

SOFF Investment Funding Request

Guyana

Systematic Observations Financing Facility

Weather and climate data for resilience





General Information

Fund	MPTF_00281: The Systematic Observations Financing Facility					
FMP Record	MPTF_00281_00037: SOFF Guyana Investment Phase					
MPTFO Project Id						
Start Date						
End Date						
Applicants	Status	Contact Type	Name	e-mail	Position	Telephone
	Active: 17-Feb-2025 6:27:00 PM	Project Manager	Gerard P. Alleng	gerarda@iadb.org		
Signatories	Signature Process	Role	Name of Organization		Name	User Email
	Digital	Signatory	WMO: WMO (World Meteorological Organization)		Celeste Saulo	csaulo@wmo.int
	Digital	Signatory	IDB: IDB - Inter-American Development Bank		Gerard P. Alleng	gerarda@iadb.org
Contacts	Contact Type	Name	e-mail	Position	Additional e-mail	Telephone
	No data available.					

Description	<p>The Systematic Observations Financing Facility (SOFF) is a funding mechanism designed to help countries address gaps in basic weather and climate observation data. To save lives, protect livelihoods, and safeguard property globally, it is essential to enhance the availability of weather and climate observations, especially in the most data-sparse areas. These observations are crucial for accurate weather forecasts, effective early warning systems, and comprehensive climate information services. The lack of such data limits countries' ability to adapt to climate change and build resilience.</p> <p>The large majority (about 90%) of Guyana's population lives along a narrow coastal strip that ranges from a width of 16 to 64 km inland and makes up approximately 10% of the nation's total land area. According to the EU/JRC GHSL (Global Human Settlement Layer), large parts of the country are almost unpopulated. The dominant climate in Guyana is a tropical rainforest climate.</p> <p>The Guyanese Hydrometeorological Service (or the Hydrometeorological Service of the Cooperative Republic of Guyana, GHS) is the national Hydrological and Meteorological Service of the Republic of Guyana, being a department under the Ministry of Agriculture and operating under the Water and Sewerage Act, 2002. The GHS provides services and products to most of the agencies of the Guyanese government, especially for the Aviation Authority, Ministry of Agriculture, the Emergency Department, regional councils and more.</p> <p>GHS currently faces a number of challenges that can be summarized as follows:</p> <ol style="list-style-type: none"> 1. An insufficient and too narrow formal mandate. 2. Insufficient renumeration. 3. Human resources limitations. 4. Limited observational capacity. 5. Lack of centralized data management system. 6. Limited communication with stakeholders. 7. Limited outreach. <p>Currently, the observational network of Guyana consists of six (6) manual stations. Taking into account the GBON standard resolution for the country, Guyana will share data from, at least, six automatic stations. Out of the 6 manual stations, only 1 operates on a twenty-four hours basis, a second one operates on an hourly base, but only during daytime, the rest only during daytime and provide observations only once every four hours. A large number of AWSs that were previously established are of poor quality (45), have become inoperable and are unsalvageable.</p> <p>Eventually, the GHMS has decided to abandon these stations and started installing stations from a different vendor, which were installed purposely in some of the more difficult locations (installed in different locations from the 6 manual stations), in order to assess their longer-term sustainability and operability. The new equipment was found to cope well with the local conditions. However, due to the high costs of these stations and the very limited budget of GHMS for investments, only four were acquired and installed to date.</p> <p>In summary, the current observational network of the GHMS is not GBON compliant, except for one station. However, even this station's current sustainability is in continuous risk of failure, due to the high staff turnover.</p>			
Universal Markers	Gender Equality Marker	Risk <ul style="list-style-type: none"> • GEM1 - The Key Activity contributes to GEWE in a limited way • Low Risk 		
Optional Markers	WB Income Category	<ul style="list-style-type: none"> • High Income 		
	UN LDC	<ul style="list-style-type: none"> • No 		
	Small Island Developing States (SIDS)	<ul style="list-style-type: none"> • Yes 		
Fund Specific Markers	SOFF Phases	SOFF Phases <ul style="list-style-type: none"> • Investment Phase 		
	EW4All	Early Warnings for All initial focus countries <ul style="list-style-type: none"> • Yes 		
	Fragile and conflict-affected situation	Fragile and conflict-affected situation <ul style="list-style-type: none"> • No 		
	Peer advisor	Peer advisor <ul style="list-style-type: none"> • GeoSphere [Austria] 		
Geographical Scope	Geographical Scope <ul style="list-style-type: none"> • Country 	Name of the Region	Region(s)	Country
			<ul style="list-style-type: none"> • Americas 	<ul style="list-style-type: none"> • Guyana

Participating Organizations and their Implementing Partners	UN Participating Organizations	Government/ Multilateral/ NGO/ Other	New Entities	Implementing Partners
	<ul style="list-style-type: none"> • WMO - WMO (World Meteorological Organization) 	<ul style="list-style-type: none"> • IDB - IDB - Inter-American Development Bank 		
Programme and Project Cost	Participating Organization	Amount (in USD)	Comments	
	Budget Requested			
	IDB	\$1,802,950.00	Includes the 7% IE fee	
	WMO	\$128,400.00	Includes the 7% WMO indirect cost	
	Total Budget Requested	\$1,931,350.00		
	Tranches			
	Tranche 1	Tranche 2	Tranche 3	
	IDB (60%) WMO (33.33%) Total:	\$1,081,770.00 \$42,795.72 Total: \$1,124,565.72	IDB (40%) WMO (33.33%) Total: \$763,975.72	Includes the 7% IE fee Includes the 7% WMO indirect cost
	Other Sources (Parallel Funding)			
	Total	\$1,931,350.00		
Thematic Keywords				
Programme Duration	Anticipated Start Date	15-Jan-2027		
	Duration (In months)	36		
	Anticipated End Date	15-Jan-2030		

Narratives

Title	Text

Close the most significant data gaps

The GBON Global Gap Analysis conducted by WMO in June 2023, considering Guyana as SIDS, stated that the country is responsible for providing data from two 2) surface stations only. However, as Guyana is a continental country with a significantly larger size compared to other SIDS members, the real GBON requirement of internationally shared stations sums up to six (6, as can be seen in table 1) - this was agreed with the technical department of WMO, through the submitted NGA. The current observational network consists of six(6) manual stations, only one of which is providing hourly observations daily, another one is providing hourly observations, but only daytime and the rest are providing observations every four hours, but only during daytime. It should be added that there are some additional gaps within the observations, either due to human factors, transmission challenges (the cellular network does not cover the entire country and in many areas, it is too weak or/unstable) or, more rarely, also due to damaged instruments.

