Systematic Observations Financing Facility

SOFF Readiness Funding Request Template

Version 2.0

April 2023

Systematic Observations Financing Facility

Weather and climate data for resilience

SOFF Readiness Funding Request

The funding request should be prepared by the SOFF beneficiary country in collaboration with the SOFF peer advisor in coordination with the prospective SOFF Implementing Entity. In case of questions on how to complete this template, please contact the SOFF Secretariat at: soffsecretariat@wmo.int.

The SOFF Readiness Funding Request template includes the following sections:

1. **Basic information**
2. **SOFF Programming criteria**
3. **Readiness phase outputs, timeline and budget**
4. **Monitoring**
5. **Readiness Phase Risk Management Framework**

The **Assignment Terms of Reference** are included in **Annex 1**.

General recommendations to fill in in the template

Section 2. Programming criteria: Please make sure that you provide clear but succinct information relevant to the programming criteria. This is an essential requirement for the submission of the funding request to the Steering Committee.

- **GBON gap and easy fixes:** Please be aware of the limitations of SOFF scope of support. SOFF only supports GBON standard density and surface and upper-air stations over land. However, SOFF does encourage peers and beneficiary countries during the Readiness phase to look at the situation of GBON high-density networks (for those countries that already have them) and marine stations for potential easy fixes opportunities via SOFF support or other future support. We encourage beneficiary countries and peer advisors to ensure that the readiness funding request focuses on the areas of work related to SOFF scope of support to avoid misinterpretations and wrong expectations for the Investment and Compliance phase. For more guidance and details on SOFF scope of support, please see the GBON National Gap Analysis and the GBON National Contribution Plan technical guidance documents.

  The information provided on the GBON Gap, and the easy fixes should be high-level, as the details are expected to be scoped out during the Readiness phase. Please avoid excessively detailed information on how many stations to rehabilitate/install.

- **Maximize delivery capacity**: Please clearly state any ongoing or planned activities in the country for which the peer advisor receives funding from other sources. This is a mandatory requirement, as per Assignment Agreement 5.4. If there are none, please explicitly state so.

Section 3. Budget: The budget is expected to reflect a strict and careful assessment of the costs for the provision of the advisory services, following a cost-recovery approach and abiding to the eligible expenditure categories according to the Umbrella Agreement. While a budget breakdown is not required in the funding request, the SOFF peer advisor must be in a position to provide copies of all the documents, including budget and costing breakdown, including for audit purposes.

Section 6: Risk management framework needs to be carefully developed indicating discrete risks and strong mitigation measures.

Annex 1: Terms of Reference. The delivery process needs to be described, including indicative timeline of planned activities, workshops, missions, delivery of the outputs and delivery team. Without this, the funding request cannot be submitted to the SOFF Steering Committee.

1. Basic information

SOFF Beneficiary Country	Republic of Cuba
Country Focal Point	Dr. Celso Pazos Alberdi, General Director of INSMET. Permanent Representative of Cuba to the WMO
Peer advisor	AEMET, Spain
Peer advisor Focal Point	Fernando Belda
Prospective Implementing Entity	UNDP
Prospective Implementing Entity Focal Point	Ivan Zverzhanovski, Deputy Resident Representative, UNDP Cuba
Total budget USD	160,000
Delivery timeframe	From 1st November 2023 to 30th April 2024.
Date of approval	
Signature SOFF Steering Committee co-chairs (after Steering Committee approval of the funding request)	

1. SOFF Programming criteria

Please provide below an initial short description of the application of the SOFF programming criteria in the country.

