SOFF Investment Funding Request

Senegal

Systematic Observations
Financing Facility

Weather and climate data for resilience

UN Multi-Partner Trust Fund Office

General Information

Fund	MPTF_00281: The Systematic Observations Financing Facility					
FMP Record	SOFF Senegal Investment Phase					
MPTFO Project Id						
Start Date	01-12-2026					
End Date	30-11-2031					
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Description

The primary aim of this project is to strengthen and sustain Senegal's weather observation network by enhancing its capacity to comply with the Global Basic Observing network (GBON) requirements. This enables the generation and dissemination of essential observational data, which are critical for improving weather forecasts and climate services, supporting multisectoral decision-making, and informing planning for the benefit of all.

The project components are:

Component 1: Enhancement of ANACIM's Institutional and Human Capacity

- The objective of this component is to establish and sustain the capability to effectively operate and maintain the observing network. This will be achieved through national consultations with civil society organizations (CSOs) and other relevant stakeholders, alongside development of institutional capacity required for GBON implementation. The component also focuses on strengthening human capacity through targeted training skills development to ensure efficient operation and maintenance of the GBON network.

Component 2: Rehabilitation and Construction of GBON-Complaint Infrastructure

- This component focuses on investments in the acquisition, installation and modernization of observation infrastructure and telecommunications systems. It encompasses the upgrading of surface-based, ICT systems, data management platforms, and standard operating procedures (SOP)s. Additionally, it supports the enhancement of existing upper-air observing stations, including associated equipment, ICT systems, data management systems, and operational practices to meet GBON requirements

Component 3: Senegal's Network Compliance with GBON Requirements

- This component covers the expenses incurred during the commissioning and operationalization of both the surface-based stations and upper-air stations within the GBON framework. This includes the costs related to ensuring compliance with GBON Operational standards, sustainable maintenance practices, and verification of data sharing in accordance with requirements set by the World Meteorological Organization (WMO).

The project is part of the Systematic Observations Financing Facility (SOFF), a mechanism that facilitates and expedites the gathering and

	dissemination of critical surface-based weather and climate observations, in accordance with international requirements, to enhance the quality and availability of weather forecasts, early warning systems, and climate services across all strata of society. The recipient of the project is the National Agency for Civil Aviation and Meteorology (ANACIM), while the Islamic Development Bank (IsDB) and the Royal Netherlands Meteorological Institute (KNMI) serve as the implementing entity and peer advisor, respectively.			
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** • Yes		
	Fragile and conflict- affected situation	**Fragile and conflict-affected situation** • No		
	Peer advisor	**Peer advisor** • The Royal Netherlands Meteorological Institute (KNMI)		
Geographical Scope	**Geographical Scope**	**Name of the Region**	**Region(s)**	**Country**
	• Country		• Africa	• Senegal
Participating Organizations and their Implementing Partners	**UN Participating Organizations**	**Government/ Multilateral/ NGO/ Other**	**New Entities**	**Implementing Partners**
	• WMO - WMO (World Meteorological Organization)	Islamic Development Bank (IsDB)		National Agency of civil Aviation and Meteorology (ANACIM) of Senegal
Programme and Project Cost	**Participating Organization**	**Amount (in USD)**	**Comments**	
	Budget Requested			
	• Islamic Development Bank (IsDB)	$ 2 249 494.80	Includes the 7% IE fee	
	WMO	$ 267 500	Includes the 7% WMO fee	
	Total Budget Requested	$ 2 516 994.80		
	Tranches			
	Tranche 1: IE (70%) $ 1 574 646.36 WMO (33.33%) $ 89 157.75 **Total:** **$** 1 663 804.81	Tranche 2 IE (30%) $ 674 848.44 WMO (33.33%) $ 89 157.75 **Total:** **$** 764 006.49	Tranche 3 IE (0%) $ 0.00 WMO (33.34%) $ 89 184.5 **Total:** **$** 89 184.5	
	Other Sources (Parallel Funding)			
	Total	**$** amount		
Thematic Keywords				
Programme Duration	**Anticipated Start Date**	1 December 2026		
	Duration (In months)	60		
	Anticipated End Date	30 November 2031		

Narratives

Close the most significant data gaps

The main GBON gaps in Senegal

The National Gap analysis in May 2024 of the spatial and temporal resolution of Senegal network of weather stations revealed the following shortcomings:

Surface weather stations

- *Insufficient spatial coverage:* relatively low horizontal resolution in the northern and eastern regions of the country, indicating the need for the installation of at least two additional stations to meet GBON requirements.
- *Limited temporal continuity of observations*: of the current thirteen (13) surface stations, only five (5) operate continuously 24 hours. The other eight (8) operate 19 hours per day, primarily due to insufficient staffing, as the stations are manual.
- *Equipment gap and reliability issues*: a while basic infrastructure is in place, several stations were found to have incomplete, missing or non-functional equipment during the assessment, particularly 10-meter wind measurement systems. In some cases, sensors lacked data logger or were out of service, leading to frequent failures and resulting in poor-quality or missing wind data. Since the gap analysis, most wind measurement equipment has been upgraded, significantly improving data availability and reliability.

Upper-air stations

- *Near-complete spatial coverage*: the upper-air network shows only a minor coverage gap in the northern part of the country when assessed against a 500 km horizontal resolution buffer, indicating generally adequate spatial coverage.
- *Operational challenges***:** at time of the gap analysis, one of the two upper-air stations (Tambacounda) was not fully operational. This issue has since been resolved, and the station is now fully functional, with hydrogen supply ensured through electrolysis.
- *Sustainability and coordination context*: the upper-air stations are located at airports and are funded and managed by ASECNA (with ANACIM staff at Tambacounda upper-air station), as part of the agreement between ASECNA and the Government of Senegal. Although the system in Tambacounda has been restored to normal operation, occasional challenges related to operations and data exchange persist, both in Dakar and Tambacounda.

Establishment of the National target toward GBON compliance

Surface-based stations

To address the identified gaps in horizontal resolution and achieve compliance with GBON, the following actions are required:

- *Expansion of the network* through establishment of two (2) new surface-based synoptics to improve spatial coverage:
  - upgrade the climatological station of Koungheul (Kaffrine region)
  - install a new synoptic station in Kidira (Tambacounda region)
- *Modernization of existing GBON stations* through the upgrade of five (5) stations at Kolda, Kedougou, Linguère, Matam and Podor through the acquisition of electronic meteorologicals equipments.
- Upper-air measurements

The two (2) upper-air stations provide near-complete coverage of Senegal's territory in terms of GBON spatial requirement. As such the current network is broadly complaint from a resolution perspective. Continued efforts are nevertheless required to ensure *Sustained operational reliability and Consistent and timely data exchange*.

The table below summarizes the gap analysis results and targets for compliance.

Type of station	WMO GBON Global Gap Analysis, June 2023				GBON National Contribution Target October 2013	
	Target	Reporting	Gap		To improve	New
			To improve	New		
	[# of stations]				[# of stations]	
surface-based stations	5	2*	3	-	5*	2**
upper-air stations	1	0	1	-	1*	0

* Minimum to fulfil GBON requirement. Note that all five surface stations need small investments to ensure continued GBON

compliance.
** Minimum to meet the GBON requirement; the location has already been determined; the choice is made on the region of Kaffrine and Kidira.

Station Type	improve	New
New and improved surface-based stations	Kolda*, Kedougou*, Linguère*, Matam*, Podor*	Kaffrine + Kidira
New and improved upper-air stations	Tambaco*u*nda**	None

* These surface-based stations (non-operational 24/7) are not GBON compliant (gaps for time)
** This Tambacounda Upper-air stations (to improve) Upper Air Station co-administered by Agency for the Safety of Air Navigation in Africa and Madagascar (ASECNA) and ANACIM was recommended to be improved in the SOFF.

Observational practice and shortcomings:

The Gap analysis found that:

Synoptic surface weather stations

Current shortcomings

- *Manual observation practice and limited quality control:* observations are largely conducted manually and there is no systematic quality control mechanism in place to ensure the accuracy and consistency of data shared internationality.
- *Inefficient data transmission methods***:** Communication from the manual stations to ANACIM headquarters or to the Regional Telecommunication Hub is primarily conducted via telephone, increasing the risk of transmission errors and delays.
- *Limited integration of existing automatic stations*: Several automatic weather stations (AWS), acquired through various projects, are not yet integrated into national and international data exchange, limiting their contribution to operational forecasting.

