring that SOFF activities are meticulously coordinated and delivered in line with the project's objectives and timelines. Project specialists, Project analysts, and Project associates from the Environment, Climate Change and Resilience Pillar at UNDP will be assigned to support project's implementation. **Project Financial Management:** UNDP has a strong financial management system that encompasses budgeting, financial reporting, auditing, and compliance with international financial standards. This ensures that project funds are managed transparently, efficiently, and in accordance with the highest financial governance standards. To oversee the management of the project's funds, a dedicated Finance Associate will be assigned. This individual will work collaboratively with the finance focal point from TMA to ensure the effective stewardship of project finances, aligning with established financial protocols and best practices. **Procurement:** UNDP's procurement experts possess extensive expertise in managing complex public procurement processes. They operate in strict compliance with UNDP's procurement guidelines and regulations, as well as the applicable national laws. This ensures that all procurement activities related to equipment, services, and infrastructure are conducted equitably, competitively, and with the highest standards of integrity. To streamline and facilitate procurement processes, UNDP's Procurement Unit will provide valuable support, drawing from their wealth of experience gained through previous projects. Additionally, a dedicated Procurement Analyst will be assigned exclusively to this project. This specialized role will focus on overseeing and optimizing the procurement aspects of the project, ensuring efficiency and effectiveness throughout the process. **Project Management Support:** UNDP provides comprehensive project management support, encompassing the development of project work plans, risk assessments, and strategic guidance. This support ensures that project activities are aligned with international best practices and tailored to the specific needs and context of Tanzania. An analyst from the Project Management Support Unit will be assigned for the project. **Communication:** UNDP recognizes the pivotal role of effective communication in project success. Its communication professionals are skilled in crafting targeted communication strategies, engaging stakeholders, and disseminating project updates and outcomes to a wide audience. This ensures that the SOFF project's objectives, achievements, and impacts are effectively communicated to relevant stakeholders, fostering broader awareness and support. The existing The Communication Unit at UNDP, in collaboration with the Communication focal point at TMA, will play a pivotal role in handling all communication and visibility matters related to the project.
Sub-regional gains	Tanzania has existing bilateral relationships in weather and climate services with countries in the Eastern and Southern Africa Sub-Regions. The TMA has been providing technical support to some National Meteorological and Hydrological Services (NMHSs) in these sub-regions. Additionally, Tanzania collaborates with neighbouring countries in the Eastern and Southern Africa Sub-Regions through various programs and projects led by organizations such as the World Meteorological Organization (WMO), East African Cooperation (EAC), and South African Development Community (SADC). These collaborations involve the implementation of projects like the HIGH impact Weather Lake Systems (HIGHWAY) project, in which TMA provided technical support to the Uganda National Meteorological Authority (UNMA), among others. Tanzania currently serves as a WMO Regional Specialized Meteorological Centre (RSMC), offering guidance on severe weather for countries around the Lake Victoria Basin, including Rwanda, Burundi, Kenya, and Uganda. Tanzania also operates as a Regional WIGOS Centre, responsible for ensuring data availability and quality in the EAC region. Furthermore, TMA has a calibration laboratory, which is used to calibrate TMA observation equipment. TMA is in the process of expanding the calibration laboratory to make it support National Meteorological and Hydrological Services (NMHSs) of neighbouring countries in the region including in EAC and SADC sub-regions. Such calibration laboratory could also support calibration of equipment for NMHSs of neighbouring countries implementing SOFF project. The project has budgeted for a regional capacity development workshop hosted by TMA on calibration of equipment. Additionally, TMA has a fabrication workshop for some weather observation equipment. The workshop could potentially be equipped to fabricate equipment for NMHSs of other neighbouring countries in the region, to whom TMA is already providing technical support. Given these well-established collaborations, the potential for establishing sub-regional cooperation is feasible. This will involve activities such as knowledge sharing, instrument maintenance, and calibration. UNDP Tanzania will also use the global support unit to ensure that all SOFF equipment is procured most effectively.

