UN Multi-Partner Trust Fund Office

General Information

Fund	MPTF_00281: The Systematic Observations Financing Facility
FMP Record	MPTF_00281_00042: SOFF Antigua and Barbuda Investment Phase
MPTFO Project Id	
Start Date	
End Date	

Applicants

Status	Contact Type	Name	e-mail	Position	Telephone
Active: 04-Mar-2025 9:10:00 AM	Project Manager	Montserrat Xilotl	montserrat.xilotl@undp.org		

Signatories

Signature Process	Role	Name of Organization	Name	User Email
Digital	Signatory	UNDP: UNDP (United Nations Development Programme (UNDP))	Ms Stephanie Ziebell	stephanie.ziebell@undp.org
Digital	Signatory	WMO: WMO (World Meteorological Organization)	Celeste Saulo	csaulo@wmo.int

Contacts

Contact Type	Name	e-mail	Position	Additional e-mail	Telephone
Project Manager	Elizabeth Soomer	elizabeth.charles-soomer@undp.org			

Description

The funding proposal for SOFF, looks to prioritize strategic investments to allow Antigua and Barbuda to ensure GBON compliance as indicated per the country's approved National Contribution, while recognizing that support needs to be provided to address critical ongoing capacity issues to allow for the ABMS to comply with global reporting requirements per GBON. Supporting ABMS in addressing these capacity issues is quick fix to allow for long term sustainability capacities for operation and maintenance, data quality and long term financing strategies.

As stated within the National Contribution Plan, the ABMS has no commercial services nor institutional funding capacities that support either the running costs of the service or the observation network, with most projects only investing in hardware that is not properly maintained. It is recommended that the existing links with the government are strengthened, and evidence is provided for an increase in recognition and sustainable funding. This can be achieved by broadening the skillset within the organisation, across both technical and stakeholder management skills. Hence supporting the ABMS in establishing a financial strategy through a cost benefit analysis of its service will provide an essential ground work for ongoing and long term GBON compliance and the sustainability of SOFF investments. Capacity building to ABMS through formal training to staff on data management and data quality and operations and maintenance should be considered as an easy fix with long term impacts.

In terms of equipment, the investments look to complement existing equipment and systems. The project has also been designed to complement work through other cooperation project investments including EW4All, that will support in creating capacities within the ABMS to enhance forecasting capacities and end-user climate information services as well as to address deep seated infrastructure issues to its offices and enhance regulatory frameworks to enhance the role of the ABMS in climate action.

Universal Markers

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

<table>
<tr><td>Optional Markers</td><td>WB Income Category</td><td colspan="3">• Upper Middle Income</td></tr>
<tr><td></td><td>UN LDC</td><td colspan="3">• No</td></tr>
<tr><td></td><td>Small Island Developing States (SIDS)</td><td colspan="3">• Yes</td></tr>
<tr><td>Fund Specific Markers</td><td>SOFF Phases</td><td colspan="3">SOFF Phases
• Investment Phase</td></tr>
<tr><td></td><td>EW4All</td><td colspan="3">Early Warnings for All initial focus countries
• Yes</td></tr>
<tr><td></td><td>Fragile and conflict-affected situation</td><td colspan="3">Fragile and conflict-affected situation
• No</td></tr>
<tr><td></td><td>Peer advisor</td><td colspan="3">Peer advisor
• Met Office [United Kingdom]</td></tr>
<tr><td>Geographical Scope</td><td>Geographical Scope</td><td>Name of the Region</td><td>Region(s)</td><td>Country</td></tr>
<tr><td></td><td>• Country</td><td></td><td>• Americas</td><td>• Antigua and Barbuda</td></tr>
<tr><td>Participating Organizations and their Implementing Partners</td><td>UN Participating Organizations</td><td colspan="2">Government/ Multilateral/ NGO/ Other</td><td>New Entities</td><td>Implementing Partners</td></tr>
<tr><td></td><td>• UNDP - UNDP (United Nations Development Programme (UNDP))
• WMO - WMO (World Meteorological Organization)</td><td colspan="2"></td><td></td><td></td></tr>
<tr><td>Programme and Project Cost</td><td>Participating Organization</td><td>Amount (in USD)</td><td colspan="3">Comments</td></tr>
<tr><td></td><td colspan="5">Budget Requested</td></tr>
<tr><td></td><td>UNDP</td><td>$1,106,915.00</td><td colspan="3">Includes USD 72,415 7% Agency Fee</td></tr>
<tr><td></td><td>WMO</td><td>$133,259.94</td><td colspan="3">Per conversations between UK Met and SOFF re Peer Advisory Fee above 7% initial threshold. The amount includes 7% WMO indirect cost.</td></tr>
<tr><td></td><td>Total Budget Requested</td><td>$1,240,174.94</td><td colspan="3"></td></tr>
<tr><td></td><td colspan="5">Tranches</td></tr>
<tr><td></td><td colspan="2">Tranche 1</td><td colspan="2">Tranche 2</td><td colspan="2">Tranche 3</td></tr>
<tr><td></td><td>UNDP (70%)</td><td>$774,840.50</td><td>UNDP (30%)</td><td>$332,074.50</td><td>UNDP (0%)</td><td>$0.00</td></tr>
<tr><td></td><td>WMO (33.33%)</td><td>$44,415.54</td><td>WMO (33.33%)</td><td>$44,415.54</td><td>WMO (33.34%)</td><td>$44,428.86</td></tr>
<tr><td></td><td>Total:</td><td>$819,256.04</td><td>Total:</td><td>$376,490.04</td><td>Total:</td><td>$44,428.86</td></tr>
<tr><td></td><td colspan="5">Other Sources (Parallel Funding)</td></tr>
<tr><td></td><td>GCF EW4All</td><td>$2,524,722.00</td><td colspan="3">Funds allocated to ABMS in support of EW4All</td></tr>
<tr><td></td><td>Total</td><td>$3,764,896.94</td><td colspan="3"></td></tr>
<tr><td>Thematic Keywords</td><td colspan="5"></td></tr>
<tr><td>Programme Duration</td><td>Anticipated Start Date</td><td colspan="4">14-Dec-2025</td></tr>
<tr><td></td><td>Duration (In months)</td><td colspan="4">36</td></tr>
<tr><td></td><td>Anticipated End Date</td><td colspan="4">14-Dec-2028</td></tr>
</table>

Narratives

Title	Text

Close the most significant data gaps	The National Contribution Plan for Antigua and Barbuda provides an in depth assessment of minimum required capacity needs for Antigua and Barbuda, through its Met Service (ABMS), to meet GBON standards. Most significant amongst these includes operational and maintenance capacity as well as equipment investments in the form of improving the only GBON surface observation station located at the V. C. Bird International Airport, Antigua. The current station, while operational and transmitting data globally, cannot be considered to be fully functional, safe or sustainable. Lack of finance dedicated to the ABMS has hampered the need for urgent replacement of the AWS at this site. The site infrastructure is over 20 years old and has significant structural issues, notably the wind mast collapsing over recent years – the mast has been re-welded back to its concrete base, but has rusted through again at the base making this an unsafe working environment. Further, the condition and lack of calibration of instruments plus the lack of subsequent data management means there is in fact low confidence in the sustainability and climate quality of the observations recorded from the GBON site. In this regard it is recommended that the ABMS improves/replaces the existing GBON surface observation site at VCBIA, ensuring that all 5 key GBON parameters should be installed in the single station enclosure. This investment should be coupled with enhanced data and metadata management for the GBON site, and a review of existing legacy networks, especially with respect to equipment stores and maintenance. The proposed surface investment will cover the majority of the landmass for Antigua and 50% of national EEZ.