Table 1: Programming criteria

Close the most significant data gaps	*Based on the WMO Global GBON Gap Analysis for the country, please provide a brief summary of the initial indications regarding the GBON gap in the country.* The country is currently operating with 68 surface synoptic stations, about 68 automatic surface weather stations and no upper air radiosonde operational. The 68 AWS need to be reviewed to ensure full operation, including ensuring connectivity for reporting to global networks. From GBON Global GAP Analysis, GBON requirement are: • Surface Land Stations (standard density): target 2 stations, reporting 1, gap (stations to improve) 1, total gap 1. • Land Station (High density): target 2 stations, reporting 1, gap (stations to improve) 1, total gap 1. • Upper-air station: target 1 station, reporting 0, gap (stations to improve) 1, total gap 1. The most significant gaps are the following 1. At least one upper-air station must be improved to ensure adequate coverage and data exchange capabilities, including support for operations and maintenance to ensure sustainability. 2. Infrastructure, data connectivity capacity for near- real time reporting to global networks, human capacity and financial gaps for one land station (GBON compliance). The data connectivity improvement will also enable the data sharing of the additional 68 existing synoptical surface weather stations. 3. A detailed analysis will be done during the Readiness Phase to potentially consider the optimization of the 14 existing automatic surface weather stations to meet GBON standard density requirements.
Target easy fixes	*Based on the WMO Global GBON Gap Analysis, please provide initial indications on the opportunities for rehabilitation and improvement of potential GBON stations in the country.* Milestones: 1. Upgrading the existing surface stations to meet GBON standard density requirements. 2. Ensure connectivity from the station's site.

	3. Improve one upper-air station. Full upper air profile availability according near maxima GBON criteria will benefit neighboring countries. 4. Education and Training plan would be established as well as Maintenance Plan. 5. Acquisition of the box WIS 2.0 by WMO. 6. Enhance the capacities of the calibration laboratory.
Maximize delivery capacity	*Outline the capacity of the peer advisor and the prospective Implementing Entity to deliver SOFF support efficiently and effectively in the country. State any ongoing or planned activities in the country for which the peer advisor receives funding from other sources.* No additional funds have been received by the peer advisor. AEMET has long experience in management AWS networks, calibration, data transmission and maintenance. AEMET has long experience supporting countries in Central and South America. Projects as the deployment of lightning detection network sponsored by AECID (Spanish Agency for International Development Cooperation) or the Regionalized climate change scenarios for Central America sponsored by FIIAPP (International and Ibero-American Foundation for Administration and Public Policies). Under CIMHET, AEMET has organized, or has led training courses related to Calibration and Maintenance of AWS, Satellite applications, communications, forecast, NWP and GHG Monitoring. UNDP is the largest resident United Nations agency in the country with more than 50 years of work experience, and with a strong partnership with the Ministry of Science, Technology and Environment (CITMA) and the National Institute of Hydraulic Resources (INRH), that positions it with a strong comparative advantage for SOFF implementation. UNDP has a strong program offering in natural resources management, Climate Change Adaptation and supporting data collection, whilst contributing to Disaster Risk Management capacity strengthening and building resilience. The country program document (CPD) 2020 – 2024 applies and integral and holistic program approach between Natural Resource management, Climate Change, Disaster Risk Reduction and social development and governance. For over two decades, UNDP has played a crucial role in enhancing the country's hydrometeorological surveillance and monitoring systems. This has been achieved through the transfer of technology for data acquisition and processing, which has helped improve weather forecasting systems and decision-making as part of early warning systems.