SOFF Beneficiary Country Capacity Assessment	The Tanzania Meteorological Authority (TMA) is a government institution mandated to provide weather and climate services in Tanzania under the Tanzania Meteorological Authority Act No. 2 of 2019. TMA was established by the Tanzania Meteorological Authority Act No. 2 of 2019 through Government Announcement GN 459 dated 14th June 2019. With the responsibility of coordinating, regulating and providing meteorological services. TMA is responsible for providing, regulating, and coordinating all meteorological services in the United Republic of Tanzania, including issuing forecasts, warnings, and advisories regarding severe weather events for the public. TMA also provided tailor-made products for various socio-economic sectors and individual users. The Authority is based on the fact that the weather agency in Tanzania was established by the law of the Agency (Executive Agency Act) Chapter No. 245 references for the year 2022. Before the weather Agency, weather services in the country were provided by the former (Directorate of Meteorology), which was established in the year 1977 after the breakup of the former East African Community, with the responsibility of making observation and providing weather information in the country. Before the East African Community, weather services in the country were provided under the Weather Institute which was under the colonial rule. Administratively, Management of TMA is headed by the Director General, who is supported by other Directors overseeing various functions, including Forecasting Services, Infrastructure and Technical Services, Research and Applied Meteorology, Corporate Services, and the TMA Zanzibar Office. TMA manages meteorological observation network consisting of manned synoptic weather stations, Automatic Weather Stations (AWSs), Rainfall Stations and weather Radars. TMA has a specific Directorate of Infrastructure and Technical Services which oversees all meteorological infrastructure and technical services whereas meteorological observation activities and data exchange are overseen by the Director of Forecasting Services. TMA is divided into eight (8) zones whereby each zone comprises of several regions and has a Zonal Manager who oversees all meteorological stations within a zone. Furthermore, manned stations are supervised by Heads of Stations who have meteorological and other experts under them to carry out meteorological operations twenty-four hours. Station operations include weather observations and data transmission to the TMA headquarters at synoptic hours (after every 3 hours). The real time observations from manned stations are sent at the Central Forecasting Office (CFO), communication section after every three (3) hours through email and telephones as backup. Received observations at CFO are then manually submitted to the Automatic Message Switching System (AMSS) for international exchange through the Global Telecommunication System (GTS). Weather parameters observed at stations are also sent through email and hardcopies to the climate data section for long term storage. The TMA organizational set up for maintenance of both surface based and upper air stations are based on a decentralized approach. TMA has divided Tanzania into eight cluster zones. Each Zone is manned with a residential engineer who will oversee maintenance in his/her Zone of operation. Additional engineers are based at TMA HQ in Dodoma with the capacity to provide support to the zones. Each cluster has a regional head office which also contains a warehouse. Spare parts and reserve equipment are stored at the warehouse of each cluster zone head office., Currently, TMA employs approximately 520 personnel, comprising 400 Meteorological Professionals and 120 supporting staff. Among the Meteorological Professionals, 79% are male, and 21% are female. TMA's staffing is at 76% of its estimated optimal number. Additionally, the institution has 10 ICT experts, including 3 females, and 13 Meteorological engineers. TMA has submitted a proposal for employment of more Meteorological Engineers by the Government through the Public Service Recruitment Secretariat. This indicates strong capacity and experience of TMA to effectively implement and deliver on SOFF project.
Investment Phase Alignment with the GBON National Contribution Plan	Currently no differences and therefore Not Applicable
Execution model and implementation arrangements	The project will be managed jointly by TMA and UNDP with inputs from DMI in its role as peer advisor. The highest project decision body will be a project Steering Committee, comprising of Chief Executive Officers of TMA and UNDP with DMI in an advisory role. The Steering Committee will consider progress on project implementation and make appropriate decisions. Below the Steering Committee, there will be a Project Technical Coordination Committee who will deliberate on project implementation and make recommendations to the Steering Committee. Below the Technical Coordination Committee, there will be a project team which will be formed by Officers and experts from TMA, UNDP and DMI in an advisory role. The day-to-day activities of the project will be coordinated by Project Officers based at TMA, UNDP and DMI who will work with a designated project accountant in the respective organizations. Activities on Monitoring and Evaluation and Communication will be carried out by UNDP in collaboration with TMA. The flow of funds will follow a structured process, with the UN Multi-Partner Trust Fund Office (UNMPTF) disbursing funds to UNDP. UNDP will then channel these funds to TMA for implementation of agreed activities in accordance with the arrangements specified in the Letter of Agreement (LoA) between TMA and UNDP. For smooth running of the project, UNDP and TMA will sign an LoA which will govern on the modality of executing the project activities, including flow of funds, coordination, and reporting mechanisms.