Type of station	GBON Global Gap Analysis June 2023				GBON Natl Contribution Target	
	Target	Reporting	Gap		Improve	New
			Improve	New		
Surface	1	0	1	0	1	0
Upper Air	1	0	0	1	0	0
Marine	** when applicable					

A significant improvement to IT infrastructure is required at ABMS to fully realise the benefit of the implementation of GBON stations supported through SOFF, including provision of updated proprietary software for real time data display with the replacement of the physical observing enclosure equipment, related data ingestion and storage servers/hardware and ability to interact with/share data internationally via WIS 2.0. Transition from local hard drive to cloud storage is required coupled with that local server-based storage for data backups. that local server-based storage for data backups. Existing in-situ PC hardware and software must be replaced with new PCs, updated operating systems and relevant proprietary software. Currently, data collected by dataloggers at AWS sites are transmitted via reliable 4G mobile modem connections (or fixed radio link within the VCBIA site) but there is significant risk held around ageing single in-situ office PCs with old and unsupported software and operating systems (eg Windows XP and 7) where that data is then held, with no back-up routines in place.

In terms of short and long term data storage, data from the VCBIA station (dating back to 1960) is currently only stored on a single XP tower in the forecast room with no back up procedure – to mitigate this significant risk, the operational observing desk continue to complete a paper Daily Record, but no analysis is undertaken of these data records. All other networks have either no data storage after receipt or retain unmanaged csv files on, in some cases, obsolete hardware. The ABMS do not currently operate a managed climate archive of data.

Support needs to be provided to the ABMS in referring and being able to apply WMO NO.1131 specifications as a guide in developing a National Climate Data Management System (CDMS) and embedding this approach culturally within the organisation, both for the proposed GBON investment and across all networks. In this regard project investments through SOFF should support the ABMS to Acquire proprietary software and servers from GBON Implementation supplier as part of the observation site procurement to receive and visualise data in real time. Support and funding should also be provided to allow for the implementation of Surface CDMS or equivalent package, preferably with data stored in the cloud or with appropriate safeguards if locally, and adopt data management and quality management practices as outlined in WMO 1131.

	However the most significant needs and investments need to be centered around enhancing ABMS capacity to be able to fund continued operation and maintenance of its equipment and operation. It is currently functioning an overstretched capacity with limited national funding that is mostly focused on staff costs, with ABMS requiring international project related investment to support its monitoring capacity. This is of course unsustainable and is a key barrier to ensure continued GBON compliance. In this regard investment through the project should include support in the development of a socioeconomic benefit (SEB) analysis of weather and climate services in Antigua and Barbuda to allow the shaping of a long term financial strategy that will look to complement and leverage existing sources of project support to allow for financial sustainability of current SOFF investments. In addition, capacity and training needs to be provided to the ABMS staff in equipment calibration and in the operation and maintenance of the instruments.
Target easy fixes	The funding proposal for SOFF, looks to prioritize strategic investments to allow Antigua and Barbuda to ensure GBON compliance as indicated per the country's approved National Contribution, while recognizing that support needs to be provided to address critical ongoing capacity issues to allow for the ABMS to comply with global reporting requirements per GBON. Supporting ABMS in addressing these capacity issues is quick fix to allow for long term sustainability capacities for operation and maintenance, data quality and long term financing strategies. As stated within the National Contribution Plan, the ABMS has no commercial services nor institutional funding capacities that support either the running costs of the service or the observation network, with most projects only investing in hardware that is not properly maintained. It is recommended that the existing links with the government are strengthened, and evidence is provided for an increase in recognition and sustainable funding. This can be achieved by broadening the skillset within the organisation, across both technical and stakeholder management skills. Hence supporting the ABMS in establishing a financial strategy through a cost benefit analysis of its service will provide an essential ground work for ongoing and long term GBON compliance and the sustainability of SOFF investments. Capacity building to ABMS through formal training to staff on data management and data quality and operations and maintenance should be considered as an easy fix with long term impacts. In terms of equipment, the investments look to complement existing equipment and systems. The project has also been designed to complement work through other cooperation project investments including EW4All, that will support in creating capacities within the ABMS to enhance forecasting capacities and end user climate information services as well as to address deep seated infrastructure issues to its offices and enhance regulatory frameworks to enhance the role of the ABMS in climate action. Further, the current project proposal has not included the cost of an UA station in view of RAIV decision on regional GBON upper air network design. Quick fixes foreseen within the current SOFF proposal include the following: • Observation equipment: Physical infrastructure, enclosure, sensors, and communications equipment for one proposed Surface GBON station at the V. C. Bird International Airport, Antigua, plus spare equipment for repairs and resilience. • IT infrastructure: Upgraded data ingestion server, uninterruptable power supply, and additional data storage drives • Software: Implementation of Surface CDMS • Human capacity/Other: Establish all necessary functions to run the GBON in ABMS, including NMHS institutional capacity and human capacity through training and staff support, particularly around operation and maintenance capacities, including through support in establishing a financial strategy and the inclusion of an observation manager role.

Create leverage	Proposed investments through this proposal have looked to ensure a complimentary of approach to current and future international cooperation projects in support of enhancing ABMS capacities and national observation networks and ICT management much of which is already in operation via investments from donors including Japan, Italy, the NOAA, the CIMH and the 5Cs. The project will look to align itself to climate related investments as relevant at a national (FP 133 GCF) and regional level (CREWS Caribbean 2.0). This will be done through coordination with national stakeholders. Cooperation funds include a small grant of US$37,500 that was made available through the Caribbean Catastrophe Risk Insurance Facility (CCRIF) to contribute to the cost of spares and repairs of existing stations and towards improving the transmission and collection of data at ABMS including the development and improvement of IT infrastructure. While the grant has not yet been released by government the project has looked to ensure that no duplication exists between SOFF and CCRIF. In addition the SOFF proposal has been drafted to ensure complementarity with the recently approved EW4All Green funding proposal by the Gren Climate Fund (GCF) which will be implemented by UNDP in Antigua and Barbuda in coordination with the National Office for Disaster Services (NODS) to enhance national multi hazard early warning systems. The project is valued at USD 12.3 million of which USD 2.5 million will be provided to the ABMS to enhance its institutional and regulatory framework as well as in the delivery of a financial strategy for climate information services. Funding under EW4All for ABMS will be used to enhance its capacity to deliver forecasting information products for multi hazards, enhance its broadcast equipment and establish a common data platform to facilitate information sharing at a national level, Funds under EW4All will also look to support ABMS in enhancing its current premises. SOFF funds will complement these efforts by enhancing the capacities of ABMS to ensure data quality and to contribute to GBON for global observations while benefiting from the EW4ALL project management structure through cost sharing and oversight. SOFF funds will further support in the development of a Strategic and Operations Plan for ABMS that will be supported by the regulatory framework that will be foreseen under EW4ALL focused on EWS. The CBS will form part of the Strategic and Operations plan developed under SOFF but delivered and enhanced as part of a larger value proposition for CI services that will be developed through EWS. It is important to note that UNDP will support in the implementation of both SOFF and EW4All. The project will also benefit from a coordinated approach by the peer advisor that is providing advisory support to other English speaking Caribbean countries in the region. As mentioned above the project will look to work through a regional framework for capacity building and coordinated approach.
Maximize delivery capacity	**UNDP** UNDP has provide support to Antigua and Barbuda through its Multi Country Office for the East Caribbean as well as through a small project office located in St. Johns, Antigua and Barbuda. UNDP has taken a strong cooperation role for the country particularly in post disaster recovery. It currently holds a strong partnership with the Government of Antigua and Barbuda, that positions it with a strong comparative advantage for SOFF implementation. This has been achieved through the technical capacity support, which has helped decision-making as part of early warning system, including reinforcing national efforts for a more integrated EWS and disaster risk reduction at a regional, national and community level. UNDP has also been supporting Antigua and Barbuda in the enhancement of climate policies including NDCs for both adaptation and mitigation as well as through GEF's Small Grants Program and will be leading in the implementation of a climate change mitigation portfolio for USD 8million as well as an climate adaptation portfolio of USD 12.3 million that accounts for the implementation of the recently approved EW4All GCF Project in Antigua and Barbuda. Through its ENGENDER program, UNDP has also been supporting the government in implementing initiatives support gender mainstreaming and gender assessments for gender responsive polices. **MET OFFICE** The Met Office as Peer Advisor (PA) has experience in managing and sustaining its own nation's surface and upper air networks in line with GBON requirements. The PA collaborates with WMO in developing observations network and data management policies, guidelines, and procedures. The PA also works with NMHSs in several countries supporting development activities and has a long and strong relationship with Antigua and Barbuda Meteorological Service (ABMS). In respect to SOFF Antigua and Barbuda, the PA has expert resources prepared to collaborate with ABMS through the investment phase.