Recent progress

- The introduction of an *automated electronic data exchange platform* linking manual stations to ANACIM headquarters developed by ANACIM staff
- The *WIS2-in-a-Box (WIS2Box*) system has been deployed operationally and is currently exchanging for some of the surface-based stations

Proposed improvement

To further improve effectiveness, the following activities are proposed:

- Procure and install *automated weather stations* with automatic data transmission and robust maintenance system (see below)
- Strengthen *national and international data exchange* by improving Internet connectivity and expanding the use of cloud-based services to support WIS
- Strengthen end-to-end data management across the full observational data value chain, including data acquisition, quality control, national and international exchange (WIS2), and long-term archiving

Upper-Air Observations

Current practices

- Radiosonde launches conducted twice daily (00Z and 12Z)
- Probes used: DMS17 (pressure, temperature, humidity) and PS15 (wind speed and direction)
- Staff: hydrogen technician for ballon inflation and observers for probes preparation and deployment

Identified challenges

- Supply constraints: occasional shortages of DSM17 probes disrupt observation continuity.
- Capacity gaps: staff operating the Tambacounda upper-air station require additional training to ensure end-to-end data management and consistent and safe operations.
- Safety issues

Proposed improvements

- Ensure sustainable operations through regular procurement and stock management of consumables (balloons, probe and improved logistics and supply chain planning.
- Provide targeted training for observers on operational procedures, safety protocols (including hydrogen handling), and end-to-end radiosonde operations.
- Equip observers with appropriate tools to safely manage balloon inflation where required

Maintenance of observing systems

Current shortcomings

	• A maintenance plan exists but is not effectively implemented due to insufficient dedicated funding and limited technical staff • Many observation staff lack adequate training in first-level maintenance of the equipment. *Proposed improvements* • Establish operational maintenance program and develop clear standard operating procedure, preventive maintenance outsourced and curative maintenance operated by ANACIM possible • Strengthen staff capacity in first-level maintenance and troubleshooting. <u>Instrument calibration</u> *Current situation* ANACIM does not currently operate a national calibration laboratory. Supports are provided through partnership with ASECNA for certain equipment (principally barometers), and with the WMO Regional Instrument Centre (RIC) in Morocco. *Key challenges* • Dependance on external facilities (mainly abroad) for calibration • Limited in-house capacity or calibration *Proposed improvements* • Strengthen collaboration with the WMO RIV in Morrocco to ensure regular and timely calibration of instruments and to build national technical capacity through training and knowledge transfer; In addition, the collaboration between ANACIM and ASECNA in supporting the calibration of barometers at various synoptic stations (GBON) will be maintained and strengthened as part of this initiative. Indeed, joint missions to calibrate equipment will be organized during and after the project in collaboration with ASECNA experts. Furthermore, for equipment such as the barometer, collaboration for the calibration of this equipment will always be maintained and strengthened with this training at the regional center level for better equipment.

Target easy fixes	A moderate level of investment is required to address critical deficiencies and ensure compliance with GBON standards, as identified in the Gap Analysis. Key priority actions include:
	• **Capacity building :**
	  ○ Training observers and volunteers in first level (preventive and corrective) maintenance of equipment.
	  ○ Providing targeted training for observers at Tambacounda to ensure the safe, efficient, and sustainable operation of radiosonde systems
	• **Strengthening data exchange systems:**
	  ○ Automatize the data collection, transmission, and quality control processes and transmit to WIS2.0 platform for international data exchange. Specifically, an internal application has been developed to enable the transmission of data from GBON stations to the central database, which will then be leveraged.
	  ○ Enabling the transmission of radiosonde data from ASECNA-operated observing systems at selected airports through WIS 2.0.
	• **Enhancing digital infrastructure :**
	  ○ Strengthening cloud-based systems to support reliable and scalable WIS 2.0 operations.
	  ○ Integrating existing automatic weather stations (AWS), installed under previous projects, into WIS 2.0 to enable real-time data transmission

Create leverage	This initiative under the Systematic Observations Financing Facility (SOFF) complements several ongoing efforts in Senegal and across the West African region. Observational data financed through SOFF will directly enhance the services provided by ANACIM, particularly by strengthening the implementation of Early Warnings for All (EW4All). At the global level, additional observations will improve weather forecasts through enhanced data assimilation by global forecasting centers, including the European Centre for Medium-Range Weather Forecasts (ECMWF). This will contribute to improved forecast skill, both globally and locally, benefiting Senegal and the wider region. Furthermore, increased availability, reliability, and quality of observations will support the objectives of the Global Climate Observing System (GCOS) by strengthening climate monitoring, ensuring data continuity, and reinforcing long-term climate services at national, regional, and global scales. At the national level, the SOFF initiative will significantly improve data availability for climate monitoring and research, helping to meet the growing demand for climate information. In this context, ANACIM is considering revising its data policy to facilitate the sharing of monthly observation data and to allow free access for non-commercial purposes, including research and education. ANACIM collaborates with numerous institutions to improve climate information services. Many of these collaborative projects prioritize service delivery over strengthening the underlying observation infrastructure. The support provided by SOFF will complement the Sub-Regional Program for Integrated Climate Risk Management (AIRCM), component 1 of which aims to strengthen the observation network (rehabilitation, equipment acquisition, maintenance, etc.). This sub-regional program, funded by IFAD (through the Green Climate Fund) with a total of US$20 million in Senegal over six years (2023-2028), aims to increase resilience and improve household livelihoods and food security. It is structured around three components: - Climate Risk Preparedness - Climate Risk Reduction - Climate Risk Transfer Under Component 1, between 2026 and 2028, approximately US$1 million is allocated to strengthen the observation network in the project's intervention zone (Northwest, Central, and Southwest regions of the country) through:

	- the acquisition and installation of automatic rain gauges for index insurance; - the acquisition and installation of automatic synoptic stations; - the upgrading and rehabilitation of meteorological stations; - the upkeep and maintenance of the stations. Therefore, the SOFF project will complement the existing system by: - constructing two new stations in the southeastern part of the country; - rehabilitating existing stations in the southeastern and northeastern parts of the country; - strengthening human resources; - improving the data collection, processing, and sharing system; and - strengthening the equipment maintenance system. These two initiatives will help fill this critical gap in the value chain by strengthening the fundamental observation systems that underpin downstream information products, thereby improving the overall quality and reliability of services. The AICRM project will focus on installation of stations in regions that are not covered by the current proposed GBON network under SOFF. ANACIM partners with numerous institutions to enhance climate information services. Many of these collaborative projects focus primarily on service delivery rather than on strengthening the underlying observational infrastructure. SOFF support will help close this critical gap in the value chain by reinforcing the foundational observation systems that underpin downstream information products, thereby improving the overall quality and reliability of services. Examples include improved climate services for farmers and the strengthening of existing early warning systems. NOAA is partnering with ANACIM to develop heatwave early warning services; improved observational data will directly enhance the accuracy and reliability of related bulletins. From a development perspective, SOFF support is expected to generate multiplier effects—both direct and indirect—by improving the availability of reliable data for forecasting and risk analysis related to climate change. This will contribute to safeguarding infrastructure and supporting economic and social development in Senegal, particularly in the agriculture, water, energy, transport, urban and rural planning, and health sectors.
Maximize delivery capacity	**The Islamic Development Bank (IsDB)** has signed a Memorandum of Understanding (MoU) with the Government of Senegal to support the expansion of its maritime investment and blue economy sectors. The signing ceremony took place on the sidelines of the Transformers Summit held in December 2019 in Senegal. Among other things, IsDB has supported the development of the sectors of agriculture, water, energy, health, women's empowerment, poverty and malnutrition, education and social protection in Senegal. The organization has initiated various projects and programs in Senegal. Such as the agricultural transformation project (Agropôle Sud) and the projects will irrigate 58,000 hectares of land, of which more than 10,000 are located in Mauritania and Senegal. In addition, the Bank has begun to provide support to member countries to enable them to obtain financing for the implementation of the programme on climate change. IsDB has close to five decades of experience working in implementing projects (including managing projects from external funds) across four continents including the Republic of Senegal. Specifically, the Bank operates a decentralized structure (with large country office i.e., the regional hub of Dakar) operating to serve its clients on the ground effectively and efficiently. The in-country presence gives the IsDB an edge to engage extensively with relevant stakeholders and institutions to ensure all issues and guidelines are implemented to the required standards of the donors and recipient country. Moreover, in term of strategic frameworks, the IsDB has an established climate change policy that recognizes the need (i) to build resilience of member countries toward addressing climate change impact, (ii) to support transition to green economy, and (iii) supporting capacity enhancement with the needed enablers to actualized climate goals and targets. In term of implementation and fiduciary policies, the IsDB has established procurement guidelines and financial management policies which are at par with the global best practices amongst multilateral development banks. These policies are applied in all projects financed by the Bank in the beneficiary country. In addition, the Bank has vast expertise (including specific local experience requirements in Senegal) of human resources across multiple disciples and sectors to support this project. For IsDB, the support provided through SOFF has the potential to benefit from IsDB Reverse Linkage Program that aids peer-to-peer learning (on real-time and better forecasting and observatory systems) between countries in the global south especially between countries in the West Africa sub-region. **The Royal Netherlands Meteorological Institute (KNMI),** has performed the Hydromet Diagnosis in Senegal, Cabo Verde, Sao Tome and Principe, Suriname and Uganda, while the IsDB has supported over the years many climate information services projects in many countries in African. Based on this practical experience, the Royal Netherlands Meteorological Institute (KNMI) and the IsDB can act in collaboration as SOFF peer advisor and Implementing Entity, respectively with adequate capacity to deliver SOFF support effectively and efficiently in Senegal. The IsDB has an office in Senegal, supported by the IsDB West Africa Regional Headquarters based in Riyadh, Saudi Arabia, with excellent contacts with the government and other relevant organizations to facilitate interactions for SOFF work and missions during the readiness and implementation stages. KNMI is an agency of the ministry of infrastructure and water management of the Dutch government with a total staff of approximately 500 employees. KNMI contributes 24/7 to a safe society by providing independent knowledge, advice and warnings about risks in the field of weather, climate and seismology by using high-quality knowledge and technology plus an extensive observation network KNMI is already active as peer advisor for SOFF countries in West Africa for Cape Verde and in East Africa for Uganda (both countries are in the investment phase) and through the regional projects of CREWS and ClimSA, focusing on climate data and indicators of climate extremes. KNMI has ample experience in providing support to peer NMHSs outside Europe: i.e., in South America, Southeast Asia and Africa. KNMI and the IsDB (peer advisor and Implementing Agency respectively) both have the capacity to contribute effectively and efficiently to the investment Phase deliverables.
Sub-regional gains	**The Regional Specialized Meteorological Centre (RSMC) for West Africa** operates under the responsibility of ANACIM. ANACIM also provides interim support to the World Meteorological Organization RSMC for Central Africa, pending its full operationalization. In addition to delivering operational guidance products, the RSMC Dakar organizes regular training activities for the region and receives staff from National Meteorological and Hydrological Services (NMHSs) within its area of responsibility. These activities contribute to