Private sector involvement	Based on the analysis outlined in the National Contribution Plan the most appropriate set up for Tanzania is the SOFF business model 1: a fully funded National Meteorological Institution. During the Readiness phase, the partners have not come across any private sector operators providing publicly available meteorological observations and data services in Tanzania. There might be private entities who gather meteorological observations for their own purposes, such as larger scale agricultural entities. It will be relevant to continue assessments during the investment phase to understand if there are potential relevant private sector partners and if other public sector operators can be included in the meteorological network (although unlikely they will be GBON relevant within the proposed project period).
Civil society participation	The SOFF investment phase will actively involve key stakeholders, including Civil Society Organizations (CSOs). While the SOFF project is rather technical, the strengthened meteorological observation network will enable strengthened data for Early Warning and disaster preparedness and response. The civil society organizations are key to achieving last mile provision of such services as well as to ensure community level communication and involvement. In ensuring gender participation in the project, activities such as construction work of stations, security services and cleanliness will give first priority to women and other marginalized groups in the localities. The selection of labourers will be done in consultation with local leaders. The selection for specific locations for construction of stations will also engage local authorities and residents as part of ensuring security of the equipment. The project has budgeted for annual workshops with civil society organizations to discuss Early Warning systems and how to the different stakeholders can work together to support a comprehensive Early warning system for Tanzania.
Fiduciary systems	Funds at the national level will be managed by UNDP. The funding process will involve the transfer of funds from the UNMPTF to UNDP, which will subsequently disburse the funds to the TMA based on arrangements outlined in a Letter of Agreement (LoA) between TMA and UNDP to be concluded at a later stage. TMA will take on the responsibility of implementing all project activities, except procurement activities which will be carried out by UNDP in accordance with Tanzanian procurement laws and regulations. UNDP procurement procedures adheres to principles such as Best Value for Money, Fairness, Integrity, and Transparency, Effective International Competition, and acting in the best interest of UNDP and the United Nations. These principles ensure fair and transparent competitive processes, value for money, and adherence to organizational mandates and objectives.
Social and environmental safeguards	The SOFF investment phase will strictly adhere to Tanzanian environmental policies and laws, including the Environmental Management Act of 2004. To ensure full compliance with these regulations, the GBON National Contribution Plan for Tanzania has outlined an activity to conduct an Environmental Impact Assessment before initiating project implementation, which is a legal requirement for new infrastructure development in Tanzania. Furthermore, TMA is committed to promoting gender equality in the delivery of weather and climate services. TMA will actively involve gender considerations in the implementation of the proposed SOFF activities. The project will also adhere to UNDPs Social and Environmental Standards **UNDP SES** which applies to all UNDP project and programme activities and the required standards will be included in agreements with all cooperating partners. The UNDPs Environmental and Social Safeguards policy framework is based on existing 'do no harm' provisions mandated by UNDPs Environmental Policy and 'Leaving no one behind' of the sustainable development goals (SDGs). The UNDP safe framework is fully aligned with the Model Approach to Environmental and Social Standards in UN Programming.
Dispute resolution mechanism	Prior to commencing the execution of project activities in the transition to the SOFF investment phase, the TMA will work collaboratively with UNDP to develop legal agreements and documentation, which will include a Memorandum of Understanding for the implementation of the SOFF Investment Phase. Nevertheless, it is anticipated that any disputes that may arise during the project implementation will be resolved amicably by the involved parties.
Additional relevant policies and procedures	Other pertinent policies and laws encompass the Income Tax Act and the Public Procurement Act of 2011. Broadly, these legislations do not pose significant hindrances to the project. However, certain regulations, such as those within the Income Tax Act, stipulate taxation on the importation of meteorological infrastructure. To address these charges, a proposal, and a Memorandum of Understanding (MoU) will be prepared and submitted to the Ministry of Finance to request tax exemptions.