Sub-regional gains	The regional organisations of relevance to GBON include the Caribbean Meteorological Organisation (CMO) and the Caribbean Institute for Meteorology and Hydrology (CIMH). CMO is a specialized agency of the Caribbean Community that coordinates the joint scientific and technical activities in weather, climate and water – related sciences in sixteen (16) English-speaking Caribbean countries. The CIMH seeks to improve the meteorological and hydrological services and to assist in promoting the awareness of the benefits of these services for the economic well-being of the CMO countries. This is achieved through training, research and investigations, and the provision of specialised services (eg calibration) and advice. ABMS would look to engage with these regional organizations as a means for training on areas such as operation and maintenance and calibration equipment as well as through South South exchanges that would benefit from wider regional approach. It is important to note that ABMS provides regional weather forecast services from this national budget for the adjacent nation of St Kitts and Nevis and the British Caribbean Territories of Montserrat, Anguilla and the British Virgin Islands under a Letter of Agreement between the BOTs and the Antigua and Barbuda government. Hence investment in enhancing ABMS capacities for observations provides tangible sub regional benefits in area that is particularly vulnerable to climate hazards and where investment is lacking. Further, the continued development of the SurfaceCDMS / OpenCDMS software, which will be freely available for use by national met services, and implementation of WIS 2.0 as foreseen in this current funding proposal has the potential to benefit countries in the region. A WIS2Box pilot scheme has been undertaken in the Caribbean with participation and collaboration from several countries, including Antigua and Barbuda, coordinated by WMO. ABMS would be able to continue to engage and collaborate with regional met services so that the benefit of the development of CDMS software and implementation of WIS 2.0 are realized as widely as possible.

SOFF Beneficiary Country Capacity Assessment	The ABMS provides hydromet services to Antigua and Barbuda, through the delivery of forecast products developed through automated information provided from 23 stations. It further ABMS provides regional weather forecast services from its limited national budget to St Kitts and Nevis and the British Caribbean Territories of Montserrat, Anguilla and the British Virgin Islands. ABMS is exclusively funded through a limited budget allocation from the central government via the Ministry of Tourism, Investment, Civil Aviation and Transportation as well as through its participation in international cooperation projects. The ABMS does not provide commercial services, nor does it receive cost recovery resources from the support it provides to other countries. As such, the ABMS lacks capacity in being able to fully invest in the OM of its observation network and in improving in its own technical capacity as the majority of the public funds it does receives is allocated to current staffing costs. In terms of equipment, it is important to note that ABMS holds no formal store of spares, instead relying on moving instrumentation from site to site or ad hoc purchases of sensors when this is not possible. There is often a significant lead time to both securing the funding and delivery timescales for replacement sensors, upwards of six months. This has resulted in the ABMS having instrumentation is of varying quality and with separate and noninteroperable visualisations and operating systems; calibration is not undertaken, with a preference for instrument replacement due to the high cost of transporting equipment for calibration. Current premises within ABMS are not hurricane proof and insufficient to house its equipment and needs. In terms of technical capacity, there are broad skills gaps in areas such as general project management and delivery, stakeholder management, financial management and strategic planning. There is also a need to ensure the technical skills base, including those responsible for network maintenance have a plan, opportunity, and funding to maintain the essential skillset in maintenance and calibration of observing equipment. Similarly, the IT and data management skillset needs to be fully supported to strengthen the capability of the NMHS to administer and maintain the network. Currently the ABMS is running on a limited staff of 55 people, each with variable technical capacities and expertise. This means that often time, one person is fulfilling multiple roles and lack of staffing means that there is little opportunity for technicians to receive long term training. The ABMS currently does note employ a network nor a data management specialist. Lack of technical and financial capacity is particularly critical in the face of climate change. Antigua and Barbuda is in the frontline of climate exposure not only due to its condition as a SID but also because it faces a range of intensifying climate hazards including hurricanes, extreme rainfall droughts and rising sea levels. The frequency and intensity of hurricanes have shown a troubling trend with the number of more intense hurricanes, particularly Categories 4 and 5, having increased. This pattern is expected to persist, with future projections suggesting a 50% increase in the frequency of high-intensity hurricanes. Additionally, these storms are likely to become more powerful, with higher wind speeds and greater precipitation rates, posing an even greater threat to the islands for which the ABMS must have the capacity to be able to respond. In this regard, support to ABMS to allow for it to deliver on GBON requirements must consider not only the investment of the refurbishment of its main land station while enhancing ICT and Data capacity needs, but also look to invest in enhancing the ABMS own capacity to be able to maintain this equipment and ensure that human capacity is available to allow for proper data quality, has the SOPs required for OM of its network, but also is able to operate in a manner that ensures the sustainability of SOFF investments. This requires support in enhancing its own Strategic and Operations Plan that takes into account current capacity assessment as well as opportunities for long term finance.
Investment Phase Alignment with the GBON National Contribution Plan	The project is fully aligned with the GBON National Contribution Plan and its recommendations. The current proposal does not include the costing of the UA station in lieu of exploring a regional solution and/or a phased approach. Project activities and costings have been discussed and coordinated with the peer advisor to ensure that minimum requirements per recommendations have been reflected.