	Currently, UNDP is working together with CITMA in an initiative financed by the Green Climate Fund, "Mi Costa", to enhance resilience to climate change in the southern coast of Cuba, with a strong focus on environmental and hydrometeorological monitoring. At the same time there is a project financed by the Euroclima+ Program through the French Development Agency, to expand the coverage of the hydrometeorological surveillance and monitoring system in two provinces of the country and to increase resilience to drought and floods in a climate change context. UNDP has provided substantial technical and operational support to the country, including procurement related support services particularly as it relates to technical equipment for observation systems that will be important for SOFF. AEMET will keep the leadership in Iberoamerican countries for training courses under the Regional Training Center (RTC). The main strategic topics will be, Management and leadership, GHG Monitoring, NWP use for Tropical Area, Satellite Meteorology, Climate Change, Climate Services, Meteorological Radar and applications, Meteorology and Health.
Create leverage	*Provide initial indications on opportunities for complementarity of SOFF with previous, ongoing and planned operations by the SOFF Implementing Entities and other funds.* *From 1970 Cuban Meteorological Service has received investment from several donors:* • *In 1970, under the UNDP project "Expansion and improvement of the meteorological service in Cuba" acquired new equipment increasing the number of stations to 68, a calibration laboratory were installed and education and training initiatives were made. These continue to be operational, although requiring support in their upgrade.* • In 2010, additional AWS were acquired and the Calibrations Laboratory was also renovated. INSMET has improved some AWS with the participation of other international projects, including those supported by UNDP. SOFF provides an excellent opportunity for improving the GBON affiliation within the larger Caribbean area where real time meteorological information is also linked to saving lives through early warning alerts. Further, SOFF investment opens the possibility to modernize Cuba's technological infrastructure thirteen years after the last investment. Currently, INSMET's technological infrastructure presents problems of obsolescence and deficiencies to be able to

	fully support the services it provides as well as to fully deliver on tis GBON obligations. Spain as member of CIMHET could ensure the continuity of the investment done and improve the observation capabilities of The Republic of Cuba with several training courses under the umbrella of CIMHET and support to maintain the infrastructure. UNDP will further provide support through its existing environmental and disaster risk management portfolio that will work on enhancing capacities and integrating the national hydromet network with environmental monitoring and early warning capacities including through the GCF funded Mi Costa project.
refereSub-regional gains	*Provide initial indications on opportunities to create economies of scale and optimize the design of the observing networks through multi-country/sub-regional SOFF implementation e.g. existing sub-regional cooperation or opportunities for sub-regional procurement and operations and maintenance.* Developing new capabilities on observation network according GBON standards will offer the opportunity of improving technical capacities and enhance the capacity building in neighboring countries. Additional opportunities on education and training on maintenance, calibration, and communications. Opportunities on public-private engagement increasing the value of meteorological industry at sub-regional level. INSMET as member of CMO, this investment will optimize the design of the observations network and increase the stations in GBON for RA IV. Republic of Cuba and Spain are members of CIMHET, AEMET and INSMET are collaborating long time ago and SOFF can offer an excellent opportunity to consolidate future projects.
Ensure country balance	*Indicate if the country is a Small Island Developing State, a Least Developed Country, an ODA-recipient country, a Fragile and Conflict-affected State.* Yes. SIDS (sustainabledevelopment.un.org)

2. Readiness phase outputs, timeline and budget

The Terms of Reference for the development of the SOFF Readiness phase outputs (see Annex I) provide more detailed information. They also summarize the roles and responsibilities, as stated in the SOFF Operational Manual, of the beneficiary country, the peer advisor, the prospective Implementing Entity and WMO Technical Authority for the delivery of the Readiness phase outputs.

The budget for the development of the SOFF Readiness phase outputs by the SOFF peer advisor shall be a lump-sum, fixed cost amount. It shall be calculated using a cost-recovery approach based on the peer advisors' standard cost recovery rates.

Please indicate the expected time required to deliver the Readiness outputs and the total budget. See example below.

Table 2: outputs, timeline and budget

Outputs	Timeline					
	November	December	January	February	MArch	April
National GBON Gap Analysis						
GBON National Contribution Plan						
Country Hydromet Diagnostic (on demand)						
Total budget USD[1]	**160,000**					

[1] Eligible expenditures are limited to: Staff and consultants; Consultations, national technical workshops, and communications; Travel and transportation costs; Other incidental expenditures.