SDG Targets

Target	Description
Main Goals	
Goal 13. Take urgent action to combat climate change and its impacts2	

Target	Description
TARGET_13.1	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
TARGET_13.2	13.2 Integrate climate change measures into national policies, strategies and planning
TARGET_13.3	13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
TARGET_13.b	13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
Secondary Goals	
Goal 5. Achieve gender equality and empower all women and girls	
TARGET_5.5	5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

SDG Indicators

Indicator Code	Description
No data available.	

Contribution to SDGs

Participating Organization	% TARGET_13.1	% TARGET_5.5	% TARGET_13.2	% TARGET_13.b	% TARGET_13.3	% Total
UNDP	20	20	20	20	20	100
WMO	20	20	20	20	20	100
Total contribution by target	**40**	**40**	**40**	**40**	**40**	
Project contribution to SDG by target	**20**	**20**	**20**	**20**	**20**	**100**

List of documents

Document	Document Type	Document Source	Document Abstract	Document Date	Classification	Featured	Status	Modified By	Modified On
Tanzania ProDoc Gateway.pdf	Pro Doc	Project		07-May-2024	Internal	No	Finalized	aheureux@wmo.int	08-May-2024 5:59:19 AM
4. Signed Tanzania SOFF Investment Phase Funding Request - SIGNED.pdf	Pro Doc	Project		21-Feb-2024	Internal	No	Draft	tlhamo@wmo.int	09-Apr-2024 6:37:09 AM

Project Results

Outcome	Output	Description
1. GBON institutional and human capacity developed		
	1.1 National consultations including with CSOs, and other relevant stakeholders conducted	

Outcome	Output	Description			
	Activities				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**
	Conduct annual stakeholders' workshop, Continuous assessment of potential private sector collaboration.		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
	1.2 NMHS institutional capacity required to operate the GBON network developed				
	Activities				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**
	Develop legal agreements and documentation for the timely procurement and clearance of observation infrastructure		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
	1.3 NMHS human capacity required to operate the GBON network developed.				

Outcome	Output	Description			
	Activities				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**
	Gender Awareness raising workshop for stakeholders		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
	Participation in sub-regional GBON collaboration meetings + Sub-regional capacity building workshop on calibration and maintenance		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
	Capacity development for technical staff including: • Training of TMA ICT staff • Training of TMA engineers to assemble/integrate sensors from different manufacturers. Capacity development workshop to strengthen TMA as regional WIGOS centre.		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
	Direct project costs in terms of oversight, procurement support, knowledge management, country coordination, for IE and TMI for duration of project.		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
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				
	Activities				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**
	Procurement and installation of new nine (9) land-based stations		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
	Procurement and installation of data collection system, station monitoring system, backup system, security infrastructure. System includes telecommunication connectivity, and WIS 2.0 alignment		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	

Outcome	Output	Description
	2.2 Improved land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place	