The Guyana Hydrometeorological Service (GHS) does not operate any upper air stations.

Table 1. GBON National Contribution Target

Type of station		WMO GBON Global Gap Analysis, June 2023				GBON National Contribution Target	
	Target	Reporting		Gap		To improve	New
		To improve			New		
		[# of stations]					[# of stations]
Surface	2	1		1	0	4*	0
Upper-air	1	0		0	1	0	1
Marine	0	0		0	0	2	0

*The target of 6 stations (Table 2) to improve was accepted in the NGA by the WMO Technical Department – as the initial gap analyze was done for a SIDS the deviation can be explained – it was mutually decided that Guyana should be classified as a mainland country regarding GBON standards, therefore the target changed from 2 to 6. However since the acceptance of the NGA&NCP, the GHS was able, through its own funds, to procure and deploy 2 AWSs in two of the locations in table 2 (Lethem and Ebini). Hence, the funding proposal will ask to purchase only 4 AWSs, though continuing looking at the entire GBON network (the 6 stations) under the SOFF umbrella.

It is highly recommended to replace all of these manual stations with AWSs, since due to numerous issues (lack of relevant personnel, accessibility, safety and security and the need for long-term sustainability).

Table 2. List of international stations for GBON (currently manual, recommended to be upgrade to AWSs)

Station Num.	Station Name	Lat	Lon	WIGOS station Indicator
1.	Kamarang	5.867° N	-60.612° W	0-20000-0-81005
2.	Lethem	3.367° N	-59.800° W	0-20000-0-81006
3.	Mabaruma	8.200° N	-59.783° W	0-20000-0-81100
4.	New Amsterdam	6.244° N	-57.517° W	0-20000-0-81058
5.	Ebini	5.550° N	-57.767° W	0-20000-0-81010

	6.	Cheddi Jagan Airport	6.5035° N	58.2526° W	0-20000-0-81002
Target easy fixes	<p>Thanks to the experience and the know-how gathered by the technical staff of the GHS in deployment and maintenance of surface AWSs, together with the newly already acquired central data management system, soon to be fully real-time, it would quite straightforward to deploy 6 AWSs, in the six locations, where there already exist manual observations for years. The Peer Advisor will support GHS with registration of the new AWSs at the OSCAR/Surface. These stations, having a long climatic record, will be continued to be operated manually as well, for the sake of reference and intercomparison with the new AWSs. The data from both will be stored in the new central data management system. All of these locations are located in governmental property, which will assure their safety, already served by local staff, which would be able to perform basic maintenance, and thus support their sustainability and together with already a proven experience in using WIS2 and transmission through satellites, can assure an immediate and continuous flow of data to the international network.</p> <ul style="list-style-type: none"> • Remark: since the acceptance of the NGA&NCP, the GHS was able, through its own funds, to procure and deploy 2 AWSs in two of the locations in table 2 (Lethem and Ebini). Hence, the funding proposal will ask to purchase only 4 AWSs, though continuing looking at the entire GBON network (the 6 stations) under the SOFF umbrella. 				
Create leverage	<p>Currently, there are two internationally funded projects related to GHS, which might be of relevance. The first is the regional CREWS Caribbean 2.0, which was already approved. Due to the decision of the Guyanese government to participate in CREWS on a national level, the GHS could only enjoy part of the regional, rather than the national activities under CREWS (these may include support with WIS2 and WIGOS, political leveraging, support for the continuation of the legislation process, etc.).</p> <p>Caribbean Meteorological Organization (CMO) is operating already a single WIS2 node, through which also Guyana, as a member of CARICOM, is already transmitting its data. The GHS, together with the Peer Advisor, are in a continuous contact with the CREWS Secretariat, as well as the CMO and CIMH, who are helping to facilitate these activities of CREWS in the region. Regular meetings with GHS, CREWS Caribbean and CMO will be held.</p> <p>The second of which is the EW4All, which is planned to commence, together with UNDRR, around May 2025. Nevertheless, as part of the SOFF investment phase, possible linkages between these two initiatives should be seriously explored, as any reliable early warning system will be based on accurate real-time observational data. The GHS will be part of the planning of the EW4All activities in Guyana, and together with the support of the Peer Advisor, will take care of any potential synergies between all three components, thus SOFF, CREWS and EW4All.</p>				