	capacity building and knowledge sharing across the sub-region. The SOFF-supported initiative is expected to further improve the quality and reliability of guidance products delivered by the RSMC Dakar. Through enhanced data availability, regional exchange, and mutual learning, the project will generate significant sub-regional benefits and strengthen cooperation among West African and Central African meteorological services. Currently, ASECNA, an international organization comprising several African countries, plays a central role in data sharing and the management of weather stations at airports within its area of influence. In this context, ASECNA has a meteorological equipment maintenance unit responsible for calibrating meteorological equipment, particularly barometers. Furthermore, by delegation from ANACIM, it manages the global telecommunications system (GTS) for data sharing, as Dakar is a regional hub. In addition, the altitude measurement stations, especially in Tambacounda, are jointly managed with ASECNA. The radiosonde station's staff are from ANACIM, and its operation is managed by ASECNA. It is at this level that the SOFF project's support including observer training, is essential. This local expertise will be strengthened by Morocco's National Meteorological Directorate (DMN), which serves as the WIGOS and WIS regional center for WMO Region I. Thus, the Moroccan DMN will be able to strengthen the capacities of ANACIM on equipment calibration (it has the regional calibration center) and also on the implementation of WIS 2.0. Regional collaboration can potentially provide significant benefits, e.g., by sharing technical facilities (such as validation, calibration and backup services, software solutions) and expertise. The group of francophone countries may also collaborate in regional capacity building activities for the maintenance of instrumentation, data processing and database management.
SOFF Beneficiary Country Capacity Assessment	**The National Agency for Civil Aviation and Meteorology (ANACIM)** is a public institution under the Ministry of Land and Air Transport of Senegal. It has legal personality and administrative autonomy and operates under the financial supervision of the Ministry of Finance. ANACIM was established by Decree No. 2011-1055 of 28 July 2011, as amended by Decree No. 2015-981 of 10 July 2015, and is designated as the Civil Aviation Authority of Senegal under Law No. 2015-10 of 4 May 2015 on the Civil Aviation Code. ANACIM is responsible, on behalf of the State, for civil aviation regulation and meteorological services. In addition to its technical departments, ANACIM has strong financial and administrative structures, including a senior official seconded from the Ministry of Finance for financial compliance, a management controller, an internal auditor, a procurement unit, a legal department, and a quality management department. Prior to its establishment, the meteorological service and the civil aviation administration operated as two separate agencies. Since its creation, ANACIM has represented Senegal within the World Meteorological Organization (WMO). In 2023, ANACIM's total budget amounted to approximately eight to nine billion CFA francs, of which about 93% consists of direct public funding. The remaining 7% is generated through revenue from service provision, including weather information services for the private sector and agricultural insurance schemes. In recent years, ANACIM's budget has remained relatively stable, with no significant increases. It is estimated that roughly half of the current budget would be required to adequately upgrade, operate, and maintain observation systems and data processing. However, the existing allocation for equipment replacement is limited to approximately USD 100,000, which covers only a small portion of actual needs. ANACIM is also expected to develop new products identified by beneficiaries but not yet operational. Strengthening the meteorological service's human resources capacity and technical infrastructure is therefore essential to ensure compliance with GBON requirements, increase data availability for early warning systems, weather forecasting, and climate services, and meet growing user demands. Enhancing storage, data management, and analytical capacities for weather and climate databases is equally critical. This will support the provision of climate services and respond to increasing demand from the private sector, government institutions, civil society, and academia. The Government of Senegal has agreed to exempt all meteorological equipment acquired by ANACIM—whether by purchase or donation—from customs duties and taxes. Despite significant progress in strengthening institutional, administrative, and technical capacities, the National Gap Analysis, National Contribution Plan, and Country Hydromet Diagnostic clearly indicate that ANACIM continues to face funding constraints in upgrading observational infrastructure and building human capacity for maintenance of observing systems. There is therefore a substantial opportunity for support from the Systematic Observations Financing Facility (SOFF) to help address these challenges.
Investment Phase Alignment with the GBON National Contribution Plan	The GBON National Contribution Plan provides detailed information on the Investment Phase Outputs. All planned activities are necessary to close the gap observed during the diagnostic analysis and its compliance with the recommendations set forth in NCP ✓ National consultations including with CSOs, and other relevant stakeholders conducted; ✓ NMHS institutional capacity required to operate the GBON network developed; ✓ NMHS human capacity required to operate the GBON network developed; ✓ New land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place ✓ Improved land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place ✓ 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' commissioning period completed, country- specific standard cost for operations and maintenance established, and data sharing verified by WMO Technical Authority
Execution model and implementation arrangements	**<u>Islamic Development Bank (IsDB)</u>** As the Implementing Entity for the Project, the Islamic Development Bank (IsDB) shall take the lead in coordinating the activities under the project. IsDB shall work closely with the beneficiary, The National Agency for Civil Aviation and Meteorology (ANACIM), to ensure the proper management and application of SOFF Grant Proceeds. Furthermore, IsDB shall oversee the annual and quarterly planning, implementation, financial management, evaluation, reporting, and project closure. IsDB shall monitor and supervise the execution of the Project to ensure that the Grant Proceeds are utilised in strict accordance with the terms of the current Funding Request and that procurement is carried out in compliance with relevant IsDB procurement procedures and guidelines, using competitive selection processes as the rule, and single sourcing as the exception (this would relate to services or equipment for which only one provider is known to be capable of delivering). The supply of all the major equipment required for the Meteorological stations will be procured using Limited International Bidding due to the limited suppliers/manufacturers available since this equipment is highly specialized in terms of scope for usage and the nature of equipment that is required which must comply with the World Meteorological Organization

	requirements. National Competitive Bidding will be used for the civil works and procurement of ICT equipment, including computers, screens, software, etc, while National Shopping will be used for the procurement of vehicles. The IsDB shall adhere to its economy, efficiency, fairness, and effectiveness principles throughout the procurement process. To explain, the economy shall dictate that the pricing of goods, works, consultant services and related services shall be limited to the minimum number of resources required to obtain the agreed output level. Efficiency shall demand the appropriate management of a given number of resources to achieve the agreed output level in a timely and cost-effective manner. Fairness requires a transparent and impartial procurement process, while effectiveness necessitates achieving specific outcomes considering the beneficiary's development objectives. Disbursements under IsDB financing will be made in accordance with the prevailing IsDB's procedures and guidelines. The Project will adopt a dual disbursement and financial management approach, combining Direct Payments and a Special Account, in accordance with IsDB Disbursement Guidelines. These disbursements will be made directly by IsDB to the implementing partners, contractors, consultants, and suppliers, based on certified invoices, approved work progress, and contract conditions. The Special Account will be opened in a reputable commercial bank acceptable to IsDB and the Government of Senegal. The operation and replenishment of the Special Account and other matters will be in accordance with the IsDB Project Special Account Policy and Procedures. The IsDB Regional Hub in Senegal will collaborate to create a project execution strategy and plan that outlines the implementation approach. IsDB and ANACIM will work together to carry out project activities. The SOFF-funded project will be jointly executed between the implementing entity and the beneficiary country. At the beginning of the project, a project steering committee (SC) will be formed, consisting of ANACIM, senior IsDB officials, and key stakeholders. The committee will include KNMI in an advisory capacity. The SC will be responsible for providing overall guidance on the execution of the project. A project management unit (PMU) will be established at ANACIM, and different technical task teams (TT) will be formed as required across the Directorate of Meteorological Operations of ANACIM. The IsDB Regional Hub in Senegal will lead IsDB's involvement in this project, and the team will comprise a project coordinator, procurement specialist, project management specialist, and financial management specialist. An expert on climate change from the Global Practice of the Bank's headquarters will support the team. **The National Agency for Civil Aviation and Meteorology (ANACIM)** The National Agency for Civil Aviation and Meteorology (ANACIM) is committed to ensuring that all planned activities are implemented in a timely and effective manner to achieve the project's objectives. To this end, ANACIM will assume specific roles and responsibilities, including supporting stakeholder engagement, preparing and submitting annual and quarterly work plans, and requesting fund disbursements for activities under its responsibility. ANACIM will also ensure the timely submission of technical progress and financial reports to the Islamic Development Bank (IsDB). In line with Global Basic Observing Network (GBON) requirements, ANACIM will be responsible for the operation, maintenance, and calibration of land-based and upper-air stations, as well as for data collection, analysis, and reporting. In close collaboration with IsDB, ANACIM will coordinate and implement all planned procurement activities in accordance with agreed procedures and standards. An indicative list of procurement activities, aligned with IsDB guidelines, will be developed as part of the project's procurement strategy. With the support of peer advisors under the National Contribution Plan, ANACIM has already prepared draft technical specifications and Terms of Reference (TORs) for goods and services under the SOFF investment phase. These documents will serve as the basis for procurement and will be reviewed and updated prior to implementation. To support effective project delivery, ANACIM will establish a Project Management Unit (PMU) at its headquarters. The PMU will play a central role in updating technical specifications and TORs, conducting technical evaluations, and contributing to supplier selection in accordance with agreed specifications, TORs, and procurement guidelines. **The Royal Netherlands Meteorological Institute (KNMI)** KNMI will collaborate with IsDB to provide technical advisory services to support ANACIM in implementing the National Contribution Plan and agreed activities for the Investment Phase. During the SOFF Investment Phase, KNMI will also be engaged in the following activities as a peer advisor: • Technical support in the AWS tender process; • Technical support in radiosounding tender process; • Technical support in the IT hardware tender process; • Benchmark portfolio, project management, and coordination in the KNMI; • Support in developing competence-building, AWS, and radiosounding processes; o Benchmark good practices; o Support in the preparation process and life cycle plans for observations. o Support for preparing a roadmap for a competence-building process that fits Senegal's context; o Support for preparation and enhancement of SOPs. o Support for preparing a roadmap for implementing QC/QA methods. • Training on AWS and radiosounding lifecycle maintenance and calibration • Advice in radiosounding and AWS data transfer and processing • Advice in implementing a data management system. • Contribution to final reporting.
Private sector involvement	Within the framework of the SOFF project in Senegal, private sector involvement will primarily take place through open and competitive procurement processes, particularly for selected civil works and service contracts. In addition, as part of the project's stakeholder engagement and consultation activities, a multi-stakeholder platform or coordination mechanism will be established to facilitate dialogue, communication, and collaboration among public institutions, private operators, development partners, and other relevant actors. In parallel, ANACIM plans to outsource routine preventive maintenance services to qualified private service providers, while continuing to strengthen its internal capacities for corrective maintenance and instrument calibration. This strategy will enhance operational efficiency, reduce system downtime, and support the long-term sustainability of observing infrastructure.
Civil society participation	Civil society organizations (CSOs) play a vital role in promoting people-centered Early Warning Systems (EWS), as they enjoy strong trust within local communities and possess extensive experience in disaster risk reduction (DRR) and humanitarian response. Access to reliable, timely, and accessible weather and climate observation data is essential for preparing communities for weather- and climate-related hazards.