Activities

Title	Description	Lead Participating Organization	Participating Organization	Other Organizations
Procurement and installation of equipment for upgrading seven (7) land-based stations (Incl. Site survey for new locations, construction of guard houses for stations in new locations	For Tanzania to be GBON compliant, a total of 18 weather stations require upgrading. Out of this 18, the Government of Tanzania has allocated funds to upgrade 11, while the remaining 7 stations are expected to be covered by SOFF. O&M for all 18 stations have been included in the SOFF budget.	UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
Establish and implement standard operating practices for land-based stations (shall include procurement of mobile and laboratory calibration equipment (for seven zone offices), safety gear, and vehicles (for five zone offices) for field level maintenance		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	

	2.3 New upper-air stations and related equipment, ICT systems, data management systems and standard operating practices in place	

Activities

Title	Description	Lead Participating Organization	Participating Organization	Other Organizations
Carry out Environmental Impact Assessment (EIA)		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
Construction of buildings for upper air stations (hydrogen generator, gas storage tank cabins)		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
Procurement and installation of three (3) new upper air stations (including spare parts, annual maintenance contract)	To become GBON compliant, Tanzania requires 4 new upper air stations. The Government of Tanzania has allocated funds for 1 new upper air stations, therefore SOFF funding will provide for three (3) new upper air stations.	UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	

	2.4 Improved upper-air stations, related equipment, ICT systems, data management systems and standard operating practices in place	

Outcome	Output	Description			
	Activities				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**
	Upgrading of upper Air Stations at Julius Nyerere International Airport -JNIA;		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
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				
	Activities				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**
	Maintenance, calibration, and operationalization of surface observation stations conducted.		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	
	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				
	Activities				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**
	Maintenance, calibration, and operationalization of Upper Air observation stations conducted (including procurement of balloons and radio sondes). (Calculation for Radio sondes is 2 per day*2 years*5 stations + 100 spare per station=7800. Unit Price 165		UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	

Signature Indicators

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	Linked Outcome / Output
No signature indicators available.												

Imported Fund Outcome / Output Indicators

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	Linked Outcome / Output
Number of new land-based stations installed		Number of stations as defined in the National Contribution Plan.	tbd	Investment	Yearly	Country	Number	0	2024	9	2027	**Outcome:** 2. GBON infrastructure in place **Output:** 2.1 New land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place
Number of land-based stations improved		Number of stations as defined in the National Contribution Plan.	tbd	Investment	Yearly	Country	Number	0	2024	7	2027	**Outcome:** 2. GBON infrastructure in place **Output:** 2.2 Improved land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place
Number of new upper-air stations installed		Number of stations as defined in the National Contribution Plan.	tbd	Investment	Yearly	Country	Number	0	2024	3	2027	**Outcome:** 2. GBON infrastructure in place **Output:** 2.3 New upper-air stations and related equipment, ICT systems, data management systems and standard operating practices in place

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	Linked Outcome / Output
Number of upper-air stations improved		Number of stations as defined in the National Contribution Plan.	tbd	Investment	Yearly	Country	Number	0	2024	1	2027	**Outcome:** 2. GBON infrastructure in place **Output:** 2.4 Improved upper-air stations, related equipment, ICT systems, data management systems and standard operating practices in place
GBON land-based stations' commissioned		Number of stations as defined in the National Contribution Plan.		Policy	At closure	Country	Number	0	2024	27	2027	**Outcome:** 3. Sustained compliance with GBON **Output:** 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
GBON upper air stations' commissioned		Number of stations as defined in the National Contribution Plan.		Policy	At closure	Country	Number	0	2024	4	2027	**Outcome:** 3. Sustained compliance with GBON **Output:** 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

Project Indicators

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	Linked Outcome / Output
- # workshops with stakeholders				Capacity	Yearly	Country	Number	0	2024	3	2027	**Outcome :** 1. GBON institutional and human capacity developed **Output:** 1.1 National consultations including with CSOs, and other relevant stakeholders conducted
	% female participation in the stakeholder workshops			Capacity	Yearly	Country	Percentage	0	2024	50%	2027	
% of women participating in SOFF consultations with CSOs and the private sector				Capacity	Yearly	Country	Percentage	0	2024	50%	2027	**Outcome :** 1. GBON institutional and human capacity developed **Output:** 1.1 National consultations including with CSOs, and other relevant stakeholders conducted
	No components available.											