Maximize delivery capacity	<p>The Implementing Entity is the Inter-American Development Bank (IDB), an international financial institution headquartered in Washington, D.C. and serves as the largest source of development financing for Latin America and the Caribbean. The IDB supports economic development, social development and regional integration in the Latin American and Caribbean (LAC) region through the provision of loans, grants and knowledge creation. The IDB provides these resources to its twenty-six (26) borrowing member countries in LAC, supporting development in a sustainable, climate-friendly way.</p> <p>The IDB has an active portfolio in Guyana with a country strategy engagement that focuses on three priority areas: Resilient Infrastructure Development: Enhancing infrastructure to withstand and adapt to future challenges; Human Capital Development: Improving health and educational outcomes to foster a skilled and healthy workforce; Strengthening Institutional Capacity: Building robust institutions to support effective governance and implementation. Currently there are no IDB programs that can directly support the SOFF investment phase.</p> <p>There are also cross-cutting issues relating to gender equality, climate change, biodiversity, and digitalization will be integrated into project design to ensure comprehensive and inclusive progress.</p> <p>Within the Guyana portfolio, the IDB has loans and grants programs in various sectors that are aligned with the purpose of the SOFF, including (i) Support for preparation of Guyana Climate Resilient Water and Sanitation Infrastructure Improvement Program; (ii) Support for Climate Resilient Road Infrastructure II; and (iii) Program to Support Climate Resilient Road Infrastructure Development. In the ongoing programming with the Government of Guyana, the IDB will actively seek to leverage additional resources for hydrometeorology development in the country.</p>
Sub-regional gains	<p>Given the geopolitical circumstances in the region around Guyana and the harsh climatic and geographic conditions in Guyana itself, optimization with neighboring countries is a challenge. There are however several potential collaborations for optimization of the operations of the network deployed. The following have been identified:</p> <ol style="list-style-type: none"> 1. There was a previous attempt of the GHS to foster stronger collaboration, through the Amazon Cooperation Treaty Organization (ACTO), but due to manpower constraints at the GHS, these were never materialized. There is some information exchange with the neighboring Suriname, but much less with Brazil (also due to language barriers). 2. Regionally, Guyana is a member state of the Caribbean Community (CARICOM). The Caribbean Meteorological Organization (the CMO) was founded under the auspices of CARICOM and its role is to coordinate the cooperation and collaboration between all the NMHSs of the Member countries. As such, CMO is supporting the GHS with its current meteorological legislation efforts as well as introducing the WIS2 protocol into the data dissemination system of the GHS. 3. The Caribbean Institute for Meteorology and Hydrology (CIMH), which is a part of CMO, is responsible for training as well as calibration services for CMO's members. The current calibration capacities of the CIMH are limited to only part of the meteorological parameters and are not suited to any instrument of any vendor, especially of the Vaisala company, whose equipment has proven to work effectively in the conditions of Guyana. Therefore, another solution for calibration should be sought after (to be elaborated later). 4. In terms of cooperation with neighboring countries, cooperation with Suriname (also a SOFF country) might be the most relevant, due to the almost identical environmental conditions in both countries. This cooperation could take the form of joint tendering for equipment or harmonization of technical specifications for tendering. <p>The Implementing Entity (IDB) for the program is also implementing SOFF in several countries in Latin America and the Caribbean and there will be opportunities to collaborate and share experiences across other SOFF beneficiary countries. Of note there IDB has two sub-regional programs that have relevancy for the SOFF program,. The first is "One Caribbean" which covers Caribbean countries and includes Guyana, which is a comprehensive regional approach to promoting sustainable development in the Caribbean and Small Island Developing States. A key pillar of One Caribbean is Resilience, Climate Adaptation, and Disaster Risk Management. The second is Amazonia Forever, which also includes Guyana and aims to upscale financing; strengthen the planning and execution of projects to generate impact; share knowledge and evidence-based innovations and leverage expertise to support policy development; and enhance regional collaboration and coordination. One of the transversal areas of action is Climate, Biodiversity and Forest.</p> <p>The peer advisor, GeoSphere Austria, is supporting the implementation of SOFF in additional three countries in the Caribbean Region.</p>

SOFF Beneficiary Country Capacity Assessment

The GHS will be the executing entity for this project. The GHS already has some experience in this area as it has worked with other implementing partners such as the WMO Global Ozone Program and others. In addition, the entire financial and fiduciary management of any project related to the GHS, is being performed together and under the parent ministry of the GHS – the Ministry of Agriculture of Guyana, which has experience in dozens of similar or even bigger projects.

As outlined in the CHD (March, 2024), the GHS currently faces a number of challenges that can be summarized as follows:

1. An insufficient and too narrow formal mandate – the Water and Sewerage Act does not cover many of the most vital fields of activities of a modern National Meteorological and Hydrological Services (NMHSs) – Disaster Risk Reduction (DRR), aviation and marine services, Climate Services, etc. A new draft legislation was prepared several years ago, but it has never been taken to the Guyanese Parliament.
2. Remuneration – the applicable staff salary scales of GHMS are not competitive in comparison with comparable job opportunities offered nationally and regionally. This issue causes strong staff rotation and a constant brain, experience and knowhow drain.
3. Human resources limitations – most of the sections within the GHMS are heavily understaffed. Moreover, education and training in the different specialized areas of hydrometeorology can only be found outside of Guyana (including at the Caribbean Institute for Meteorology and Hydrology (CIMH) in Barbados), it continues to be challenging for the existing staff to stay up-to-date with the developments in the worlds of meteorology, hydrology and the allied sciences.
4. Limited observational capacity – the current weather and hydrological monitoring network of Guyana is too small, providing data in much less than an hourly base, with extended gaps and mostly not on a real-time basis. A donation of a considerable number of AWSs turned out to be rather counter-productive, as all of the stations were delivered with manufacturer's defects, and despite large efforts in recovering them, these stations can be considered obsolete.
5. Lack of centralized data management system – most employees of the GHMS do not have easy and comfortable access to the data. Moreover, large parts of the historical data are still not digitalized. (this item is already partially resolved, as such a system was acquired and successfully utilized at the GHS IT infrastructure).
6. Lack of communication with stakeholders – exchange is limited and happens mostly on an ad-hoc basis.
7. Limited outreach – since most of the country has only limited, if any, internet, TV or radio coverage, it remains extraordinarily challenging to reach out to faraway communities.

However, to further build capacity and ensure sustainability, it is proposed that a project management unit (PMU) be funded through SOFF for the two years of implementation. Currently there are no existing implementing entity project management unit in place that can adopt this role. The proposed PMU will have at least one person as a project manager and another as a monitoring and evaluation officer. It is envisioned that these persons will then be eventually hired to work permanently in the department through funding from the GHS annual budget. Once the unit is established, the IDB will provide capacity training on its procurement and financial procedures to support the unit in its program management role.

Investment Phase Alignment with the GBON National Contribution Plan

There is no divergence between the targets stated in the GBON National Contribution Plan and the proposed Investment Phase targets.

Execution model and implementation arrangements

The program will be client-executed and a project execution unit will be established within the GHS as the designated executing entity (EE). The EE will be responsible for (i) the project's technical, administrative, and operational management; (ii) the procurement of works, goods, and services; (iii) the preparation of disbursement requests; (iv) the preparation and update of annual work plans and the procurement plan, among others; (v) the submission of project management reports —the Annual Operation Plan, Semi-Annual Reports, and final evaluation reports; (vi) the monitoring, supervision, and inspection of works and service contracts. The EE will use the IDB's procurement and financial policies during execution.

A summary of the procurement policies of the IDB in relation to the procurement of Works and Goods are as follows:

- 1. Scope.** The policies for the **Procurement of Works and Goods Financed by the IDB** apply to all operations, financed wholly or partly by the Bank or by funds administered by the Bank and executed by a Borrower or Beneficiary. These policies regulate procurement processes of works, goods, and related services (different from consulting services). References to "goods" and "works" in these Policies include related services such as transportation, insurance, installation, commissioning, training, and initial maintenance. The term "goods" includes commodities, raw materials, machinery, equipment, and industrial plants. Provisions of these Policies also apply to services that are bid and contracted on the basis of performance of measurable physical output, such as drilling, mapping, and similar operations.
- 2. Basic Responsibilities.** The responsibility for project implementation, and therefore for the award and administration of the contract under the project, rests with the Borrower. In some cases, the Borrower acts only as an intermediary, and the project is carried out by another agency or entity. The Bank oversees the procurement process to ensure that its rules and procedures are followed.