	Under this project, CSOs will contribute by raising public awareness, advocating supportive policies, facilitating dialogue, providing technical assistance, mobilizing resources, and supporting service delivery. Accordingly, the project will actively engage CSOs during implementation, particularly in public awareness campaigns on the importance of weather and climate observations, both in general and in the national context. ANACIM maintains close collaboration with CSOs in public education activities focused on the value of weather and climate information and the need to protect Automatic Weather Station (AWS) sites. In addition, local administrative authorities, in partnership with ANACIM, play an active role in monitoring and safeguarding AWS installations in remote areas of Senegal. The project will further strengthen civil society engagement through a series of workshops on climate services and early warning systems. These will include consultation sessions to identify priority areas for collaboration in implementing the project plan. Special emphasis will be placed on promoting gender mainstreaming, social inclusion, and equitable participation, as well as creating opportunities for private sector engagement.
Fiduciary systems	As a multilateral development bank, the IsDB is committed to ensuring its operations are conducted with the highest integrity, transparency, accountability, and efficiency standards. To this end, the IsDB has established a comprehensive fiduciary system that covers the entire project cycle, from identification to completion and evaluation. The fiduciary system is designed to safeguard the IsDB's resources, enhance the quality and effectiveness of its interventions, and promote good governance and sound financial management among its beneficiaries. The main objectives of the IsDB's fiduciary system are to: • Ensure that IsDB's funds are used for the intended purposes and in accordance with the terms and conditions of the financing agreements; • Minimize the risks of fraud, corruption, mismanagement, and inefficiency in the implementation of the IsDB-financed projects; • Strengthen the capacity and ownership of the beneficiaries to plan, execute, monitor, and report on the IsDB-financed projects; • Enhance the development impact and sustainability of the IsDB-financed projects; • Facilitate coordination and harmonization of the IsDB's fiduciary policies and procedures with other development partners. The IsDB's fiduciary system consists of four interrelated components: • Procurement: The IsDB's procurement policies and procedures aim to ensure that the goods, works, and services required for the IsDB-financed projects are acquired in a fair, competitive, transparent, and cost-effective manner. The IsDB also supports the development of the procurement capacity and systems of its beneficiaries and encourages using country systems when they meet the IsDB's minimum requirements. • Financial Management: IsDB's financial management policies and procedures aim to ensure that the IsDB-financed projects are implemented in a sound and efficient manner, with adequate internal controls, accounting, auditing, and reporting systems. The IsDB also supports the development of its beneficiaries' financial management capacity and systems and encourages using country systems when they meet the IsDB's minimum requirements. • Disbursement: The IsDB's disbursement policies and procedures aim to ensure that the funds are released promptly and appropriately based on the progress and performance of the projects it finances. The IsDB also supports modern and efficient disbursement methods and systems, such as direct payments, special accounts, and electronic funds transfers. • Supervision and Evaluation: The IsDB's supervision and evaluation procedures aim to ensure that the IsDB-financed projects are implemented in accordance with the agreed objectives, outputs, and outcomes and that the IsDB's funds are used for the intended purposes and in accordance with the terms and conditions of the financing agreements. The IsDB also supports using participatory and results-based approaches to supervision and evaluation and disseminating the lessons learned and best practices from the IsDB-financed projects. For the SOFF funding, the financial management and procurement within the project will be guided by IsDB financial regulations, rules, and practices, as well as IsDB procurement guidelines and policies. For activities to be executed by ANACIM, the Senegalese government Procurement guidelines shall fully be applied upon satisfactory assessment by IsDB. There will be an agreement to be signed between ANACIM and IsDB on details of their responsibilities. Within this context, funding allocation mechanisms are managed in accordance with IsDB rules and procedures, including eligibility criteria, proposal evaluation processes, quality assurance and control, project monitoring and supervision. The Procurement Strategy covers the following areas: • Identification of the specific project needs; • Assessment of the operating context and its potential impact on the procurement; • Assessment of the implementing agency's capacity, resources, and previous experience in procuring these types of activities; • Assessment of the market's adequacy, behaviour, and capabilities to respond to the procurement; • Justifying the proposed procurement arrangements based on market analysis, risk and operating context and the project's circumstances.
Social and environmental safeguards	The Islamic Development Bank (IsDB) is committed to supporting its member countries in achieving their development goals environmentally and socially sustainably. To this end, IsDB has established Environment and Social Safeguards (ESS) systems that apply to all its financing operations. The ESS systems aim to ensure that IsDB projects are designed, implemented, and monitored in accordance with the principles of environmental and social responsibility, accountability, and transparency. The ESS systems have three main components: the Environmental and Social Policy, the Environmental and Social Safeguards Standards, and the Environmental and Social Safeguards Procedures. These components provide the framework and guidance for identifying, assessing, managing, and reporting on the environmental and social impacts and risks of IsDB projects, as well as for engaging with stakeholders and ensuring compliance and accountability. The Environmental and Social Policy The Environmental and Social Policy (ESP) is the overarching policy that defines IsDB's vision, objectives, and principles for environmental and social sustainability. The ESP sets out the expectations and responsibilities of IsDB and its clients when applying the ESS systems to IsDB projects. The ESP also outlines the scope and applicability of the ESS systems, the roles and functions of the Environmental and Social Safeguards Unit (ESSU) within the Climate Change and Environment Division, and the mechanisms for disclosure, consultation, grievance redress, and independent review. The Environmental and Social Safeguards Standards