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	Linked Outcome / Output
# of TMA Senior Management trained				Capacity	Yearly	Country	Number	0	2024	10	2027	**Outcome :** 1. GBON institutional and human capacity developed **Output:** 1.2 NMHS institutional capacity required to operate the GBON network developed
	No components available.											
#Team members trained in project Management				Capacity	Yearly	Country	Number	0	2024	5	2027	**Outcome :** 1. GBON institutional and human capacity developed **Output:** 1.2 NMHS institutional capacity required to operate the GBON network developed
	No components available.											

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	Linked Outcome / Output
# of TMA Engineers and ICT staff Trained				Capacity	Yearly	Country	Number	0	2024	25	2027	**Outcome :** 1. GBON institutional and human capacity developed **Output:** 1.3 NMHS human capacity required to operate the GBON network developed.
	No components available.											

Risks

Event	Category	Level	Likelihood	Impact	Mitigating Measures	Risk Owner
Failure to comply with legal requirements (e.g. TMA Act No.2 of 2019, Procurement Act, Revenue Act, Finance Act, and associated Regulations etc)	• Regulatory	Medium	Unlikely	Major	• Initiate MoU/agreement among parties to have sections signifying necessity for compliance. • Having implementation flow chart(s)/ matrix with clear responsibilities descriptions	
Late disbursement of funds	• Financial • Operational	Medium	Possible	Minor	Close follow up on Funds flow and schedule	
After the conclusion of the Investment phase, GBON data are not collected or shared or are shared of insufficient quality	• Operational • Strategic	Medium	Unlikely	Major	• Ensure effective telecommunication system is in place. • Ensure regular inspection and maintenance of infrastructure. • Ensure availability of skilled personnel in maintenance and conducting meteorological observations.	
Destruction/ Theft/Vandalism of SOFF infrastructures	• Financial • Operational	High	Possible	Major	• Employ security personnel. • Engage the Civil Society Organizations (CSOs) and all relevant local authorities from the beginning of the project. • Enter into MoU with Local Government Authorities and Religious Organizations.	
Inability to access meteorological data and forecast products	• Social and Environmental • Operational	High	Possible	Moderate	• Ensure reliable telecommunication facility. • Provide access to data and products. • Ensure relevant expertise to access the data from global/regional sources.	
Price escalation	• Financial • Operational	High	Possible	Moderate	• Ensure budget allocation addresses exchange rate fluctuations • Timely procurement.	
Damage of infrastructure by natural hazards	• Social and Environmental • Operational	Medium	Unlikely	Moderate	• Locating stations at places not prone to natural hazards like flooding, landslides, etc	
SOFF-funded investments cause environmental or social impacts	• Social and Environmental • Operational	Low	Rare	Insignificant	• Project impacts are anticipated to be minimal and manageable through proactive planning and adherence to industry best practices. • Environmental and sustainability factors will be integrated into both supplier selection and construction processes to minimize potential impacts.	

NMHS staff depart after being trained	• Operational	Medium	Unlikely	Moderate	• To mitigate the risk of staff turnover, the project will involve and train sufficient staff at NMHS to ensure that capacity is built at institutional level. • NMHS staff will be engaged throughout the project lifecycle to ensure ownership over the process.	
Slow implementation and delays in procurement, installation, and capacity building activities	• Financial • Operational • Organizational	High	Possible	Moderate	• Ensuring close coordination between TMA, DMI and UNDP to ensure project activities remain on-track. Challenges when identified will be addressed in a timely manner.	