Basic Guidelines.

The basic guidelines of the procurement policies relate (i) the general principles of eligibility, advance contracting and retroactive financing, joint ventures, Bank Review, mis-procurement, Fraud and Corruption, and the requirement of a procurement plan; (ii) the process of international competitive bidding, including related and relevant aspects; (iii) other selection methods, such as limited international bidding, national competitive bidding, shopping, direct contracting, force account, and community participation in procurement, among other methods, and specific recommendations for good practices.

A summary of the procurement policies of the IDB in relation to the selection and contracting of Consultants financed are as follows:

- 1. Scope.** The Policies for the Selection and Contracting of Consultants Financed by the IDB apply to all operations, financed wholly or partly by the Bank or by funds administered by the Bank and executed by a borrower or beneficiary. For the purpose of these policies, the term consultants includes a wide variety of private and public entities, including consulting firms, engineering firms, construction managers, management firms, procurement agents, inspection agents, specialized agencies and other multinational organizations, investment and commercial banks, universities, research institutions, government agencies, nongovernmental organizations (NGOs), and individuals consultants. These policies regulate the processes of selection and contracting of consulting services of an intellectual and advisory nature. These Policies do not apply to other types of services in which the physical aspects of the activity predominate (for example, construction of works, manufacture of goods, operation and maintenance of facilities or plant, surveys, exploratory drilling, aerial photography, satellite imagery, and services contracted on the basis of performance of measurable physical output). For these last types of services, the Policies for the procurement of Goods and Works are applied.
- 2. Basic Responsibilities.** The Borrower is responsible for preparing and implementing the project, and therefore for selecting the consultant, and for the award and subsequent administration of the contract. The Bank oversees the procurement process to ensure that its rules and procedures are followed.

Basic Guidelines

The basic guidelines of the procurement policies for the selection of consultants describes (i) issues related to the general principles, conflict of interest, unfair competitive advantage, eligibility, advance contracting and retroactive financing, associations between consultants, review, assistance and monitoring on the part of the Bank, mis-procurement, prohibited practices, and the requirement of a procurement plan; (ii) the selection process based on quality and cost, as well as aspects to be aware of during such process; (iii) other methods of selection, such as quality-based selection, least-cost selection, selection based on the consultants' qualifications, and single source selection, among other methods and specific recommendations for good practices; (iv) types of contracts and important provisions related to them; (v) aspects related to the selection of individual consultants.

In terms of fiduciary requirements, the executing entity will be required to establish a separate bank account for the flow of funds from the IDB, the Implementing Entity.

	<p>The execution arrangements will be established through a technical cooperation agreement between the IDB and the Government of the Co-operative Republic of Guyana.</p>
Private sector involvement	<p>Currently, the GHS is the sole governmental stakeholder to operate and acquire meteorological observations. No other governmental stakeholder is performing such activity or is planning to start doing so in the known future. As for private stakeholders, it is unknown who is carrying any observations. However, mostly such observational stations tend to be not sustainable and relatively short-lived.</p> <p>Related to the private sector, there is no across-country private meteorological service or firm that operates an observational network and that could provide support to the GBON compliance strategy and or that could be approached for a potential partnership. There is, however, the potential for interaction with some of the bigger farms, as well as the oil industry (for the marine stations), but it would likely comprise a more "services provided to client" approach and not a joint venture or a public private partnership to enhance the national capacities as a whole.</p> <p>However, in order to support the sustainability, of the planned GBON stations network, a public-private partnership is planned, in which a private company (most probably the vendor/s of the surface and upper air stations) will provide a high-level maintenance of the stations (if required), remote support, in-site visit (if required) and support with the calibration of the reference instruments (for the surface stations) and the upper-air station's instruments.</p>
Civil society participation	<p>The GHS has strong ties with the local communities residing around the GBON surface-stations, such as Mabaruma, Lethem, Kamarang and others. An additional effort will be made, during the implementation phase, to strengthen the engagement with these local communities, bringing them to help support the sustainability, security and safety of these stations. The National Contribution Plan envisages special meetings for 4 out of the 6 locations, bringing the leaders of these communities and explaining them the potential benefits of the new data for their communities and the importance of their continuous support with them.</p>

Fiduciary systems

The financial management and oversight of the project including reporting requirements, will follow IDB policies and procedures. The financial management of the project will be governed by the IDB's [Financial Management Guidelines](#) for all operations financed by the IDB, which aims to ensure "that the proceeds of any loan made, guaranteed, or participated in by the Bank are used only for the purposes for which the loan was granted, with due attention to considerations of economy and efficiency".

There are ten financial management guidelines that the executing entity must agree to in the execution of projects and generally relate to (i) financial planning and cash flow needs; (ii) records and reports on the use of project resources; (iii) effective internal controls; (iv) statement of accounts audited by independent entities and (v) comprehensive supervision by the Bank. The ten guidelines are:

- Requirement 1. Eligibility of expenditures
- Requirement 2. Disbursement management
- Requirement 3. Rendering of accounts
- Requirement 4. Project financial supervision
- Requirement 5. Project financial reporting system
- Requirement 6. Internal control
- Requirement 7. Independent external auditors
- Requirement 8. External financial audit of the project
- Requirement 9. Prohibited practices
- Requirement 10. Transparency

The procurement of goods, works and services, and the selection of consultants will be carried out in accordance with IDB policies and guidelines related to: (i) [Procurement of Goods and Works financed by the IDB](#); (ii) [Policies for the Selection and Contracting of Consultants](#) financed by the Inter-American Development Bank. The procurement of projects is guided by core procurement principles which are:

- Value for money
- Economy – refers to buying inputs of the appropriate quality at the right price
- Efficiency
- Equality
- Transparency
- Integrity

Social and environmental safeguards

The project will be governed by IDB's [Environmental and Social Policy Framework](#), which is a consolidated framework covering environment, involuntary resettlement, and indigenous peoples. All projects will be prepared in accordance with the ESPS requirements. All projects undergo environmental and social due diligence at appraisal to help the IDB decide if the project should be financed and, if so, the way in which environmental and social risks and impacts should be addressed in its planning, implementation and operation. The appraisal process also identifies opportunities for additional environmental or social benefits. IDB seeks that projects are designed, implemented, and monitored in compliance with its policies, applicable regulatory requirements and international best practices. The SP sets out principles, rules, procedures and guidelines for conducting environmental and social due diligence of the potential projects. These procedures and guidelines also describe the process for developing measures to avoid and mitigate potential adverse impacts as well as opportunities to improve the environmental and social outcomes of the projects. IDB is committed to the principles of transparency, accountability and stakeholder engagement, and promoting adoption and implementation of these principles by its clients. Proportionate to the nature and scale and environmental and social risks and impacts of the project, IDB requires its clients to disclose sufficient information about the risks and impacts arising from projects, engage with stakeholders in a meaningful, effective, inclusive and culturally appropriate manner and take into consideration the feedback provided through such engagement.