4. Monitoring

The beneficiary country and peer advisor shall notify the SOFF Secretariat on any delays that may impede the timely delivery of the Readiness phase outputs. If the assignment takes more than six months, the SOFF peer advisor shall submit semi-annual progress reports to the SOFF Secretariat (form to be provided by the SOFF Secretariat) stating the delivery status of the outputs.

The Readiness phase completion will be monitored by the peer advisor and the SOFF Secretariat using the following country-level Results Framework for the Readiness phase.

Table 3: Result framework

Outputs	Indicator	Target
1. GBON National Gap Analysis	GBON gap established and reviewed (Y/N)	GBON gap analysed and reviewed by WMO Technical Authority
2. GBON National Contribution Plan	GBON national contribution plan developed (Y/N)	GBON national contribution plan developed and reviewed by WMO Technical Authority
	GBON National Contribution Plan includes gender considerations (Y/N)	GBON National Contribution Plan includes gender considerations
3. Country Hydromet Diagnostic (on demand)	Country Hydromet Diagnostic developed (Y/N)	Country Hydromet Diagnostic developed

4. Evaluation

An evaluation from both, the beneficiary country and the prospective Implementing Entity on the quality of support received by the peer advisor will be conducted at the end of the Readiness phase and the peer advisor's assignment (form to be provided upon completion of the Readiness phase by the SOFF Secretariat).

5. Readiness Phase Risk Management Framework

Please provide a brief description of the contextual, institutional, and programmatic risks that might hinder the effective delivery of the Readiness phase outputs.

Table 3: Risk Management Framework

Risk category	Description	Probability	Mitigation action
Contextual risks Risks related to conflicts, safety and political insecurity jeopardizing the delivery of the Readiness phase outputs	**Lack of international cooperation and commitment.**	**Possible**	**In – situ analyses planned in close coordination with INSMET.** **Aligned plans to CMO and CIMHET.** **RA IV strategy plan**
Institutional risks Risks related to the beneficiary country's institutions participation in the Readiness phase activities	**Lack of cooperation between partners and stakeholders.**	**Rare**	**Leadership of INSMET. INSMET must lead strategic alliance with local and regional institutions. Key partners are already defined.**
Programmatic risks Risks related to country ownership of the Readiness phase outputs	**Lack of commitment of readiness phase outputs by stakeholders**	**Possible**	**Establishment of protocols and methodology to share outputs**

Annex 1. Assignment Terms of Reference for the development of the SOFF Readiness phase outputs

1. Purpose and scope

The purpose of this Assignment is to provide SOFF peer advisory services by AEMET to Republic of Cuba to develop the outputs of the SOFF Readiness phase as described in section 3 of these Terms of Reference.

The provisions defined in the Terms of Reference are based on the SOFF Operational Manual, in particular Section 4.4 on Operational Partners and Section 4.5.1 on the Readiness phase.

2. Roles and responsibilities

Beneficiary country National Meteorological and Hydrological Service

- Is responsible for implementing the activities of the Readiness phase with the support from the peer advisor and the prospective Implementing Entity.
- Prepares the Assignment Terms of Reference following the standard Terms of Reference provided by the SOFF Secretariat, in collaboration with the peer advisor and in coordination with the prospective Implementing Entity.
- Submits the funding request for the SOFF Readiness phase support using the standardized template provided by the SOFF Secretariat.
- Is responsible for collaborating with the peer advisor to provide all the necessary information and participate in and facilitate the national activities the peer advisor needs to conduct in order to develop the Readiness phase outputs.
- Confirms receipt of the peer advisors' report with the Readiness phase outputs and provides comments on the outputs as needed.

Peer advisor

- Is accountable to the beneficiary country.
- In dialogue with the beneficiary country, provides independent technical advice, analysis and recommendations to support the beneficiary country in implementing the activities of the Readiness phase.
- Develops the Readiness phase outputs and is responsible for their quality and timely delivery. Communicates regularly with the beneficiary country and the Implementing Entity.
- Engages with the civil society, including on the identification of stakeholders of relevance for GBON implementation.
- Submits the final report with the Readiness phase outputs to the country for comments and to the prospective Implementing Entity for feedback.
- Submits the final report including the beneficiary country's comments and the prospective Implementing Entity's feedback to the SOFF Secretariat.