Budget by UNSDG Categories: Over all

Budget Lines	Description	UNDP (7%) *	WMO (7%) *	Total
1. Staff and other personnel	(Project Management Unit embedded within TMA (Project Manager, Accountant, Driver)	$205,607.48	$0.00	$205,607.48
2. Supplies, Commodities, Materials		$100,000.00	$0.00	$100,000.00
3. Equipment, Vehicles, and Furniture, incl. Depreciation	Procurement of Equipment, Vehicles, and Furniture.	$6,655,280.37	$0.00	$6,655,280.37
4. Contractual services				$0.00
5. Travel		$47,000.00	$0.00	$47,000.00
6. Transfers and Grants to Counterparts				$0.00
7. General Operating and other Direct Costs	Direct project costs in terms of oversight, procurement support, knowledge management, country coordination, for IE and TMI for duration of project, plus implementing entity fee, and Peer Advisor Fee (WMO).	$877,473.83	$588,941.00	$1,466,414.83
Project Costs Sub Total		**$7,885,361.68**	**$588,941.00**	**$8,474,302.68**
8. Indirect Support Costs		$551,975.32	$41,225.87	$593,201.19
Total		**$8,437,337.00**	**$630,166.87**	**$9,067,503.87**

Performance-based Tranches Breakdown

Tranche			Total
Tranche 1	UNDP (60%)	$5,062,402.20	$5,272,436.82
	WMO (33.33%)	$210,034.62	
Tranche 2	UNDP (40%)	$3,374,934.80	$3,584,969.42
	WMO (33.33%)	$210,034.62	
Tranche 3	UNDP (0%)	$0.00	$210,097.63
	WMO (33.34%)	$210,097.63	
			$9,067,503.87

Results based budget

Outcome *	Output *	Agency *	Budget (USD) *
1. GBON institutional and human capacity developed		**Sub Total**	**$1,342,863.00**
	1.1 National consultations including with CSOs, and other relevant stakeholders conducted	UNDP (7%)	$15,000.00
	1.2 NMHS institutional capacity required to operate the GBON network developed	UNDP (7%)	$12,000.00
	1.3 NMHS human capacity required to operate the GBON network developed.	UNDP (7%)	$726,922.00
	1.3 NMHS human capacity required to operate the GBON network developed.	WMO (7%)	$588,941.00
2. GBON infrastructure in place		**Sub Total**	**$4,972,970.00**
	2.1 New land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place	UNDP (7%)	$1,698,000.00

	2.2 Improved land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place	UNDP (7%)	$1,019,970.00
	2.3 New upper-air stations and related equipment, ICT systems, data management systems and standard operating practices in place	UNDP (7%)	$1,935,000.00
	2.4 Improved upper-air stations, related equipment, ICT systems, data management systems and standard operating practices in place	UNDP (7%)	$320,000.00
3. Sustained compliance with GBON		**Sub Total**	**$2,158,470.00**
	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	UNDP (7%)	$749,470.00
	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	UNDP (7%)	$1,409,000.00
Total			**$8,474,303.00**