	The Environmental and Social Safeguards Standards (ESSS) are the operational standards that specify the environmental and social requirements and performance criteria that IsDB projects must meet. The ESSS consist of ten standards that cover the following topics: • ESS1: Environmental and Social Assessment and Management; • ESS2: Involuntary Resettlement; • ESS3: Indigenous Peoples; • ESS4: Cultural Heritage; • ESS5: Biodiversity Conservation and Sustainable Management of Natural Resources; • ESS6: Climate Change; • ESS7: Pollution Prevention and Resource Efficiency • ESS8: Occupational Health and Safety; • ESS9: Community Health and Safety; • ESS10: Stakeholder Engagement and Information Disclosure The ESSS is aligned with international best practices and the relevant conventions and agreements to which IsDB is a party. They also reflect the values and principles of Shariah and the specific needs and contexts of IsDB member countries. The Environmental and Social Safeguards Procedures The Environmental and Social Safeguards Procedures (ESSP) are the operational procedures that describe the steps and actions that IsDB and its clients must follow to implement the ESS systems. The ESSP covers the entire project cycle, from screening and categorisation to appraisal and approval, implementation and supervision, and completion and evaluation. The ESSP also provide the tools and templates for conducting environmental and social assessments, preparing environmental and social management plans, conducting stakeholder consultations, disclosing information, monitoring, and reporting on environmental and social performance, and addressing grievances and complaints. The ESS systems are intended to be flexible and adaptable to the different types and scales of IsDB projects and the varying capacities and regulatory frameworks of IsDB clients. They also promote the use of country systems and harmonisation with other development partners whenever possible and appropriate. The ESS systems are subject to regular review and update to ensure their relevance and effectiveness.
Dispute resolution mechanism	The IsDB has an established Dispute resolution mechanism as part of its systems. The main objectives of the dispute resolution mechanism are to: • Provide a fair, transparent, and efficient process for resolving disputes between the IsDB and its member countries, partners, or beneficiaries. • Promote the amicable settlement of disputes through dialogue, negotiation, mediation, or conciliation. • Avoid escalating disputes and resort to litigation or arbitration, which may be costly, time-consuming, and adversarial. • Preserve the good relations and trust between the IsDB and its member countries, partners, or beneficiaries. • Enhance the accountability and credibility of the IsDB and its operations. The scope of the dispute resolution mechanism covers any dispute or disagreement that may arise between the IsDB and its member countries, partners, or beneficiaries with: • The interpretation or application of the IsDB's Articles of Agreement, by-laws, regulations, rules, policies, or procedures. • The performance or non-performance of the obligations or commitments under the IsDB's financing agreements, contracts, or grants. • The eligibility, selection, evaluation, or supervision of the IsDB's projects, programs, or activities. The procurement, delivery, or quality of the goods, works, or services financed by the IsDB. • The environmental, social, or governance impacts or risks of the IsDB's operations. • Any other matter that may affect the rights or interests of the IsDB or its member countries, partners, or beneficiaries. • The following principles guide the dispute resolution mechanism: • Voluntary participation: The parties to a dispute must agree to submit their dispute to the dispute resolution mechanism and to abide by its outcome. • Good faith: The parties to a dispute must act in good faith and cooperate with the dispute resolution mechanism throughout the process. • Confidentiality: The parties to a dispute must respect the confidentiality of the information and documents exchanged or disclosed during the dispute resolution process unless otherwise agreed or required by law. • Impartiality: The dispute resolution mechanism must ensure the impartiality and independence of the persons or entities involved in the dispute resolution process and avoid any conflict of interest or bias. • Flexibility: The dispute resolution mechanism must adapt to the specific circumstances and needs of each dispute and allow the parties to a dispute to choose the most suitable method and format for resolving their dispute. • Timeliness: The dispute resolution mechanism must resolve the disputes as quickly and efficiently as possible and within the time limits agreed upon or specified by the parties or the mechanism. The dispute resolution mechanism consists of the following procedures: • Dialogue: The parties to a dispute should first attempt to resolve it through direct dialogue and communication and seek a mutually acceptable solution. • Negotiation: If the dialogue fails or is insufficient, the parties to a dispute may negotiate directly or through their authorised representatives and try to settle their dispute by mutual agreement. • Mediation: If the negotiation fails or is insufficient, the parties to a dispute may request the assistance of a mediator, who is a neutral third party appointed by the IsDB or agreed by the parties, to facilitate the communication and negotiation between the parties and help them reach a voluntary and consensual resolution.

	• Conciliation: If the mediation fails or is insufficient, the parties to a dispute may request the intervention of a conciliator, who is a neutral third party appointed by the IsDB or agreed by the parties, to examine the dispute and propose a non-binding solution or recommendation for the parties to consider and accept. • Arbitration: If the conciliation fails or is insufficient, and if the parties to a dispute have expressly agreed in writing to submit their dispute to arbitration, they may refer it to an arbitral tribunal. The tribunal comprises one or more arbitrators appointed by the IsDB or agreed upon by the parties, who will render a final and binding decision on the dispute. The parties to a dispute may choose any of the above procedures, or a combination, to resolve their dispute, subject to the agreement of the IsDB and the other party. They may also terminate or withdraw from any procedure at any time unless they have agreed to arbitration. At their own expense, the parties may seek legal advice or representation at any stage of the dispute resolution process. The IsDB's dispute resolution mechanism is valuable for preventing and resolving disputes between the IsDB and its member countries, partners, or beneficiaries. It aims to foster a culture of dialogue, cooperation, and mutual respect and enhance the effectiveness and efficiency of the IsDB's operations. It also reflects the IsDB's commitment to upholding the principles of Shari'ah and the values of Islamic solidarity and cooperation. More information is provided here: IsDB Complaints Management. The SOFF Secretariat will be kept informed of any issues through the regular reporting process, with urgent matters communicated promptly via email.
Additional relevant policies and procedures	The IsDB's projects and operations are guided by policies reflecting its vision, mission, values, and strategic objectives. These policies also ensure that the IsDB's interventions are aligned with the needs and priorities of its beneficiaries, as well as the best practices and standards of the international development community. The policies also aim to promote transparency, accountability, efficiency, effectiveness, sustainability, and inclusiveness in the IsDB's operations. Depending on the project context, the implementing entity might apply several other policies and procedures during the project implementation phase; they can be found in the IsDB Policies Compendium..

SDG Targets

Target	Description
Main Goals	
Goal 13. Take urgent action to combat climate change and its impacts2	
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
C130b01	13.b.1 Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change

Contribution to SDGs

Participating Organization	% TARGET_5.5	% TARGET_13.1	% TARGET_13.2	% TARGET_13.3	% TARGET_13.b	% Total
WMO	20%	20%	20%	20%	20%	100
E	20%	20%	20%	20%	20%	100

Project Results / Indicators / Work Plan

Please note that there are different sections for **Project Results**, **Project Indicators** and **Work Plan** in the UN MPTF Gateway. Please refer to the Gateway Manual for guidance on how to fill out these sections.

Outcome	Output			Description																
1. GBON institutional and human capacity developed	1.1 National Consultations conducted			National consultations including with CSOs, and other relevant stakeholders conducted																
	Activities (add rows as needed)																			
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**	**Indicator Title**	**Description**	**Means of Verification**	**Category**	**Cycle**	**Scope**	**Value Type**	**Baseline Value**	**Baseline Year**	**Total Target Value**	**Target Completion Year**	**Annual Targets**				
																	Y1	**Y2**	**Y3**	**Y4**	**Y5**
	1.1.1. Stakeholder engagement and national advocacy workshops	National advocacy towards the implementation of the WIS, WIGOS, GCOS and GBON compliance including engaging with relevant stakeholders toward an enhanced legal framework (three national workshops)	IE	WMO	Ministries, national technical directorates, NGOs, academics community, international institution, KNMI etc.	Number of workshops	National advocacy for the implementation of the GBON Plan for Senegal, including engaging with relevant stakeholders to enhance the legal framework.	Annual or semi-annual progress updates and Workshops reports	Capacity	At closure	Country	Number	0	2026	#3	2029	3				
						% of female participants in workshops		Annual or semi-annual progress updates and Workshops reports	Capacity	At closure	Country	Percentage	0%	2026	50 %	2031	50%				

	1.1.2 Organize seven workshops/consultations to launch the project at local level	7 workshops organized at local level to launch the project with strong involvement of the authorities, technical structures and various organizations at local level for awareness raising about GBON compliance and the importance of the observing systems	IE	WMO	Local authorities, NGOs	Number of workshops	A series of workshops, including consultation activities on areas of collaboration, will be conducted to implement the Plan, ensure the active participation of NGOs, and promote gender mainstreaming, inclusion, and opportunities.	Annual or semi-annual progress updates and Workshops reports	Capacity	yearly	Local level	Number	0	2026	7	2029	7				
						% of female participants in workshops		Annual or semi-annual progress updates and Workshops reports	Capacity	At closure	Country	Percentage	0%	2026	50 %	2031	50%				
	1.2 NMHS institutional capacity developed		**NMHS institutional capacity required to operate the GBON network developed**																	
	Activities (add rows as needed)																			
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**	**Indicator Title**	**Description**	**Means of Verification**	**Category**	**Cycle**	**Scope**	**Value Type**	**Baseline Value**	**Baseline Year**	**Total Target Value**	**Target Completion Year**	**Annual Targets**				
																	Y1	**Y2**	**Y3**	**Y4**	**Y5**
	1.2.1 SOFF Project Management Unit for 5 years including part time project management officer		IE	WMO	ANACIM	Number of PMU staff employed	Additional staff employed to implement the project. For the management of the project, 5 staff will be recruited (the coordinator, the financial manager, the monitoring and evaluation manager, a secretary and	Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	# 5	2027	5				

							one driver)														
	1.2.2 Reinforcement of ANACIM staff to implement, operate and maintain the GBON-compliant stations (7 observers, 2 technicians for maintenance, 1 person for data management)	1.2.2.1 Reinforcement of ANACIM staff to implement, operate and maintain the GBON-compliant stations (7 observers)	IE	WMO	ANACIM	Number of observers recruited	To ensure 24/7 service at the various GBON stations, it is currently necessary to recruit additional staff to guarantee continuous data availability. The project's duration will allow ANACIM to prepare for integrating these costs into its operating budget.	Annual or semi-annual progress updates - recruitment contract and call for applications	Capacity	At closure	country	Number	0	2026	7	2028	7					
		1.2.2-2 Reinforcement of ANACIM staff to implement, operate and maintain the GBON-compliant stations (2 technicians for maintenance)	IE	WMO	ANACIM	Number of technicians recruited	To ensure equipment maintenance, it is necessary to strengthen the existing team responsible for maintaining the three meteorological instruments currently in operation. This reinforcement is essential to guarantee the proper functioning of the equipment and ensure the continuous availability of data during and after the project. The project's duration will allow ANACIM to prepare for integrating these costs into its operating budget.	Annual or semi-annual progress updates recruitment contract and call for applications	Capacity	At closure	country	Number	0	2026	2	2029		2				
		1.2.2.3	IE	WMO	ANACIM	Number of data management staff	Currently, the system in place	Annual or	Capacity	At closure	country	Number	0	2026	1	2027	1					