Execution model and implementation arrangements	UNDP through its Multi Country Office (MCO) in Barbados will support the ABMS the implementation of the project under a Direct ImplementationModality (DIM). The project will be supported through a Project Management Unit that will be in charge of every day implementation support including a Project Manager and Associate, it will also benefit from the PMU that has been costed within EW4All Project that includes a monitoring, procurement, a gender and an ME expert. UNDP will follow its own policies including as they relate to reporting, evaluation and project closure. Under the DIM framework, both UNDP and ABMS will work together in the execution of the project activities, however UNDP will be responsible for overall coordination of project implementation including the coordination of annual and quarterly planning of activities and their approval by theproject steering committee (whic h will be established at the beginning of the project implementation). UNDP will manage SOFF funds in strict adherence to UNDP's Rules and Regulations. UNDP will be accountable to SOFF in the management of SOFF funds. UNDP will receive funds from MPTF per UNDP Rules and Regulations (https://popp.undp.org/document/operating-guidelines-mptf-projects-implemented-undp-country-offices) ensuring mechanisms for reporting and tracking of financial resources. UNDP will prepare a Project Document (PRODOC) that outlines the work schedule during the implementation phase and the budget allocated for each activity, as approved by SOFF. Additionally, it will define the monitoring and evaluation mechanisms to be followed, as well as implementation arrangements. The roles of participating entities, including beneficiaries and national institutions related to the project's objectives will be specified. The PRODOC will also address project risks, mitigation measures, and environmental safeguards.A Project Board will be created to provide project oversight and guidance. The Project Board will be responsible for approving annual workplans that will be developed in tandem between UNDP and ABMS. **Governance Structure** A Project Board, consisting of national stakeholders, the Beneficiary Country (ABMS), and the Implementation Partner (UNDP), will provide strategic oversight, monitor progress, and ensure alignment with national priorities. The Project Board will be chaired by a senior UNDP Country Office management, together with a senior official from the Ministry of Tourism, Investment, Civil Aviation and Transportation, to whom the ABMS forms part. **Implementation Arrangements** While the project will managed as a DIM, UNDP may engage the support of Responsible Parties for the implementation of specific actions. To implement any partnership, UNDP ensures that clear and robust fiduciary arrangements are in place before the implementation starts. These include financial management and procurement aspects which enable transparency, accountability, and effectiveness in the utilisation of funds mobilised. The project will be co-managed by key stakeholders: • ABMS: Responsible for overall project execution, installation, maintenance, and coordination with government and private sector partners. ABMS will support in the framing of terms of reference for the procurement of technical equipment and will form an active part of selection committees. • Met Office (Peer Advisor) : Provides technical guidance, capacity development and supports GBON compliance. TORs are included for reference. • UNDP (Implementation Partner): Will ensure financial management and procurement per its own rules and policies,, while ensuring compliance and facilitating coordination with WMO. Collaborating national and regional institutions, and private sector partners will provide technical expertise and support as may be required UNDP through its MCO in Barbados will also perform the financial oversight, handling the project budget, overseeing fund allocations . All management and financial undertakings will be stringently aligned with the standards set by the UNDP, as outlined in the programme and operational policies and procedures (POPP). ABMS will oversee the operation, maintenance, and calibration of land-based, as well as handle data collection, analysis, and reporting to ensure compliance with GBON standards. Together the UNDP and ABMS will ensure that all planned activities are executed as scheduled to achieve the project's objectives. The specific roles and responsibilities in project execution will include supporting stakeholder engagement, preparing and submitting annual and quarterly work plan. **Monitoring and Reporting**

	Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. The UNDP Country Office is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements. Additional reporting per SOFF reporting requirements including narrative progress reports and evaluation plans will be undertaken by the Project Management Team . Additionally, the project will develop annual work plans that will be updated, identifying challenges and mitigation measures for achieving the established goals as set forth in this proposal. UNDP will maintain regular contact with ABMS and relevant stakeholders to facilitate systematic exchanges and monitor project implementation. **Reporting and Auditing:** Regular financial reports will track progress, while independent audits will ensure transparency and compliance with standards as per UNDP Rules and Regulations.
Private sector involvement	ABMS currently does not provide commercial services. However, there is an opportunity to explore potential agreements with key ectors in the provision of climate related services. In this regard the project has costed consultations with key private sector actors including utilities (water rand energy services), tourism operators, aviation (Airport Authority) and health providers. Stakeholder consultation will look to identify opportunities for efficiencies in observations networks while also look for opportunities to provide forecasting services. Results from the consultations will guide the Strategic and Operation Plan that will be developed for ABMS and will look to focus on the sustainability of ABMS operation, particularly as it relates to its long term capacity to deliver its international obligations per GBON in a sustained manner.
Civil society participation	The importance of engaging with Civil Sector Organisations is also recognised in terms of raising awareness of the ABMS, its observations and services and how they play an important role in the value chain that provides high-impact weather information, especially to women and girls and marginalized communities within Antigua & Barbuda. The proposed investment in GBON sites across Antigua will require cooperation with CSOs and an event will be held to engage with this sector to mitigate against the risk of theft and vandalism. The project has included within its workplan and budget consultations with civil society so as to reflect their participation as end used within the strategic and operations plan that will be developed and within the long term financial analysis. The project has allowed for budgeting for continuous consultation process with CSOs, including women's organizations to ensure that the Strategic and Operational plan of the ABMS is gender sensitive and responds to community based needs and gaps. Training both for all staff and management will also include a social equity and inclusion training to better facilitate engagement within the ABMS with vulnerable populations at all parts of its operation. A gender analysis has also been included as part of the formulation process to be considered within the ABMS Strategic and Operations Plan.

Fiduciary systems	UNDP will manage SOFF funds in strict adherence to UNDP's Rules and Regulations and will be accountable to SOFF in the management of SOFF funds. UNDP will receive funds from MPTF per UNDP Rules and Regulations (https://popp.undp.org/document/operating-guidelines-mptf-projects- implemented-undp-country-offices) ensuring mechanisms for reporting and tracking of financial resources. UNDP will prepare a Project Document (PRODOC) that outlines the work schedule during the implementation phase and the budget allocated for each activity, as approved by SOFF. Additionally, it will define the monitoring and evaluation mechanisms to be followed, as well as implementation arrangements. A Project Board will be created to provide project oversight and guidance. The Project Board will be responsible for approving annual workplans that will be developed in tandem between UNDP andthe ABMS. While the project will managed as a DIM, UNDP may engage the support of Responsible Parties for the implementation of specific actions. To implement any partnership, UNDP ensures that clear and robust fiduciary arrangements are in place before the implementation starts. These include financial management and procurement aspects which enable transparency, accountability, and effectiveness in the utilisation of funds mobilised. **Reporting and Auditing:** Regular financial reports will track progress, while independent audits will ensure transparency and compliance with standards as per UNDP Rules and Regulations. **Procurement:** UNDP and ABMS will work closely to deliver all planned procurement. Using its own policies and guidelines, UNDP will be responsible ofthe following procurement activities, including purchase of equipment and services. UNDP will work with ABMS and Met Office to prepare specifications and/or Terms of Reference for procurement of services, equipment, materials and goods and support for maintenance of land-based stations as well as the technical trainings of ABMS Staff where appropriate. Once the specifications/ToRs are ready, UNDP Procurement guidelines will be followed foracquisition of goods and services. The evaluation of offers will be done by an independent UNDP procurement committee and the award will be given to the most competitive offeror.

Social and environmental safeguards	UNDP follows norms that require an analysis of environmental and social safeguards, which must be conducted and approved before project implementation begins. Social and environmental sustainability will be reinforced through the application of UNDP's Social and Environmental Standards and corresponding procedures, which can be accessed at UNDP SES Standards at http://www.PNUD.org/ses. UNDP's social and environmental management system ensures the SES are applied through the programming cycle and includes the following elements: 1. Quality assurance and risk management; 2. Screening, assessment and management of social and environmental risks and impacts; 3. Stakeholder engagement and response mechanisms; 4. Access to information; and 5. Monitoring, reporting and compliance. A Social and Environmental Screening Procedure will be applied during project document formulation to identify possible ESS risks and they management measures. The project will install a Grievance Redress Mechanism as appropriate for the project identified risks and in accordance with UNDP's Social and Environmental Standards. *The **Investment Phase social and environmental safeguards** ensure that all project activities align with sustainable and inclusive practices. These safeguards include measures to mitigate environmental impacts, promote social equity, and integrate gender considerations throughout the project lifecycle.* 1. **Environmental Safeguards:** Sustainable Installations: AWS will comply with national regulations and international best practices, minimizing environmental disruption. Renewable energy sources and proper waste management will be prioritized. Climate Resilience: The project will strengthen early warning systems and contribute to climate adaptation strategies, enhancing national resilience. 1. **Social Safeguards:** Community Engagement: Local communities will be involved in infrastructure planning, ensuring benefits reach vulnerable populations. Consultations will prevent displacement or land-use conflicts. 1. **Gender Policy:** Gender Equality: A gender-sensitive approach will ensure equal participation of women in training, decision-making, and technical roles. The project will promote women's leadership and employment in meteorology. 1. **Monitoring and Compliance:** Safeguard Monitoring: A framework will track environmental and social safeguards, with gender-disaggregated data and a grievance mechanism for affected communities. These measures ensure the project aligns with sustainable development, social inclusion, and gender equality. UNDP has a well-defined gender policy that isintegrated across all project results. Efforts to ensure gender equality in the promotion of meteorological and climatic services will continue and will beenhanced through project implementation by providing an opportunity for targeted technical support to women technicians.
Dispute resolution mechanism	The conflict resolution policy will be that established per UNDP Rules and Regulations per MPTF (https://popp.undp.org/document/operating-guidelines-mptf-projects-implemented-undp-country-offices). Both parties will make every effort to resolve any disputes, controversies, or claims through conciliation and in accordance with established norms for such cases. UNDP has mechanisms in place for consultations and has created spaces for reconciling differences with project stakeholders. As the implementing agency, UNDP will adhere to the policies, procedures, and practices of the United Nations Security Management System and the Accountability Mechanism, which can be accessed at http://www.pnud.org/secu-srm UNDP will ensure that relevant organizations and stakeholders are well-informed about the existence of the Accountability Mechanism and have access to it.