Programme Outcome Costs

Outcome	Output	Activity	Implementing Agent	Time Frame				
				2024	2025	2026	2027	2028
				1	1	1	1	1
1. GBON institutional and human capacity developed								
	1.1 National consultations including with CSOs, and other relevant stakeholders conducted							
		Conduct annual stakeholders' workshop, Continuous assessment of potential private sector collaboration.						
			UNDP	☑	☑	☑	☑	☐
			WMO	☑	☑	☐	☐	☐
	1.2 NMHS institutional capacity required to operate the GBON network developed							
		Develop legal agreements and documentation for the timely procurement and clearance of observation infrastructure						
			UNDP	☑	☑	☐	☐	☐
			WMO	☑	☑	☐	☐	☐
	1.3 NMHS human capacity required to operate the GBON network developed.							
		Gender Awareness raising workshop for stakeholders						
			UNDP	☑	☑	☑	☑	☐
			WMO	☐	☐	☐	☐	☐
		Participation in sub-regional GBON collaboration meetings + Sub-regional capacity building workshop on calibration and maintenance						
			UNDP	☑	☑	☑	☑	☐
			WMO	☑	☑	☑	☑	☐
		Capacity development for technical staff including: • Training of TMA ICT staff • Training of TMA engineers to assemble/integrate sensors from different manufacturers. Capacity development workshop to strengthen TMA as regional WIGOS centre.						
			UNDP	☑	☑	☑	☑	☐
			WMO	☑	☑	☑	☑	☐
		Direct project costs in terms of oversight, procurement support, knowledge management, country coordination, for IE and TMI for duration of project.						
			UNDP	☑	☑	☑	☑	☐
			WMO	☑	☑	☑	☑	☐
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							
		Procurement and installation of new nine (9) land-based stations						
			UNDP	☑	☑	☑	☐	☐
			WMO	☑	☑	☑	☐	☐
		Procurement and installation of data collection system, station monitoring system, backup system, security infrastructure. System includes telecommunication connectivity, and WIS 2.0 alignment						
			UNDP	☑	☑	☑	☐	☐
			WMO	☑	☑	☑	☐	☐
	2.2 Improved land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place							

Outcome	Output	Activity	Implementing Agent	Time Frame				
				2024	2025	2026	2027	2028
				1	1	1	1	1
		Procurement and installation of equipment for upgrading seven (7) land-based stations (Incl. Site survey for new locations, construction of guard houses for stations in new locations						
			UNDP	☑	☑	☑	☐	☐
			WMO	☑	☑	☑	☐	☐
		Establish and implement standard operating practices for land-based stations (shall include procurement of mobile and laboratory calibration equipment (for seven zone offices), safety gear, and vehicles (for five zone offices) for field level maintenance						
			UNDP	☑	☑	☑	☐	☐
			WMO	☑	☑	☑	☐	☐
	2.3 New upper-air stations and related equipment, ICT systems, data management systems and standard operating practices in place							
		Carry out Environmental Impact Assessment (EIA)						
			UNDP	☑	☑	☐	☐	☐
			WMO	☑	☑	☐	☐	☐
		Construction of buildings for upper air stations (hydrogen generator, gas storage tank cabins)						
			UNDP	☑	☑	☐	☐	☐
			WMO	☑	☑	☐	☐	☐
		Procurement and installation of three (3) new upper air stations (including spare parts, annual maintenance contract)						
			UNDP	☑	☑	☑	☐	☐
			WMO	☑	☑	☑	☐	☐
	2.4 Improved upper-air stations, related equipment, ICT systems, data management systems and standard operating practices in place							
		Upgrading of upper Air Stations at Julius Nyerere International Airport -JNIA;						
			UNDP	☑	☑	☐	☐	☐
			WMO	☑	☑	☐	☐	☐
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							
		Maintenance, calibration, and operationalization of surface observation stations conducted.						
			UNDP	☐	☑	☑	☑	☐
			WMO	☐	☑	☑	☑	☐
	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							
		Maintenance, calibration, and operationalization of Upper Air observation stations conducted (including procurement of balloons and radio sondes). (Calculation for Radio sondes is 2 per day*2 years*5 stations + 100 spare per station=7800. Unit Price 165						
			UNDP	☐	☑	☑	☑	☐
			WMO	☐	☑	☑	☑	☐

Signatures

UNDP: UNDP (United Nations Development Programme (UNDP)) (Digital) Mr Shigeki Komatsubara Mr. shigeki.komatsubara@undp.org	**SIGNATURE:** Shigeki Komatsubara **DATE:** 07-05-2024

WMO: WMO (World Meteorological Organization) (Digital) Celeste Saulo Secretary-General csaulo@wmo.int	**SIGNATURE:** Andrea Celeste Saulo **DATE:** 05-05-2024