The Bank will undertake a gender assessment as part of its Institutional Capacity Assessment of the executing entity to manage the project. The IACS examines six areas of project execution (i) project management; (ii) technical quality management; (iii) human resources management; (iv) procurement management; (v) financial management; and (vi) environmental and social impact management. The gender assessment will be done within the context of the environmental and social impact management module.

Dispute resolution mechanism	<p>In accordance with the environmental and social standards of the IDB, there are three channels by which an entity can file a complaint related to an -IDB financed project that may cause environmental or social damage;:</p> <ol style="list-style-type: none"> 1. At the local level, file a complaint though the executing entity 2. With the IDB group, through its IDB Complaints form <p>Independent Mechanism, through an accountability office independent from project teams which facilitates dispute resolution processes to resolve the concerns raised.</p> <p>Additionally the IDB will report to the SOFF Secretariat including in its annual reports, on any disputes raised by project.</p>
Additional relevant policies and procedures	None

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
No data available.	

Contribution to SDGs

Participating Organization	% TARGET_13.1	% TARGET_13.2	% TARGET_13.3	% TARGET_13.b	% TARGET_5.5	% Total
IDB	10	30	30	20	10	100
WMO	0	50	50	0	0	100
Total contribution by target	10	80	80	20	10	
Project contribution to SDG by target	5	40	40	10	5	100

Project Results

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.

Outcome	Output	Description			
	Activities				
	Title	Description	Lead Participating Organization	Participating Organization	Other Organizations
	National consultations including with CSOs, and other relevant stakeholders conducted	Conduct consultation workshops to support the legislation process of a new law and institutional structure for the Hydrometeorological Service, to replace the existing and outdated law (Water and Sewerage Act 2002) and ensure the structure of the GHS enables it to be fit-for- purpose. The new legislative framework, will include the establishing the responsibility of the GHS in relation to generation and dissemination weather and climate data and use the weather observation infrastructure being rolled out through SOFF funding.	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Program advocacy on legal framework	Advocacy towards the establishment of this legal framework defining role and mandate of the GHS	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Program launch for key stakeholders	Project initiation event with all relevant Ministries and Development Partners to raise awareness of the SOFF plans and to ensure coordination, and concluding event to prepare for operational phase	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Stakeholders meetings	Conduct routine (yearly) meetings with the other public and private stakeholders regarding the needs and opportunities related to the new data and data-based products to be available	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	

Outcome	Output	Description		
	GESI campaign	Conduct a gender Equality and Social Inclusion campaign that includes a GESI assessment	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> • WMO - WMO (World Meteorological Organization)
	CSOs and indigenous groups workshops	Organize annual workshops with CSOs and community leaders in the Mabaruma, Ebini, Kamarang and Lethem areas to sensitize and promote the GBON designated weather stations in these areas.	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> • WMO - WMO (World Meteorological Organization)
	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
	Revision of the National Hydrometeorological Service of Guyana (GHS) strategic plan and development of an operational plan.	Strategic Plan: Revise the National Hydrometeorological Service of Guyana (GHS) strategic plan and develop an operational plan. Establish standard operating procedures, and operational documentation associated with maintenance, quality management and operation of the	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Implementation of Quality Management System	Update the IQMS program, by bringing the already existing Standard Operating Procedure (SOP) and quality assurance/quality control for the station operations up-to-date: Implementation of Quality Management System	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Project Execution Capacity Building	Establishment by the GHS of a project execution team, including project management and stakeholder management skills to support the execution of the project.	IDB - IDB - Inter-American Development Bank		
	Gender sensitive capacity building	Deliver capacity building activities on gender-sensitive topics in the context of SOFF operations.	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Gender inclusion	Promote gender equality by establishing minimum thresholds for female participation in SOFF-related activities.	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Data Policy Alignment	Support in formulating policies or national strategies for data sharing and public data services. Aligning Guyana with the WMO National Standard	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	