		Reinforcement of ANACIM staff to implement, operate and maintain the GBON-compliant stations (1 person for data management)				recruited	for data management requires an additional person with expertise in database management (ORACLE and others). The person currently assigned to this task does not possess these skills (a meteorologist).	semi-annual progress updates recruitment contract and call for applications													
	1.2.3 Maintenance plan elaboration and monitoring (system for sensors monitoring, software, consultant)		IE	WMO	ANACIM	Number of maintenance plan contract awarded and implemented (Operational maintenance plan and implementation. The contract for the acquisition of remote monitoring tools for equipment and maintenance equipment has been launched and awarded.)	operationalize the maintenance plan in place and acquire a remote monitoring tool for sensors at the various GBON stations and consulting services.	Annual or semi-annual progress updates	Capacity	At closure	country	Number	0	2026	1	2027	1					
	1.2.4 Provide expert guidance for review the final plan and report.		WMO	IE				Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	1	2027	1					
	1.3 NMHS human capacity developed			**NMHS human capacity required to operate the GBON network developed**																	
	Activities (add rows as needed																				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**	**Indicator Title**	**Description**	**Means of Verification**	**Category**	**Cycle**	**Scope**	**Value Type**	**Baseline Value**	**Baseline Year**	**Total Target Value**	**Target Completion Year**	**Annual Targets**					
																	Y1	**Y2**	**Y3**	**Y4**	**Y5**	
	1.3.1 Initial training for two (2) maintenance	Initial training for 2	IE	WMO	ANACIM EAMAC,	Number of	The two recruited and trained	Annual or	Capacity	Yearly	Country	Number	0	2026	2	2029	2	2				

	technicians (Electrotonic and IT)	maintenance technicians at the institute such as EAMAC, AGRHYMET, IHFR, METEO-FRANCE/ENM, etc			AGRHYMET, IHFR, METEO-FRANCE/ENM	maintenance technicians trained	technicians will spend two years at EAMAC or Agrhymet maintaining the equipment acquired for the project and operating the GBON network. The cost of training for each technician includes a round-trip ticket (at the beginning and end of the training), living expenses (stipends), and the cost of the training itself.	semi-annual progress updates - Registration certificate and diplomas												
	1.3.2 Initial training for seven (7) observers to be deployed at the GBON stations	Initial training for 7 observers at the institute such as EAMAC, AGRHYMET, IHFR, etc.	IE	WMO	ANACIM EAMAC, AGRHYMET, IHFR,	Number of observers trained	The seven (7) observers who will be recruited will be trained at EAMAC for a period of one year. The cost of training for each technician includes a round-trip ticket (at the beginning and end of the training), as well as accommodation expenses.	Annual or semi-annual progress updates - Registration certificate and diplomas	Capacity Contractual services	At closure	Country	Number	0	2026	7	2029	3	4			
	1.3.3 On the job training for ANACIM staff capacity enhancement on devices calibration in collaboration with the WMO Regional instrument Centre in Morocco	training for ANACIM 2 staff capacity enhancement on devices calibration in collaboration with the WMO Regional instrument Center in Morocco.	IE	WMO	ANACIM DMN Marocco	Number of technicians trained	One training for two technicians on devices calibration at WMO Regional instrument Center in Morocco. The cost of this training will include round-trip tickets and per diems .	Annual or semi-annual progress updates - Mission report	Capacity	At closure	Country	Number	0	2026	2	2027	2				
	1.3.4 On the job	training in	IE	WMO	ANACIM	Number of	Two Training	Annual	Capacity	At closure	Country	Number	0	2026	3	2028	2	1			

	training in WIGOS and WIS in collaboration with other NHMSs and WMO	WIGOS and WIS in collaboration with other NHMSs and WMO			DMN Marocco	technicians trained	session of 3 Engineer in two step (two Engineer in year 1 and one in Year 2) in WIGOS and WIS. The cost of this training will include round-trip tickets and per diems	or semi-annual progress updates - Mission report													
	1.3.5 On the job training to build capacity for first-level maintenance for observers and volunteers		IE	WMO	ANACIM	Number of trainings conducted.	Training to build capacity for first-level maintenance for observers and volunteers. This training will take place in two formats. The first will bring together all station managers at the General Directorate in Dakar, and the second will involve maintenance technicians traveling to the sites for practical training. This session will also allow for the training of all observation network staff. The cost covers the expenses related to the first week-long workshop (transportation, per diems, room rental, meals, etc.) and the on-site training (fuel, per diems for the technicians and driver).	Annual or semi-annual progress updates - Report of the training	Capacity	At closure	Country	Number	0	2026	2	2028	1	1					

						Number of staff trained		Annual or semi-annual progress updates - Report of the training	Capacity	At closure	Country	Number	0	2026	24	2028		24				
						% of female participants		Annual or semi-annual progress updates - Report of the training	Capacity	At closure	Country	Percentage	0	2026	30%	2028		30 %				
	1.3.6 On the job training for upper-air measurements operations and maintenance		IE	WMO	ANACIM Météo france	Number of staff trained	On-the-job training for operations and maintenance related to high-altitude measurements. This includes training costs: round-trip airfare, per diems, and training fees for two technicians for two months.	Annual or semi-annual progress updates Training report	Capacity	At closure	Country	Number	0	2026	2	2028	2					

	1.3.7 KNMI support in training	Advice and support in training on AWS and radiosounding LCM and calibration	WMO	IE			On the job or online training		Capacity	At closure	Country						1	1				

Outcome	Output	Description																			
2. GBON infrastructure in place	2.1 New land-based stations in place	New land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place																			
	Activities (add rows as needed)																				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**	**Indicator Title**	**Description**	**Means of Verification**	**Category**	**Cycle**	**Scope**	**Value Type**	**Baseline Value**	**Baseline Year**	**Total Target Value**	**Target Completion Year**	**Annual Targets**					**Budget**
																	Y1	**Y2**	**Y3**	**Y4**	**Y5**	
	2.1.1 Fence and building work, earthwork electricity access and power backup for two new GBON land-based stations (fully automated).	Fence and building work, earthwork electricity access and power backup for two new GBON land-based station (fully automated) .	IE	WMO	ANACIM	Number of GBON station sites with infrastructure established	Fence and building work, earthwork electricity access and power backup for two new GBON land-based station (fully automated) .	Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	2	2029			2			
	2.1.2 Purchase of two GBON Automatic Weather Synoptic Stations including spare parts	GBON Automatic Weather Synoptic Stations including spare parts	IE	WMO	ANACIM	Number of AWS acquired	GBON Automatic Weather Synoptic Stations including spare parts	Annual or semi-annual progress updates - document for the launch of deliveries and reception of equipment. it includes also, installation, commissioning	Investment	At closure	Country	Number	0	2026	2	2029			2			

								and agency cost to install operational system													
	2.1.3 Internet connection fees to transfer the data from the 2 AWS to a central server – GPRS for 5 years	the costs of Internet Connection fees to transfer the data from the 2 AWS to a central server – GPRS for 1 year	IE	WMO	ANACIM	Number of AWS connected to the central server	Estimated costs of Internet Connection fees to transfer the data from the 2 AWS to a central server – GPRS for 1 year	Annual or semi-annual progress updates - document for the launch of deliveries and reception of equipment	Investment	At closure	Country	Number	0	2026	2	2029			2			
	2.1.4 Security System and Monitoring Facilities in constructed facilities - two stations.	Costs Security System and Monitoring Facilities in constructed facilities - two stations.	IE	WMO	ANACIM	Number of GBON station sites with security system in place	Costs Security System and Monitoring Facilities in constructed facilities - two stations.	Annual or semi-annual progress updates - Launch market documents for building and infrastructure security	Investment	At closure	Country	Number	0	2026	2	2029			2			
	2.1.5 . Mobile (portable) AWS sensor calibration kit Data.	Mobile (portable) AWS sensor calibration kit Data;	IE	WMO	ANACIM	Number of AWS sensor calibration kit	Mobile (portable) AWS sensor calibration kit Data;	Annual or semi-annual progress updates - document for the launch of deliveries and reception of calibration dit Data	Investment	At closure	Country	Number	0	2026	2	2029			2			
	2.1.6 Acquisition of two maintenance and inspection vehicles for the GBON stations	Cost of 1 maintenance and inspection vehicles for the GBON stations.	IE	WMO	ANACIM	Number of vehicule acquired	Cost of 1 maintenance and inspection vehicles for the GBON stations.	Annual or semi-annual progress updates - document for the launch of deliveries and reception of vehicule	Investment	At closure	Country	Number	0	2026	2	2029			2			

	2.1.7 Advice by KNMI in AWS and data management system	Advice and support in radiosounding and AWS data transfer and processing	WMO	IE	ANACIM			Annual or semi-annual progress updates	Investment		Country			2026		2029			2			
	2.1.8 Support in Tender process	Technical Support in AWS, IT hardware and radiosounding tenderprocess	WMO	IE	ANACIM			Annual or semi-annual progress updates	Investment										2			
	2.1.9 Technical support by KNMI	Support in preparing/enhancing SOPS Support in preparation process and plan for life cycle management for observations	WMO	IE	ANACIM			Annual or semi-annual progress updates	Investment										2			