Additional relevant policies and procedures	UNDP has a robust Programme and Operational Policies and Procedures (POPP) framework. This framework provides comprehensive guidance for project and programme implementation, ensuring effectiveness, transparency, and accountability in all operations.

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 c

Contribution to SDGs

Participating Organization	% TARGET_13.1	% TARGET_13.2	% TARGET_13.3	% TARGET_13.b	% TARGET_5.5	% Total
UNDP	20	20	20	25	15	100
WMO	20	25	20	20	15	100
Total contribution by target	**40**	**45**	**40**	**45**	**30**	
Project contribution to SDG by target	**20**	**22.5**	**20**	**22.5**	**15**	**100**

Project Results

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

Outcome	Output	Description			
	Activities				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**
	1.1.1 Coordination meetings with national stakeholders (institutional)	Discussion with national ministries and Barbuda Council in the shaping of an AMBS Strategic Plan, including inception workshops	UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	ABMS
	1.1.2 Consultations with CSOs including women's organizations	Discussion with CSOs (women's organization, inception workshop)	UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	ABMS
	1.1.3 Consultation with private sector actors	Discussion with the airport authority, energy and utility companies in the shaping of potential partnerships (service agreements) in support of shaping ABMS Strategic and Operational Plan, inception workshop	UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	ABMS
	1.2 NMHS institutional capacity developed	NMHS institutional capacity required to operate the GBON network developed.			

Outcome	Output	Description			
	Activities				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**
	1.2.1 Develop a revised ABMS Strategic and Operational Plan	Strategic and Operational Plan will focus on better organizing ABMS functions in a manner that prizes strategic planning based on commitments and funding, will include the development of a business/financial plant that will be incorporated as part of the strategic analysis. The operational plan will also ensure that OM and operations of existing equipment is managed in a way that prizes efficiency, quality and is cognizant of existing capacities while taking into account	UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	ABMS
	1.2.2 Develop a benefit analysis of ABMS and WCIS in Antigua and Barbuda	The benefit analysis will allow ABMS to develop a business model that enables it to ensure sufficient funding to ensure GBON investments sustainability	UNDP - UNDP (United Nations Development Programme (UNDP))		ABMS
	1.2.3 Develop a gender assessment to be integrated within the Strategic and Operations Plan	To be integrated within the Strategic and Operations Plan	UNDP - UNDP (United Nations Development Programme (UNDP))		ABMS
	1.3 NMHS human capacity developed	NMHS human capacity required to operate the GBON network developed.			

<table>
<tr><th>Outcome</th><th>Output</th><th colspan="4">Description</th></tr>
<tr><td rowspan="4"></td><td colspan="5">Activities</td></tr>
<tr><td>Title</td><td>Description</td><td>Lead Participating Organization</td><td>Participating Organization</td><td>Other Organizations</td></tr>
<tr><td>1.3.1 Carry out a Training Needs and Staff Capacity Assessment and, on the basis of the Assessment, devise a training plan for senior managers, technical managers, and other staff.</td><td>Staff capacity assessment will gauge the existing staff capacity to deliver on its current mandate, particularly as it relates to GBON and international commitments in terms of reporting to be able to deliver on the Strategic and Operations Plan. A training needs assessment will complement this analysis by identifying skills that need to be better developed and formalize a continuous training path.</td><td>UNDP - UNDP (United Nations Development Programme (UNDP))</td><td></td><td>ABMS</td></tr>
<tr><td>1.3.2 Deliver capacity development activities for technical staff, including formal training through scholarships</td><td>Training will include
-Basic maintenance
-Advanced maintenance
-It network / database management and basic maintenance
Advanced IT network training
SurfaceCDMS / WIS2</td><td>UNDP - UNDP (United Nations Development Programme (UNDP))</td><td>• WMO - WMO (World Meteorological Organization)</td><td>ABMS</td></tr>
<tr><td>1.3.3 Enhanced Staff Capacity for the ABMS through the hiring and recruitment of support staff for the ABMS</td><td>Recruitment and hiring of ABMS Support Staff (i.e. Manager)</td><td>UNDP - UNDP (United Nations Development Programme (UNDP))</td><td>• WMO - WMO (World Meteorological Organization)</td><td>ABMS</td></tr>
<tr><td>2. GBON infrastructure in place</td><td></td><td colspan="4"></td></tr>
<tr><td></td><td>2.2 Improved land-based stations in place.</td><td colspan="4">Improved land-based stations and related equipment, ICT systems, data
management systems and standard operating practices in place.</td></tr>
</table>

Outcome	Output	Description			
	Activities				
	Title	**Description**	**Lead Participating Organization**	**Participating Organization**	**Other Organizations**
	2.2.1 Install a refurbished surface land station	Replace and refurbish the existing VCBIA station GBON observation capability with instruments measuring the 5 key relevant GBON parameters and supporting infrastructure, with focus on producing sustainable, high-quality observations in line with the GBON National Gap Analysis.	UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	ABMS

Outcome	Output	Description			
	2.2.2 Design of the ICT infrastructure and services to align to GBON standards	Upgraded IT infrastructure + installation ABMS technical team will configure the proposed/optimum Surface ICT design in concert with the Implementing Entity to bring data from the VCBIA station into the existing manual data entry interface for dissemination to EDIS/WIS 2.0. Back-up contingency arrangements should be considered for SOFF investment which would require direct automated message submission to WIS. Existing in-situ PC hardware and software must be replaced with new PCs, updated operating systems and relevant proprietary software. If ABMS data systems cannot be migrated to the cloud and sustainably funded, then routine back up procedures must be implemented to safeguard data on local hardware and industry standard security protocols implemented where required. Peer Advisor will work with ABMS to develop Standard Operating Procedures to support implementation and operation of ABMS IT systems relevant to the operation and data sharing of the GBON observation station.	UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	ABMS

Outcome	Output	Description			
	2.2.3 Design the data management system	Contractor for commissioning of SurfaceCDMS + WIS2.0 to enable international data sharing and archiving/QC. This investment should be coupled with enhanced data and metadata management for the GBON site, and review of existing legacy networks, especially with respect to equipment stores and maintenance. Metadata recording and archiving should be implemented to provide quality assurance of observations in line with GBON standards.	UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	ABMS
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

Title	Description	Lead Participating Organization	Participating Organization	Other Organizations
3.1.1 OM of land based station and data and ICT investment	Spare equipment and parts, OM implementation for 2 years, logistics and fuel costs, human capacity support, support for the implementation of an OM Strategy to transition into results phased	UNDP - UNDP (United Nations Development Programme (UNDP))	• WMO - WMO (World Meteorological Organization)	ABMS

Signature Indicators

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

Imported Fund Outcome / Output Indicators

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	Lin Ou / C
Number of land-based stations improved		Number of stations as defined in the National Contributio n Plan.	Progress updates/An nual or quarterly reports	Investment	At closure	Country	Number	0	2025	1	2028	**Ou** **:** 2 GE inf tur pla **Ou** 2.2 Im lar ba sta in
GBON land-based stations' commissi oned		Number of stations as defined in the National Contributio n Plan.	Progress updates/An nual or quarterly reports	Policy	At closure	Country	Number	0	2025	1	2028	**Ou** **:** 3 Su co ce GE **Ou** 3.1 GE lar ba sta co on pe co d.