Outcome	Output		Description																					
	GHS business model development	Development of GHS' business model that aligns with GBON Network's sustainability objectives	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> • WMO - WMO (World Meteorological Organization) 																				
	1.3 NMHS human capacity developed	NMHS human capacity required to operate the GBON network developed.																						
<p>Activities</p> <table border="1"> <thead> <tr> <th data-bbox="736 680 916 838">Title</th><th data-bbox="916 680 1275 838">Description</th><th data-bbox="1275 680 1500 838">Lead Participating Organization</th><th data-bbox="1500 680 1702 838">Participating Organization</th><th data-bbox="1702 680 1913 838">Other Organizations</th></tr> </thead> <tbody> <tr> <td>GHS Leadership training program</td><td>Training and development for the following competencies for the senior leadership team at the National Hydrometeorological Service of Guyana: leadership, financial management, project management, and human resource management</td><td>IDB - IDB - Inter-American Development Bank</td><td></td><td></td></tr> <tr> <td>GHS technical staff training program: surface air</td><td>Training and development of the technical staff for the calibration of the surface observational network. The training program will include the procedures for the maintenance and operations of automatic surface stations will be done in collaboration with CIMH and vendor experts.</td><td>IDB - IDB - Inter-American Development Bank</td><td> <ul style="list-style-type: none"> • WMO - WMO (World Meteorological Organization) </td><td></td></tr> <tr> <td>GHS technical staff training program: Upper air</td><td>Training and development for the technical and observers' staff with the maintenance, operation and calibration of the upper-air observational station. The training will be done in collaboration with CIMH and vendor experts.</td><td>IDB - IDB - Inter-American Development Bank</td><td> <ul style="list-style-type: none"> • WMO - WMO (World Meteorological Organization) </td><td></td></tr> </tbody> </table>					Title	Description	Lead Participating Organization	Participating Organization	Other Organizations	GHS Leadership training program	Training and development for the following competencies for the senior leadership team at the National Hydrometeorological Service of Guyana: leadership, financial management, project management, and human resource management	IDB - IDB - Inter-American Development Bank			GHS technical staff training program: surface air	Training and development of the technical staff for the calibration of the surface observational network. The training program will include the procedures for the maintenance and operations of automatic surface stations will be done in collaboration with CIMH and vendor experts.	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> • WMO - WMO (World Meteorological Organization) 		GHS technical staff training program: Upper air	Training and development for the technical and observers' staff with the maintenance, operation and calibration of the upper-air observational station. The training will be done in collaboration with CIMH and vendor experts.	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> • WMO - WMO (World Meteorological Organization) 	
Title	Description	Lead Participating Organization	Participating Organization	Other Organizations																				
GHS Leadership training program	Training and development for the following competencies for the senior leadership team at the National Hydrometeorological Service of Guyana: leadership, financial management, project management, and human resource management	IDB - IDB - Inter-American Development Bank																						
GHS technical staff training program: surface air	Training and development of the technical staff for the calibration of the surface observational network. The training program will include the procedures for the maintenance and operations of automatic surface stations will be done in collaboration with CIMH and vendor experts.	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> • WMO - WMO (World Meteorological Organization) 																					
GHS technical staff training program: Upper air	Training and development for the technical and observers' staff with the maintenance, operation and calibration of the upper-air observational station. The training will be done in collaboration with CIMH and vendor experts.	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> • WMO - WMO (World Meteorological Organization) 																					
2. GBON infrastructure in place																								
	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.																						

Outcome	Output	Description			
	Activities				
	Title	Description	Lead Participating Organization	Participating Organization	Other Organizations
	AWS procurement	Procurement of 4 new surface AW Stations (out of 6, since 2 were already procured and deployed by the GHS, since the acceptance of the NCP)	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Storage building	Construction of a storage for spare parts and ICT equipment.	IDB - IDB - Inter-American Development Bank		
	Vehicle procurement	Procurement: Procurement. As mentioned in the NCP, Guyana suffers from a lack/poor roads, especially in the hinterland, making the accessibility of most stations quite a challenge, which can be resolved only with adequate vehicles. The current vehicles of the GHS are already old and slowly approach their end life time. Without any ability of procuring new ones, the staff of the GHS could simply not access most of the stations. Causing the total investment to be totally non-sustainable.	IDB - IDB - Inter-American Development Bank		
	Vendor technical visits	Continuous technical support of the vendor, including yearly calibration of the reference instruments, remote support, technician visits by demand	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Calibration system procurement	Procurement of a full set of instruments to serve as reference instruments for calibration, together with 2 calibration kits and 2 field computers, to facilitate intercomparison and on-site and real-time calibration	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	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.			

Outcome	Output	Description			
	Activities				
	Title	Description	Lead Participating Organization	Participating Organization	Other Organizations
	Procurement of Upper-Air facility	Establish a new Upper-Air including hydrogen generation facilities. Provide for consumable costs for a year period	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Hydrogen generator training	Provide for routine training on the safe operation and basic maintenance of hydrogen generation and storage equipment	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	SOP development	Develop robust Standard Operating Procedures for the safe and reliable operation of the upper-air station	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Procurement of surface level agreement	Develop terms of reference and specification for the procurement and Service Level Agreement with instrument manufacturers, including environmental and sustainability considerations	IDB - IDB - Inter-American Development Bank	<ul style="list-style-type: none"> WMO - WMO (World Meteorological Organization) 	
	Construction of Upper-air station enclosure	Construction of an enclosure for the upper-air station, together with sufficient storage place for the consumables	IDB - IDB - Inter-American Development Bank		
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

Outcome		Output		Description				
		Activities						
		Title	Description		Lead Participating Organization	Participating Organization	Other Organizations	
		Operational costs for GBON surface stations	Operational costs for 2 years for 4 GBON surface stations. This includes, spares and repairs (covering the 2 already installed AWSs by GHS and the future 4 AWSs procured and deployed under the SOFF project)		IDB - IDB - Inter-American Development Bank	• WMO - WMO (World Meteorological Organization)		
		3.2 GBON upper-air station 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						
		Title	Description		Lead Participating Organization	Participating Organization	Other Organizations	
		Operational costs for GBON upper air station.	Operational costs for 2 years for 1 GBON upper air station.		IDB - IDB - Inter-American Development Bank	• WMO - WMO (World Meteorological Organization)		

Signature Indicators

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year	Line Out / O
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
Number of land-based stations improved		Number of stations as defined in the National Contribution Plan.	Progress updates/Annual or quarterly reports	Investment	At closure	Country	Number	0	2026	4	2029

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year
Number of new upper-air stations installed		Number of stations as defined in the National Contribution Plan.	Progress updates/Annual or quarterly reports	Investment	At closure	Country	Number	0	2026	1	2029
GBON land-based stations' commissioned		Number of stations as defined in the National Contribution Plan.	Progress updates/Annual or quarterly reports	Policy	At closure	Country	Number	0	2026	6	2029
GBON upper air stations' commissioned		Number of stations as defined in the National Contribution Plan.	Progress updates/Annual or quarterly reports	Policy	At closure	Country	Number	0	2026	1	2029

Project Indicators

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year
# of consultation workshops to support the legislation process.		Consultations on legislation	Consultation Report	Other	At closure	Country	Number	0	2026	2	2029
	% of female participants in the workshops	Consultations on legislation	Consultation report	Other	At closure	Country	Percentage	0	2026	50%	2029
# of workshops for Advocacy towards the establishment of this legal framework defining role and mandate of the GHS.		Advocacy consultations	Consultations Report	Other	At closure	Country	Number	0	2026	2	2029
	% of female participants in advocacy workshops	Advocacy consultations	Consultations Report	Other	At closure	Country	Percentage	0	2026	50%	2029

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year
# of events on project initiation and conclusion with all relevant Ministries and Development Partners to raise awareness of the SOFF plans and to ensure coordination, and concluding event to prepare for operational phase.		Events undertaken at start and end of project	Events Report	Other	At closure	Country	Number	0	2026	2	2029
	% of females in events	Events undertaken at start and end of project	Events Report	Other	At closure	Country	Percentage	0	2026	50%	2029
# of routine (yearly) meetings with the other public and private stakeholders regarding the needs and opportunities related to the new data and data-based products to be available		Public and private sector meetings	Meetings Reports	Capacity	Yearly	Country	Number	0	2026	2	2029
	% of females in routine meetings	Public and private sector meetings	Meetings reports	Capacity	At closure	Country	Percentage	0	2026	50%	2029

Indicator Title	Component Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Target Value	Target Year
# of GHS' business model developed that aligns with GBON Network's sustainability objectives		Business model for GHS	Model Report	Capacity	At closure	Country	Number	0	2026	1	2029
No components available.											