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

Activities (add rows as needed)

Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**	**Indicator Title**	**Description**	**Means of Verification**	**Category**	**Cycle**	**Scope**	**Value Type**	**Baseline Value**	**Baseline Year**	**Total Target Value**	**Target Completion Year**	**Annual Targets**				
																Y1	**Y2**	**Y3**	**Y4**	**Y5**
2.2.1 Fence and building work for 2 of the 5 existing GBON stations	Fence and building work for 2 of the 5 existing GBON stations	IE	WMO	ANACIM	Number of GBON station sites with infrastructure established	Total Number of land-based stations in Senegal fully automated and operational with quality control and historical data rescued	Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	2	2029			2		
2.2.2 . Internet connection	Estimated costs of Internet Connection	IE	WMO	ANACIM	Number of AWS	Estimated costs of	Annual or semi-annual	Investment	At	Country	Number	0	2026	5	2029			5		

	fees to transfer the data from the 5 AWS to a central server – GPRS for 5 years	fees to transfer the data from the 5 AWS to a central server – GPRS for 1 year				connected to the central server	Internet Connection fees to transfer the data from the 5 AWS to a central server – GPRS for 1 year	progress updates		closure										
	2.2.3 Security System and Monitoring Facilities in constructed facilities - five stations.	Costs Security System and Monitoring Facilities in constructed facilities - two stations.	IE	WMO	ANACIM	Number of GBON station sites with security system in place	Costs Security System and Monitoring Facilities in constructed facilities - two stations.	Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	5	2029			5			
	2.2.4 Upgrade of the existing automatic weather stations	Estimated cost of Upgrading One (1) existing automatic weather station	IE	WMO	ANACIM	Number of surface stations upgraded	Estimated cost of Upgrading One (1) existing automatic weather station;	Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	5	2029			5			
	2.2.5 Refurbishment of the Central Observation Room for data management (real time data collection, analysis of data from different observing systems, quality control in compliance with GBON Stations Requirements.	Estimated costs	IE	WMO	ANACIM	Number of central Observation room refurbished	estimated cost of renovating the data collection center's facilities	Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	1	2029			1			
	2.2.6 Acquisition of hardware infrastructure for the Central Observation Room	Estimated costs	IE	WMO	ANACIM	Number of PC acquired		Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	10	2029			10			
Select	2.2.7 Software development for data		IE	WMO	ANACIM	Upgrade of Clidata	Estimated cost of purchasing	Annual or semi-annual progress	Investment	At closure	Country	Number	0	2026	1	2029			1			

	collection in the Central Observation Room from different observing systems and database software upgrade					software	tools analysis	updates													
	2.2.8 Improve capacity in data management and exchange with WIS2.0 (Cloud, Storage, Transmission		IE	WMO	ANACIM	Number of data management and exchange system installed and operational	• A virtualized server infrastructure, coupled with backup solutions, to ensure data security and availability; • A secure centralized power supply system, based on a solar solution coupled with inverters, to guarantee service continuity; • The deployment of stand-alone solar systems at meteorological stations, ensuring their continuous operation, particularly in areas with high energy constraints. This system is a key lever for improving the resilience of the meteorological information system, strengthening ANACIM contribution to	Annual or semi-annual progress updates	Capacity	Yearly	Country	Number	0	2026	1	2030			1			

							international data exchange, and meeting the requirements of WIS 2.0.														
2.2.10 KNMI Advice rol	Advice in datamanagement and datarescue	WMO	IE	ANACIM			Annual or semi-annual progress updates	Investment		Country											
2.2.11 KNMI provide technical support	Support in preparing/enhancing SOPS Support in plan for life cycle management of AWS including maintenance protocols	WMO	IE	ANACIM			Annual or semi-annual progress updates	Investment		Country											
2.3 New upper-air stations in place			**New upper-air stations and related equipment, ICT systems, data management systems and standard operating practices in place**																		
Activities (add rows as needed)																					
Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**	**Indicator Title**	**Description**	**Means of Verification**	**Category**	**Cycle**	**Scope**	**Value Type**	**Baseline Value**	**Baseline Year**	**Total Target Value**	**Target Completion Year**	**Annual Targets**					
																Y1	**Y2**	**Y3**	**Y4**	**Y5**	
2.4 Improved upper-air stations in place			**Improved upper-air stations and related equipment, ICT systems, data management systems and standard operating practices in place**																		
Activities (add rows as needed)																					
Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**	**Indicator Title**	**Description**	**Means of Verification**	**Category**	**Cycle**	**Scope**	**Value Type**	**Baseline Value**	**Baseline Year**	**Total Target Value**	**Target Completion Year**	**Annual Targets**					
																Y1	**Y2**	**Y3**	**Y4**	**Y5**	

Outcome	**Output**	**Description**
3. Sustained compliance with GBON	**3.1 GBON land-based stations commissioning period completed**	**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 (add rows as needed)

Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**	**Indicator Title**	**Description**	**Means of Verification**	**Category**	**Cycle**	**Scope**	**Value Type**	**Baseline Value**	**Baseline Year**	**Total Target Value**	**Target Completion Year**	**Annual Targets**				
																Y1	**Y2**	**Y3**	**Y4**	**Y5**

	3.1.1. Procurement to a private company for preventive maintenance in accordance with the maintenance plan for all synoptic stations including the two new automatic stations during the 4-year period	This is a maintenance contract for the duration of the project. After the project, the team that will be trained will take over.	IE	WMO	ANACIM	GBON land-based stations' fully operating	Number of stations as defined in the National Contribution Plan operating at more than 80% of data exchanged.	Annual or semi-annual progress updates SOFF Compliance tool	Investment	At closure	Country	Number	0	2026	7	2031			7	7	7	
	3.1.2. Staff travel and fuel for curative maintenance and inspection of observing network.	mission to meteorological stations to ensure the proper functioning of equipment	IE	WMO	ANACIM	Number of inspections	This cost covers mission expenses and fuel for maintenance and inspections.	Annual or semi-annual progress updates. Inspection report	Investment	At closure	Country	Number	0	2026	4	2031		1	1	1	1	
	3.1.3 Advice during the commissioning period to keep the Surface observations at the expected standard		WMO	IE				Annual or semi-annual progress updates. Inspection report	Capacity	At closure	Country	Number	0	2026	1	2031					1	
	3.2 GBON upper air stations' commissioning period completed	**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 (add rows as needed)																					
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**	**Indicator Title**	**Description**	**Means of Verification**	**Category**	**Cycle**	**Scope**	**Value Type**	**Baseline Value**	**Baseline Year**	**Total Target Value**	**Target Completion Year**	**Annual Targets**					
																	Y1	**Y2**	**Y3**	**Y4**	**Y5**	
	3.2.1Procurement of spare consumables in Tambacounda in case of shortage (Calculation 165 USD for launch for 100 spare kits per year for 5 years);	Purchase of spare consumables in Tambacounda in case of shortages for radiosonde measurements (DMS17 (pressure, temperature, humidity) and PS15 (wind speed and direction)) and hydrogen	IE	WMO	ANACIM	GBON upper air stations' fully operating	Number of upper-air stations as defined in the National Contribution Plan operating at more than 90% of data exchanged	Annual or semi-annual progress updates SOFF Compliance tool	Investment	At closure	Country	Number	0	2026	1	2032			1	1	1	
	3.1.3 Advice during the commissioning period to keep the upper air		WMO	IE				Annual or semi-annual progress updates.	Capacity	At closure	Country	Number	0	2026	1	2031					1	

	observations at the expected standard							Inspection report													

Risks

The Investment Phase Risk Management Framework should be based on the SOFF Risk Management Framework, incorporating relevant programmatic risks and including additional country-specific risks. Please follow the methodology established by the Multi-Partner Trust Fund Office (MPTFO) presented below.

		Impact				
		Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Extreme (5)
Likelihood	Very Likely (5)	Medium (5)	High (10)	High (15)	Very High (20)	Very High (25)
	Likely (4)	Medium (4)	Medium (8)	High (12)	High (16)	Very High (20)
	Possible (3)	Low (3)	Medium (6)	High (9)	High (12)	High (15)
	Unlikely (2)	Low (2)	Low (4)	Medium (6)	Medium (8)	High (10)
	Rare (1)	Low (1)	Low (2)	Medium (3)	Medium (4)	High (5)

Event	Category	Level	Likelihood	Impact	Mitigating Measures	Risk Owner
Challenges in Cooperation, Joint coordination and mis- alignment of goals and processes.	Operational	Medium	Unlikely	Moderate	The IsDb has a regional hub located in Senegal, which will allow for effective implementation and supervision of the PMU. Coordination with ANACIM and KNMI will be done through regular meetings including through the steering committee. IsDB and KNMI have already established collaboration through another SOFF project (Uganda).	IsDB, ANACIM, KMI
Non-compliance with fiduciary and procurement standards in some SOFF activities	Strategic	Low	Unlikely	Minor	As soon as the approval of the financing request is established, in collaboration with the IsDB, ANACIM will organize a kick-off workshop to familiarize itself with the IsDB's procurement and financial management guidelines and policy. All relevant policies will be strictly adhered to. In addition, the Procurement Unit at ANACIM will work with the IsDB to ensure that there is an adequate understanding of the Bank's procurement guidelines. In line with the Bank's procurement guidelines, the Mission will continue to implement the Public Procurement and Transfer of Public Property (PPDA) guidelines and the Quality Management System (QMS); both require full documentation to increase ISDB requirements if necessary.	IsDB, ANACIM
SOFF-funded investments cause environmental or social impacts	Social and Environmental	Low	Unlikely	Insignificant	As indicated in the environmental recommendations of the National Contribution Plan, ANACIM has already begun to implement the Minamata Convention's aims to end the millennial toxicity of mercury by using mercury-based instruments. These are systematically replaced by electronic instruments	IsDB, ANACIM, Min. Environment