Project Indicators

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	L C /
1.1.1 Number of Consultat ion s held with national ministries		2 meetings per year with national institutions	Meeting minutes and agenda	Other	At closure	Country	Number	0	2025	6	2028	**C** **:** G ir n h c d d **C** 1 N C ic c d
	% of female participatio n	At least 50% of all workshop participants must be women	Participant list	Beneficiaries	At closure	Country	Percentage	0	2025	50%	2028	

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	L C /
1.2.1 Number of Strategic and Operations Plan developed for the ABMS ensuring gender sensitivity and financial sustainability		1 Strategic Plan will be developed that includes gender sensitive analysis and financial sustainability strategy 1 Operations plan will be developed that incorporates financial sustainability perspective	1 Strategic Plan Completed 1 Operational Plan Completed	Policy	At closure	Country	Number	0	2025	2	2028	**C :** G in n h c d d **C** 1 N in n c d d
	No components available.											
1.3.1 Number of Staff Capacity Assessment and Training Plan developed		1 Staff Capacity Assessment 1 Training Needs Assessment and Training Plan developed	Completed document	Policy	At closure	Country	Number	0	2025	2	2028	**C :** G in n h c d d **C** 1 N h c d d
	No components available.											
1.3.2 Number of ABMS personnel trained		55 people within ABMS (40% are women per current staffing)	Certificates of completion, training attendance records	Capacity	At closure	Country	Number	0	2025	55	2028	**C :** G in n h c d d **C** 1 N h c d d

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	L C /
	% of female participatio n	40% of ABMS staff receiving training (currently women make up 40% of ABMS total staff)	Certificates of completion, training attendance records	Capacity	At closure	Country	Percentage	0	2025	40	2028	
1.1.2 Number of Consultat ion s held with CSOs		Including indigenous populations and women's CSOs. 1 per year	Meeting minutes and agenda	Capacity	At closure	Country	Number	0	2025	3	2029	**C** **:** G in n h c d d **C** 1 N C ic c d
	% of female participatio n	50% participants are women	Participant registry	Capacity	At closure	Country	Percentage	0	2025	50%	2029	
1.1.3 Number of consultat ions/disc ussion with private sector stakehol ders		One at inception and 1 at close	Meeting minutes and agenda	Investment	At closure	Country	Number	0	2025	2	2029	**C** **:** G in n h c d d **C** 1 N C ic c d
	% of female participatio n	At least 50% of participants will be women	Participant registry	Capacity	At closure	Country	Number	0	2025	50%	2028	

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	L C /
1.2.2 A benefit analysis of ABMS is developed		Benefit Analysis	Completed document	Policy	At closure	Country	Number	0	2025	1	2028	**C :** G in n h c d d **C** 1 N in n c d d
	No components available.											
1.2.3 Number of gender sensitivity analysis developed		Gender Analysis	Completed Document	Policy	At closure	Country	Number	0	2025	1	2028	**C :** G in n h c d d **C** 1 N in n c d d
	No components available.											
1.3.3 ABMS Staff Capacity enhanced through the hiring of an ABMS Manager		People hired	Contracts	Capacity	At closure	Country	Number	0	2025	1	2028	**C :** G in n h c d d **C** 1 N h c d d
	No components available.											

Risks

Event	Category	Level	Likelihood	Impact	Mitigating Measures	Risk Owner

Station operations & security included ensuring constant power supply communications.	• Operational	High	Possible	Major	Adequate funding, skills and planning to manage the network. ABMS and project/permanent resource will need to engage with local providers to ensure delivery	ABMS
Operational hardware failure does not allow to provide full GBON compliant stations to GTS/WIS2	• Operational	High	Likely	Major	Adequate funding, skills and planning to manage the network. Resilience and redundancy measures to be included in network design and operational plans/ SOPs	ABMS
Insufficiently trained staff leads into an inability to maintain the observations network	• Organizational • Operational	High	Possible	Major	Collaborate with other stakeholders to provide support and maintenance to the network where necessary. Deliver on SOFF training plans both for technical skills and leadership and management. Ensure sustainability measures are included and considered within the Operations Plan	ABMS
Potential lack of alignment of A&B government priorities may lead to counter-demands on ABMS reducing capacity to deliver GBON compliance	• Political	Medium	Likely	Moderate	Build relationships and understanding of the importance of weather and climate services across the A&B government, in particular those produced by ABMS, through continued consultations and communication regarding the value add of ABMS. The Strategic Plan developed through SOFF will look to include an operational model that takes into account long term sustainability.	ABMS
Risk to project funding and delivery if insufficient separation of project funds from normal operational funds via A&B government	• Financial	Medium	Unlikely	Major	Project will be implemented by UNDP through a DIM modality. Project will follow UNDP's Financial Rules and Regulations, thus ensuring that project funds deliver on expected results	UNDP
Natural disaster impact on ABMS or GBON observation sites, for example damage to ABMS infrastructure may damage electrical or communications equipment or infrastructure resulting in project delays,	• Social and Environmental	High	Very Likely	Moderate	The project will look to ensure that all project investments are installed per international best standards and provider recommendations. Equipment will look to invest in extended warranties. EW4All funds will also work with ABMS to support the enhancement of its own premises.	ABMS
Non-compliance with fiduciary and procurement standards in some SOFF activities	• Organizational	Medium	Unlikely	Moderate	The project will be managed by UNDP under NIM modality, ensuring compliance with relevant standards. A Project Board will be developed for the project to better support oversight. UNDP norms will be in place.	UNDP
SOFF-funded investments cause environmental or social impacts	• Social and Environmental	Medium	Unlikely	Moderate	Project impacts are mainly in capacity building. Update and refurbishment of existing station is located at the airport in an area that already houses the station and national regulations for construction will be followed. The project has embedded consultation processes to ensure that any upstream discussions (operations plan) incorporate the views of stakeholders and ensure gender sensitivity as well as proper sharing of any benefits related to SOFF investment.	