Risks

Event	Category	Level	Likelihood	Impact	Mitigating Measures	Risk Owner
Non-compliance with fiduciary and procurement standards in some SOFF activities	• Operational	Low	Unlikely	Minor	To ensure compliance and avoid the risk of mis-procurement, the executing agency will be trained in the procurement and fiduciary policies of the IDB	Executing agency
SOFF-funded investments cause environmental or social impacts	• Operational	Low	Unlikely	Minor	The execution of the project activities will adhere to the environmental and social safeguards policy and practices of the IDB. The EA will be trained in these safeguards as part of the institutional capacity building effort.	Executing Agency
GHS staff depart after being trained	• Operational • Organizational	High	Likely	Moderate	Through a strong political leverage and advocacy, the GHS will help raise the recognition of the importance of the role of the Service and the need to adequately support its work to the Government of Guyana.	GHS
Slow implementation and delays in procurement, installation and capacity building activities.	• Organizational • Regulatory	High	Likely	Major	There will be regular project reporting and meetings. The EA will be trained in and follow the procurement policies of the Bank. The EA in collaboration with the Bank, will have regular administration and supervision missions to ensure timelines for implementation are maintained.	Executing agency

After the conclusion of the Investment phase, GBON data are not collected or shared or are shared of insufficient quality.	• Operational	High	Possible	Major	The data collection from stations will be monitored continuously by the technical department, the forecasting department as well as the climatology department, updating the technical department for immediate required actions. The steering committee will examine monthly reports and deal with appearing major issues. The GHS has protocols for the sharing of information with stakeholders.	Executing Agency
Destruction or theft of SOFF-financed equipment and infrastructure.	• Operational	High	Possible	Major	The stations will be continuously monitored and any disruption in transmission will be detected and resolved. All of the low-resolution stations are located in governmental facilities.	Executing Agency
Meteorological conditions that affect the deployment activities by limiting accessibility to sites and constructions as needed.	• Social and Environmental	High	Likely	Major	Schedule work plan around national weather forecasts; locate construction materials close to proposed site.	Execution Agency
Limited availability of potential staff members to be trained to ensure full operations of the network.	• Operational	High	Likely	Major	Contracting of support consultants through the SOFF program	Executing Agency
Countries cannot make optimal use of data, including accessing or using improved forecasts products from the Global Producing Centers throughout the hydromet value chain.	• Operational	High	Possible	Moderate	GHS, through SOFF, CREWS, EW4All and other initiatives, will seek to constantly improve the knowledge and know-how of its relevant employees, with the support of CIMH, the peer advisor, as well as future additional partners, such as the university of Guyana, NCEP, the university of the west indies and more.	GHS

Budget by UNSDG Categories: Over all

Budget Lines	Description	WMO (7%) *	IDB (7%) *	Total
1. Staff and other personnel		\$0.00	\$100,000.00	\$100,000.00
2. Supplies, Commodities, Materials		\$0.00	\$0.00	\$0.00
3. Equipment, Vehicles, and Furniture, incl. Depreciation		\$0.00	\$1,060,000.00	\$1,060,000.00
4. Contractual services		\$120,000.00	\$415,000.00	\$535,000.00
5. Travel		\$0.00	\$0.00	\$0.00
6. Transfers and Grants to Counterparts		\$0.00	\$0.00	\$0.00
7. General Operating and other Direct Costs		\$0.00	\$110,000.00	\$110,000.00
Project Costs Sub Total		\$120,000.00	\$1,685,000.00	\$1,805,000.00
8. Indirect Support Costs		\$8,400.00	\$117,950.00	\$126,350.00
Total		\$128,400.00	\$1,802,950.00	\$1,931,350.00

Performance-based Tranches Breakdown

Tranche			Total
Tranche 1	IDB (60%)	\$1,081,770.00	\$1,124,565.72
	WMO (33.33%)	\$42,795.72	
Tranche 2	IDB (40%)	\$721,180.00	\$763,975.72
	WMO (33.33%)	\$42,795.72	
Tranche 3	IDB (0%)	\$0.00	\$42,808.56
	WMO (33.34%)	\$42,808.56	
			\$1,931,350.00

Results based budget

Outcome *	Output *	Agency *	Budget (USD) *
1. GBON institutional and human capacity developed		Sub Total	\$635,000.00
	1.1 National Consultations conducted	IDB (7%)	\$105,000.00
	1.2 NMHS institutional capacity developed	IDB (7%)	\$115,000.00
	1.3 NMHS human capacity developed	WMO (7%)	\$120,000.00
	1.3 NMHS human capacity developed	IDB (7%)	\$295,000.00
2. GBON infrastructure in place		Sub Total	\$1,060,000.00
	2.2 Improved land-based stations in place.	IDB (7%)	\$610,000.00
	2.3 New upper-air stations in place.	IDB (7%)	\$450,000.00
3. Sustained compliance with GBON		Sub Total	\$110,000.00
	3.1 GBON land-based stations commissioning period completed.	IDB (7%)	\$60,000.00
	3.2 GBON upper-air station commissioning period completed	IDB (7%)	\$50,000.00
Total			\$1,805,000.00

Programme Outcome Costs

Outcome	Output	Activity	Implementing Agent	Time Frame					
				2027	2028	2029			
				1	1	1			
1. GBON institutional and human capacity developed									
1.1 National Consultations conducted									
National consultations including with CSOs, and other relevant stakeholders conducted				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
Program advocacy on legal framework									
WMO				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
IDB				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Program launch for key stakeholders									
WMO				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
IDB				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Stakeholders meetings									
WMO				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
IDB				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
GESI campaign									
WMO				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
IDB				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