Event	Category	Level	Likelihood	Impact	Mitigating Measures	Risk Owner
					(thermometer, hygrometer, atmospheric pressure and wind devices). Project activities are not expected to present environmental and social impacts and risks. However, the IsDB will have to carry out an environmental and social assessment of the activities covered by this financing request at the beginning of the activities. The potential impacts are likely to be very limited in terms of magnitude and easily avoided by proactive planning. Many of the project activities are related to capacity building and training, which are inherently low-impact activities. While the activities related to infrastructure development and installation of new observation equipment will require low-level monitoring, management of environmental and social risks will be a matter of following industry's best practices. As a mitigation measure, environmental and sustainability considerations will be included in the procurement process, as selection criteria for suppliers. In addition, prior to site works for upgrading stations or installing new stations, an environmental management plan will be prepared considering local conditions and approaches to minimize the environmental impact of construction activities. For this ESIA/AS will be conducted before the beginning of construction.	
NMHS staff depart after being trained	Operational	Medium	Rare	Moderate	Strengthen incentive mechanisms for key SOFF personnel to maintain them. Historically, ANACIM has little experience with employees leaving the organization as experience increases. ANACIM follows the Public Service Standing Order that inspires the Human Resource Manual that is being utilized to ensure adequate human resources retention. SOFF Support will be used to build the capacity of ANACIM staff, including for observing and data management ANACIM will offer continuing service contracts, and organize regular refresher courses for trained staff. Even though the probability of this situation occurring remains relatively low, given the level of compensation for ANACIM staff at the national level, the departure of one or more staff members could impact the workload for those who remain. In such situations, we typically redeploy personnel to achieve a more balanced situation (which is the	ANACIM

Event	Category	Level	Likelihood	Impact	Mitigating Measures	Risk Owner
					current situation).	
Operational efficiency risk, causing low implementation and delays in procurement, installation and capacity building activities, resulting in failure of the project	Operational	High	Possible	Moderate	ANACIM and IsDB will establish a detailed workplan considering all relevant activities to ensure compliance with agreed timelines. In case there are any delays in specific activities, ANACIM and IsDB will closely coordinate to take preventive action to ensure that this does not affect any other activities. The Project Management Team will ensure that there is early planning of procurement, installation and capacity building is done and that monitoring is regularly conducted and strategies to accelerate project implementation are adopted.	IsDB, ANACIM
After the conclusion of the Investment phase, GBON data are not collected or shared or are shared of insufficient quality	Operational	Medium	Unlikely	Major	All stakeholders will be made aware of the importance of data availability in delivering warning systems, improving forecasts and climate information. The project will enhance the capacity of ANACIM Staff for data collection, quality control and sharing. In addition, ANACIM will ensure its work complies with the national and WMO data policies. In the event of a potential delay in data transmission, the following procedure will be implemented: - Automatic delay detection (by implementing a monitoring system that verifies data reception according to the scheduled times, message completeness, and format compliance (e.g., SYNOP, METAR, BUFR)) - Incident classification (minor, moderate, or critical) This classification will determine the escalation level and implement a cascading procedure to locate the fault: - Cascading procedure: 1- at the station level 2- at the central level 3- the internet service provider 5- regional center 6- WMO Then inform Management, produce an incident report and send it to the WMO. After resolution: identify the root cause; define corrective actions and update procedures Implement a lessons learned form.	ANACIM, KNMI
Destruction or theft of SOFF-financed equipment and infrastructure	Operational	Medium	Unlikely	Major	All ANACIM observation sites are fenced and guarded to minimize the risk of theft. During the investment phase, security will be stepped up to minimize the risk of theft and vandalism. The local administration will be involved	ANACIM

Event	Category	Level	Likelihood	Impact	Mitigating Measures	Risk Owner
					through awareness-raising activities, in particular to prevent vandalism and animal straying. Mitigation measures will be taken as part of site preparation. The GBON equipment budget will also cover additional equipment needed (such as shelters, protective covers and clothing, torches, etc.) to guard against climate-related hazards wherever possible.	
Countries cannot make optimal use of data, including accessing or using improved forecasts products from the Global Producing Centers throughout the hydromet value chain	Strategic	Medium	Unlikely	Moderate	Participation in capacity building activities supported by different programs sought by sub-regional centres allows ANACIM to have a sufficient number of employees to operate throughout the value chain of hydrometeorological services. The project will strengthen their capacity to make optimal use of the data collected as well as to use improved forecasts generated by global models. To mitigate the risk, it is proposed that the Investment Phase includes extensive and comprehensive training for ANACIM staff from the peer advisor and technical partners, including on observations, data management, processing, assimilation, aviation meteorology, etc. This will help to ensure that the country has enough capacity to make the optimal use of data, including accessing or using improved forecasts products from the Global Producing Centers throughout the hydromet value chain.	ANACIM
Political instability and regulatory risks which will impact the successful completion of the Investment Phase	Operational	Low	Unlikely	Minor	Complete all investment activities by 2029, the year of the presidential election. We will complete all investment projects by 2029, the year of the presidential election. Specifically, we will ensure that construction and equipment acquisitions are completed within the first two years. All activities requiring tenders must be executed promptly to avoid any potential regime change that could have repercussions. Training activities will also be conducted within the first few years.	ANACIM
Capacity gaps in technical skills after completion of the investment phase	Operational	Low	Rare	Minor	ANACIM, even if it's limited, has a minimum of resources to maintain its achievements, even if it will be difficult. In 2031, we will strive to make their recruitment a priority and budgeted in 2032 for their integration.	ANACIM
Natural disasters	Social and Environmental	Low	Rare	Minor	Everything that is moved must be replaced, and every effort will be made to minimize environmental impact during the infrastructure	ANACIM

Event	Category	Level	Likelihood	Impact	Mitigating Measures	Risk Owner
					installation. It should be noted that the project's environmental risk is low.	

Budget by UNSDG Categories: Over all

Budget Lines	Description	WMO	IE	Total
1. Staff and other personnel			$ 811,108.92	$ 811,108.92
2. Supplies, Commodities, Materials			$ 110,906.00	$ 110,906.00
3. Equipment, Vehicles, and Furniture, incl. Depreciation			$ 653,000.00	$ 653,000.00
4. Contractual services		$ 250,000.00	$ 427,316.67	$ 677,316.67
5. Travel			$ 30,000.00	$ 30,000.00
6. Transfers and Grants to Counterparts			$ -	$ -
7. General Operating and other Direct Costs			$ 70,000.00	$ 70,000.00
Project Costs Sub Total		**$ 250,00.00**	**$ 2,102,331.59**	**$ 2,352,331.59**
8. Indirect Support Costs		$ 17,500.00	$ 147,163.21	$ 164,663.21
Total		**$ 267,500.00**	**$ 2,244,494.80**	**$ 2,516,994.80**

Performance-based Tranches Breakdown

Tranche			Total
Tranche 1	IE (70%)	$ 1,574,646.36	$ 1 663 804.11
	WMO (33.33%)	$ 89,157.75	
Tranche 2	IE (30%)	$ 674,848.44	$ 764 006.19
	WMO (33.33%)	$ 89,157.75	
Tranche 3	IE (0%)		$ 89 184.5
	WMO (33.34%)	$ 89 184.5	
			$ 2 516 994.80

Results based budget

Outcome	Output	Agency	Budget (USD)
1. GBON institutional and human capacity developed		**Sub Total**	**$1,208,425.59**
1.1 **National consultation**s, including with CSOs and other relevant stakeholders conducted		Implementing Entity	$ 110,000.00
		WMO	$ -
1.2 **NMHS institutional capacity** required to operate the GBON network developed		Implementing Entity	$ 811.108.92
		WMO	$ 25,000
1.3 **NMHS human capacity** required to operate the GBON network developed		Implementing Entity	$ 212,316.67
		WMO	$ 50,000
2. GBON infrastructure in place		**Sub Total**	**$961,406.00**
2.1 **New land-based stations** and related equipment, ICT systems, data management systems and standard operating practices in place		Implementing Entity	$ 474,116.00
		WMO	$ 120,000
2.2 **Improved land-based stations** and related equipment, ICT systems, data management systems and standard operating practices in place		Implementing Entity	$ 312 290
		WMO	$ 55,000
2.3 **New upper air stations** and related equipment, ICT systems, data management systems and standard operating practices in place		Implementing Entity	$ -
		WMO	$ -

2.4 **Improved upper air stations** and related equipment, ICT systems, data management systems and standard operating practices in place	Implementing Entity	$ -
	WMO	$ -
3. Sustained compliance with GBON	**Sub Total**	**$182,500.00**
3.1 **GBON land-based stations' commissioning period complet**ed, country-specific standard cost for operations and maintenance established, and data sharing verified by WMO Technical Authority	Implementing Entity	$ 100,000.00
	WMO	$ 250 000 -
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	Implementing Entity	$ 82,500.00
	WMO	$ -
	Total	**$2,352,331.59**