NMHS staff depart after being trained	• Organizational	High	Possible	Moderate	The project through its first output will look to enhance organizational capacities that will be embedded through a long term strategy. The project has also looked to ensure capacity building at all levels within the organization to ensure that the pool of skilled technicians is wide within the organization. All trainings will be systematized to allow for replication	ABMS
Slow implementation and delays in procurement, installation and capacity building activities	• Operational	High	Possible	Major	The project will develop a procurement plan and will work actively with the peer advisor to support in the shaping of TORs. Existing LTAs when appropriate will be leveraged. The project will have the support of the procurement officer from the EW4All project.	UNDP
After the conclusion of the Investment phase, GBON data are not collected or shared or are shared of insufficient quality	• Operational	Medium	Unlikely	Major	The project has been developed to address underlying gaps and barrier to GBON reporting while ensuring that sustainability has been embedded.	ABMS
Countries cannot make optimal use of data, including accessing or using improved forecasts products from the Global Producing Centers throughout the hydromet value chain	• Organizational	High	Possible	Major	The project will be developed in tandem with the EW4All project that will also look to enhance capacity of the ABMS in developing CIEWS products including through improved forecasting. This will reduce the potential likelihood of the risk	ABMS
Destruction or theft of SOFF-financed equipment and infrastructure	• Operational	Low	Unlikely	Moderate	The station that will be upgraded is located at the Airport where sufficient security is available. Data and network investments will be developed at the ABMS offices.	ABMS

Budget by UNSDG Categories: Over all

Budget Lines	Description	UNDP (7%) *	WMO (7%) *	Total
1. Staff and other personnel		$330,000.00	$0.00	$330,000.00
2. Supplies, Commodities, Materials		$81,000.00	$0.00	$81,000.00
3. Equipment, Vehicles, and Furniture, incl. Depreciation		$105,000.00	$0.00	$105,000.00
4. Contractual services		$412,000.00	$124,542.00	$536,542.00
5. Travel		$54,000.00	$0.00	$54,000.00
6. Transfers and Grants to Counterparts		$0.00	$0.00	$0.00
7. General Operating and other Direct Costs	Workshops	$52,500.00	$0.00	$52,500.00
Project Costs Sub Total		**$1,034,500.00**	**$124,542.00**	**$1,159,042.00**
8. Indirect Support Costs		$72,415.00	$8,717.94	$81,132.94
Total		**$1,106,915.00**	**$133,259.94**	**$1,240,174.94**

Performance-based Tranches Breakdown

Tranche			Total
Tranche 1	UNDP (70%)	$774,840.50	$819,256.04
	WMO (33.33%)	$44,415.54	

Tranche			Total
Tranche 2	UNDP (30%)	$332,074.50	
	WMO (33.33%)	$44,415.54	$376,490.04
Tranche 3	UNDP (0%)	$0.00	
	WMO (33.34%)	$44,428.86	$44,428.86
			$1,240,174.94

Results based budget

Outcome *	Output *	Agency *	Budget (USD) *
1. GBON institutional and human capacity developed		**Sub Total**	**$792,759.94**
	1.1 National Consultations conducted	UNDP (7%)	$34,000.00
	1.2 NMHS institutional capacity developed	UNDP (7%)	$100,500.00
	1.3 NMHS human capacity developed	UNDP (7%)	$525,000.00
		WMO (7%)	$133,259.94
2. GBON infrastructure in place		**Sub Total**	**$355,000.00**
	2.2 Improved land-based stations in place.	UNDP (7%)	$355,000.00
3. Sustained compliance with GBON		**Sub Total**	**$20,000.00**
	3.1 GBON land-based stations commissioning period completed.	UNDP (7%)	$20,000.00
Total			**$1,167,759.94**

Programme Outcome Costs

Outcome	Output	Activity	Implementing Agent	Time Frame		
				2025	2026	2027
				1	1	1
1. GBON institutional and human capacity developed						
	1.1 National Consultations conducted					
		1.1.1 Coordination meetings with national stakeholders (institutional)				
			UNDP	☑	☑	☑
			WMO	☐	☑	☐
		1.1.2 Consultations with CSOs including women's organizations				
			UNDP	☑	☑	☑
			WMO	☑	☐	☐
		1.1.3 Consultation with private sector actors				
			UNDP	☑	☐	☐
			WMO	☑	☐	☐
	1.2 NMHS institutional capacity developed					
		1.2.1 Develop a revised ABMS Strategic and Operational Plan				
			UNDP	☐	☑	☑
			WMO	☐	☑	☑
		1.2.2 Develop a benefit analysis of ABMS and WCIS in Antigua and Barbuda				
			UNDP	☐	☑	☑
		1.2.3 Develop a gender assessment to be integrated within the Strategic and Operations Plan				
			UNDP	☐	☑	☐
	1.3 NMHS human capacity developed					

Outcome	Output	Activity	Implementing Agent	Time Frame		
				2025	2026	2027
				1	1	1
		1.3.1 Carry out a Training Needs and Staff Capacity Assessment and, on the basis of the Assessment, devise a training plan for senior managers, technical managers, and other staff.				
			UNDP	☑	☐	☐
		1.3.2 Deliver capacity development activities for technical staff, including formal training through scholarships				
			UNDP	☐	☑	☑
			WMO	☐	☑	☑
		1.3.3 Enhanced Staff Capacity for the ABMS through the hiring and recruitment of support staff for the ABMS				
			UNDP	☑	☑	☑
			WMO	☑	☐	☐
2. GBON infrastructure in place						
	2.2 Improved land-based stations in place.					
		2.2.1 Install a refurbished surface land station				
			UNDP	☐	☑	☑
			WMO	☐	☑	☑
		2.2.2 Design of the ICT infrastructure and services to align to GBON standards				
			UNDP	☑	☑	☐
			WMO	☑	☑	☐
		2.2.3 Design the data management system				
			UNDP	☑	☑	☐
			WMO	☑	☑	☐
3. Sustained compliance with GBON						
	3.1 GBON land-based stations commissioning period completed.					
		3.1.1 OM of land based station and data and ICT investment				
			UNDP	☐	☐	☑
			WMO	☐	☐	☑

Signatures

UNDP: UNDP (United Nations Development Programme (UNDP)) (Digital) Ms Stephanie Ziebell stephanie.ziebell@undp.org	**SIGNATURE:** **DATE:**
WMO: WMO (World Meteorological Organization) (Digital) Celeste Saulo Secretary General csaulo@wmo.int	**SIGNATURE:** **DATE:**

Annex: Terms of Reference for the provision of technical advisory services during the SOFF Investment Phase

1. Purpose and scope

These Terms of Reference describe the provision of technical advisory services by the [Met Office to the [Antigua & Barbuda Meteorological Service] to contribute to the delivery of the SOFF Investment Phase outputs as described in Section 3.

The Terms of Reference are based on the SOFF Operational Manual, Section 4.4.3 on the Operational Partners and Section 4.5.2 on the Investment Phase; as well as on the SOFF Investment Framework, Section 4.5 on the Peer Advisors and WMO Technical Authority.

2. Roles and responsibilities

Beneficiary country National Meteorological and Hydrological Service

- Is responsible for implementing the activities of the SOFF Investment Phase activities with the support of the Implementing Entity and the peer advisor.
- Submits the SOFF Investment Phase funding request using the standardized template provided by the SOFF Secretariat, including the Terms of References for the peer advisor's technical advisory services during the Investment Phase.
- Is responsible for collaborating with the Implementing Entity to provide all the necessary information, participate in and facilitate the national activities that the Implementing Entity and peer advisor need to conduct in order to deliver the SOFF Investment Phase outputs.
- Confirms the completion of all the Investment Phase activities and provides comments as needed on the final report prepared by the Implementing Entity.

Peer advisor

- Is accountable to the beneficiary country and the Implementing Entity.
- Is contracted via the WMO pass-through mechanism and operates on a cost-recovery basis.
- Provides technical advisory services to support beneficiary countries and Implementing Entities in the design and implementation of the SOFF Investment Phase activities.
- Contributes to the final report of the SOFF Investment Phase.

Implementing Entity

- Prepares the Investment Phase funding request in collaboration with the beneficiary country and the peer advisor, including the Terms of References for the provision of technical advisory services during the SOFF Investment Phase.
- Manages the Investment Phase activities following the terms specified in the funding request and in collaboration with relevant national partners, including civil society organizations.