Outcome	Output	Activity	Implementing Agent	Time Frame		
				2027	2028	2029
		CSOs and indigenous groups workshops			1	1
			WMO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			IDB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	1.2 NMHS institutional capacity developed	Revision of the National Hydrometeorological Service of Guyana (GHS) strategic plan and development of an operational plan.				
			WMO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			IDB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Implementation of Quality Management System					
			WMO	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			IDB	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Project Execution Capacity Building					
			IDB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Gender sensitive capacity building					
			WMO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			IDB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Gender inclusion					
			WMO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			IDB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Data Policy Alignment					
			WMO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			IDB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	GHS business model development					
			WMO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			IDB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1.3 NMHS human capacity developed					
	GHS Leadership training program					
			IDB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	GHS technical staff training program: surface air					
			WMO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			IDB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	GHS technical staff training program: Upper air					
			WMO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			IDB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2. GBON infrastructure in place						
	2.2 Improved land-based stations in place.					
	AWS procurement					
			WMO	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			IDB	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Storage building					
			IDB	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Vehicle procurement					
			IDB	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Vendor technical visits					
			WMO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			IDB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Calibration system procurement					
			WMO	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			IDB	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	2.3 New upper-air stations in place.					

Outcome	Output	Activity	Implementing Agent	Time Frame		
				2027	2028	2029
				1	1	1
Procurement of Upper-Air facility						
		WMO		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		IDB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydrogen generator training						
		WMO		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		IDB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SOP development						
		WMO		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		IDB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Procurement of surface level agreement						
		WMO		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		IDB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction of Upper-air station enclosure						
		IDB		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Sustained compliance with GBON

	3.1 GBON land-based stations commissioning period completed.
Operational costs for GBON surface stations	
	WMO
	IDB
3.2 GBON upper-air station commissioning period completed	
Operational costs for GBON upper air station.	
	WMO
	IDB

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 GeoSphere Austria to Guyana 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 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 tool¹
- 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 Prediction (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	EOP
1.1 National consultations , including with CSOs and other relevant stakeholders conducted	Number of consultation workshops to support the legislation process.	Advice for policy development and high-level engagement on the legislative framework for GHS, participation in face-to-face as well as online workshops.	1		1	2
	Number of workshops for advocacy towards the establishment of a revised legal framework defining the role and mandate of the GHS.	Advice for policy development and high-level engagement on the legislative framework for GHS, participation in face-to-face as well as online workshops.	1		1	2
	Number of events on project initiation and conclusion with all relevant Ministries and Development Partners to raise awareness of the SOFF plans and to ensure coordination, and	Participation of Peer Advisor at these events (1-2 persons from GeoSphere Austria)	1		1	2

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	EOP
	concluding event to prepare for operational phase.					
	Number of routine (yearly) meetings with other public and private stakeholders regarding the needs and opportunities related to the new data and data-based products to be available	Participation of Peer Advisor at these meetings (online or, if possible, physical) - (1-2 persons from GeoSphere Austria)	1	2	1	4
	Number of Gender Equality and Social Inclusion assessment	Advice on the preparation & analysis of this assessment	1			1
	Number of outreach campaigns to women, girls, youth and Indigenous groups.	Support in preparing 4 community awareness & Sensitization meetings (online support)	1	2	1	4
1.2 NMHS institutional capacity required to	Number of GHS' strategic plan development of	Advice for developing a strategic plan, development of SOPs, and operational documentation associated with		1		1

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	EOP
operate the GBON network developed	SOPs, and operational documentation associated with maintenance, quality management and operation of the GBON in Guyana revised.	maintenance, quality management and operation of the GBON in Guyana (online)				
	Number of Quality Management Systems implemented	Advice and support in developing and implementing a QMS, with focus on the observational network (online)			1	1
	Number of policies or national strategies formulated for data sharing and public data services.	Advice and support to develop these strategies		1		1
1.3 NMHS human capacity required to operate the GBON network developed	Number of project execution teams established	Advice and support with writing the jobs' requirements and supporting their onboarding (online & in situ)	1			1
	Number of capacity building programs on gender- sensitive topics in	Support the development of these programs and staff participation (online) in the training sessions	1			1

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	EOP
	the context of SOFF operations implemented					
	Number of training programs conducted for the following competencies for the senior leadership team at the National Hydrometeorological Service of Guyana: leadership, financial management, project management, and human resource management.	Support the development of these programs and staff participation (online) in the training sessions		1		1
	Number of training programs conducted for the technical staff for the calibration of the surface observational network	Support the development of these programs and staff participation (online) in the training sessions		1		1
	Number of training programs conducted for the technical and other	Support the development of these programs and staff participation (online) in the training sessions			1	1

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	EOP
2.1 New land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place	operational staff for the maintenance, operation and calibration of the upper-air observational station					
	A GHS' business continuity model developed that aligns with GBON Network's sustainability objectives	Advice and support the development of the business continuity model		1		1
2.1 New land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place	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	EOP
2.2 Improved land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place	Number of stations improved as per the GBON National Contribution Plan	Technical support on location, exposure, advice on data transmission issues, purchasing processes, spare parts, transition from manual to AWS, OSCAR Registration, etc.		4		4
2.3 New upper air stations and related equipment, ICT systems, data management systems and standard operating practices in place	Number of new stations installed as per the GBON National Contribution Plan	Technical support on location, facility construction requirements, work safety, advice on data transmission issues, procurement processes, OSCAR registration, etc.			1	1
2.4 Improved upper air stations and related equipment, ICT systems, data management systems and standard operating practices in place	Number of stations improved as per the GBON National Contribution Plan	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	EOP
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	Number of stations commissioned as per the GBON National Contribution Plan	Assisting in equipment testing, training, management and operationalisation, QC Support on SOP development and quality control and quality assurance mechanism	2	6	6	6
	Number of calibration plans established	Technical support to develop & execute a calibration plan, SOP and continuous business model for the consumables	1	0	0	1
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	Number of stations commissioned as per the GBON National Contribution Plan	Technical support to develop & execute a calibration plan, SOP and continuous business model for the consumables			1	1

Signatures

Peer advisor focal point	Giora G.H. Gershtein SOFF focal point for GeoSphere Austria 14.01.2026 
Country focal point	Dr. Garvin Cummings PR of Guyana with WMO 19.01.2026 