- Delivers the Investment phase outputs and is responsible for their quality and timely delivery, in coordination with the country and the peer advisor.
- Provides quarterly updates to the SOFF Secretariat according to a simple standardized form and annual reports according to the United Nations Multi-Partner Trust Fund Office's reporting requirements indicated in the legal agreements.
- Informs the SOFF Secretariat of circumstances that could materially impede the implementation of the Investment phase or any considerable deviation in the conditions of the funding request to achieve its objectives.
- Submits the final report to the SOFF Secretariat including the beneficiary country's comments and the peer advisors' feedback. The final report describes the institutional arrangements to secure sustained operation and maintenance of the investments made.

WMO Technical Authority

- Provides basic on-demand technical assistance to the beneficiary country, Implementing Entity and peer advisor on GBON regulations, including on monitoring and assessing the data-sharing status of the stations using the WDQMS web tool[1]
- Is responsible for the verification of data sharing of the new or rehabilitated surface and upper -air stations as per GBON regulations.
- WMO provides a verification report to the SOFF Secretariat, upon which the Investment Phase can be considered completed.
- Establishes and administers the pass-through mechanism for contracting and funding of the advisory services provided by the peer advisors.

SOFF Secretariat

- Facilitates communication, coordination and collaboration between the beneficiary country, the Implementing Entity, the peer advisor and WMO Technical Authority.
- Reviews the SOFF Investment Phase funding request, including the Terms of Reference for the provision of technical advisory services and provides feedback as needed. Then transmits the funding request to the SOFF Steering Committee for their decision.
- Compiles quarterly updates and annual reports and monitors implementation based on information received from the Implementing entity, the peer advisor and the beneficiary country. Regularly informs the Steering Committee of progress.
- Coordinates regional implementation approaches to the SOFF Investment Phase.
- Confirms receipt of the final report by the Implementing Entity and completion of the Investment Phase based on WMO verification of data sharing.
- Organizes exchange of knowledge and experiences and captures lessons learned.

[1] The WDQMS web tool monitors the availability and quality of observational data based on near -real-time information from the four participating global Numerical Weather Prediction centres: the German Weather Service (DWD), the European Centre for Medium range Weather Forecasts (ECMWF), the Japan Meteorological Agency (JMA) and the United States National Centers for Environmental Pre diction (NCEP). These are four of the ten World Meteorological Centres, designated by WMO to provide global numerical weather prediction products for all WMO Members.

3. Peer advisors' activities during the SOFF Investment Phase

The peer advisor will contribute to the delivery of the SOFF Investment Phase outputs as described in the *RBM* section of the SOFF UNMPTF Gateway through the following activities:

Output	Indicator (Please copy the indicators from RBM section of the Investment Funding request.)	Activities conducted / contributions (Please list all activities that will be conducted by the peer advisor relevant to the output. Please add rows if more than one activity will be conducted.)	Implementation plan				
			Y1	Y2	Y3	Y4	Y5
1.1 **National consultations**, including with CSOs and other relevant stakeholders conducted	1.1.1 Coordination meetings with national stakeholders (institutional)	- Attend and contribute to project initiation workshop - Contribute to government stakeholder engagement / consultation workshop.	x			N/A	N/A
	1.1.2 Consultations with CSOs including women's organizations	Nil				N/A	N/A
	1.1.3 Consultation with private sector actors	Nil				N/A	N/A
1.2 **NMHS institutional capacity** required to operate the GBON network developed	1.2.1 Develop a revised ABMS Strategic and Operational Plan	- Review and contribute to drafting of ABMS Strategic and Operational Plan	x	x		N/A	N/A
	1.2.2 Develop a benefit analysis of ABMS and	Nil				N/A	N/A

Output	Indicator (Please copy the indicators from RBM section of the Investment Funding request.)	Activities conducted / contributions (Please list all activities that will be conducted by the peer advisor relevant to the output. Please add rows if more than one activity will be conducted.)	Implementation plan				
			Y1	Y2	Y3	Y4	Y5
	WCIS in Antigua and Barbuda						
	1.2.3 Develop a gender assessment to be integrated within the Strategic and Operations Plan	Nil				N/A	N/A
1.3 **NMHS human capacity** required to operate the GBON network developed	1.3.1 Carry out a Training Needs and Staff Capacity Assessment and, on the basis of the Assessment, devise a training plan for senior managers, technical managers, and other staff.	Nil				N/A	N/A
	1.3.2 Deliver capacity development activities for technical staff,	- Co-develop specification and ToR for technical staff training plans including: station maintenance; IT network / database management maintenance incl. SurfaceCDMS / WIS2	x	x		N/A	N/A

Output	Indicator (Please copy the indicators from RBM section of the Investment Funding request.)	Activities conducted / contributions (Please list all activities that will be conducted by the peer advisor relevant to the output. Please add rows if more than one activity will be conducted.)	Implementation plan				
			Y1	Y2	Y3	Y4	Y5
	including formal training through scholarships	- Co-develop a specification for regional training and collaboration. with neighbouring countries and regional projects for the management and calibration of the GBON network					
	1.3.3 Enhanced Staff Capacity for the ABMS through the hiring and recruitment of support staff for the ABMS including GBON Data and Network Manager	Nil				N/A	N/A
2.1 **New land-based stations** and related equipment, ICT systems, data management systems and standard operating practices in place	N/A	N/A.	N/A	N/A	N/A	N/A	N/A
2.2 **Improved land-based stations** and related equipment, ICT	2.2.1 Install a refurbished surface land station	- Co-develop and review specification documents and ToR to: replace equipment	x	x	x	N/A	N/A

Output	Indicator (Please copy the indicators from RBM section of the Investment Funding request.)	Activities conducted / contributions (Please list all activities that will be conducted by the peer advisor relevant to the output. Please add rows if more than one activity will be conducted.)	Implementation plan				
			Y1	Y2	Y3	Y4	Y5
systems, data management systems and standard operating practices in place		for 1 surface station plus one set of spares; installation including repositioned concrete plinth; consider and implement arrangements for calibration - Co-development of SOPs for monitoring, maintenance and calibration of GBON surface network.					
	2.2.2 Design of the ICT infrastructure and services to align to GBON standards	- Co-develop and review specification documents and ToR to upgrade IT infrastructure and installation, including SurfaceCDMS and WIS 2.0.	x	x			
	2.2.3 Design the data management system	NIL	N/A	N/A	N/A		
2.3 **New upper air stations** and related equipment, ICT systems, data management systems and standard	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Output	Indicator (Please copy the indicators from RBM section of the Investment Funding request.)	Activities conducted / contributions (Please list all activities that will be conducted by the peer advisor relevant to the output. Please add rows if more than one activity will be conducted.)	Implementation plan				
			Y1	Y2	Y3	Y4	Y5
operating practices in place							
2.4 **Improved upper air stations** and related equipment, ICT systems, data management systems and standard operating practices in place	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3.1 **GBON land-based stations' commissioning period completed**, country-specific standard cost for operations and maintenance established, and data sharing verified by WMO Technical Authority	3.1.1 OM of land based station and data and ICT investment	Monitor and advise ABMS on GBON compliance during Commissioning Period			x	N/A	N/A
3.2 **GBON upper air stations' commissioning period**	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Output	Indicator (Please copy the indicators from RBM section of the Investment Funding request.)	Activities conducted / contributions (Please list all activities that will be conducted by the peer advisor relevant to the output. Please add rows if more than one activity will be conducted.)	Implementation plan				
			Y1	Y2	Y3	Y4	Y5
completed, country-specific standard cost for operations and maintenance established, and data sharing verified by WMO Technical Authority							

Signatures

Peer advisor focal point	Name Title Institution Date
Country focal point	Name Title Institution Date