- Notifies the SOFF Secretariat and the prospective Implementing Entity of any delays that may impede the timely delivery of the outputs, and for assignments for which the delivery takes more than six months submits a semi-annual progress report.

Implementing Entity

- Participates in the Readiness phase activities and collaborates with the beneficiary country and the peer advisor to ensure a common understanding of the Readiness phase outputs and that they address the technical needs for the design and implementation of the Investment phase.
- Contributes to the definition of the Terms of Reference and provides feedback on the outputs delivered by the peer advisor.
- Based on its experience in the beneficiary country, supports the work of the peer advisor, e.g. by sharing its knowledge and facilitating access to the network of relevant stakeholders.

WMO Technical Authority

- Provides basic technical support to the beneficiary country, peer advisor, and prospective Implementing Entity on GBON regulations.
- Is responsible for the technical screening of the draft GBON National Gap Analysis and the draft GBON National Contribution Plan against the GBON regulations.
- Is responsible for establishing and administering the pass-through mechanism for contracting and funding of the technical assistance provided by the peer advisors.

SOFF Secretariat

- Facilitates communication, coordination and collaboration between the beneficiary country, the peer advisor, the prospective Implementing Entity and WMO Technical Authority.
- Reviews the Readiness funding request, including the Terms of Reference, for compliance and consistency with the information requirements in the template and provides feedback as needed. Transmits the funding request to the SOFF Steering Committee for its decision.
- Confirms receipt of the peer advisors' report with the Readiness phase outputs.
- Organizes exchange of knowledge and experiences and captures lessons learned.

3. Readiness phase outputs

The peer advisor should perform the following tasks following the technical guidance and using the templates provided in the operational guidance documents for each one of the outputs. A summary of the key steps and modules to be conducted for each output is presented below.

3.1 GBON National Gap Analysis

The GBON National Gap Analysis defines the gap between the mandatory requirements of the GBON regulations and the existing country surface and upper-air networks. In other words, it serves as the basis for identifying the number of observing stations that need to be installed or rehabilitated to comply with the mandatory requirements of the GBON regulations.

To develop the GBON National Gap Analysis, the following steps should be followed

- **Step 1** – Country information from the GBON Global Gap Analysis
- **Step 2** – Analysis of existing GBON stations and their status against GBON requirements
- **Step 3** – GBON Gap Analysis results
- **Step 4** – Country endorsement for integration of the GBON National Gap Analysis into the GBON National Contribution Plan

3.2 GBON National Contribution Plan

The GBON National Contribution Plan identifies the infrastructure, human and institutional capacity needed to achieve a progressive target toward GBON compliance, including the sustained operation and maintenance of the national GBON observing network.

To develop the GBON National Contribution Plan, the following modules should be completed

- **Module 1. National target toward GBON compliance:** Establishment of a progressive national target toward GBON compliance
- **Module 2. GBON business model and institutional development**: public-private business model as appropriate; partnerships, institutional and financial arrangements needed to operate and maintain the observing network
- **Module 3. GBON infrastructure development**: Appropriate investments needed to increase or improve the observing network and its Information and Communication Technology (ICT) infrastructure
- **Module 4. GBON human capacity development**: Human technical and managerial capacities required to operate and maintain the observing network
- **Module 5. Risk Management:** Operational risks of the observing network and required mitigation measures
- **Module 6. Transition to SOFF Investment phase:** Support the beneficiary country and the Implementing Entity in preparing the Investment phase funding request (template provided by the SOFF Secretariat).

3.3 Country Hydromet Diagnostics

The Country Hydromet Diagnostic (CHD) complements the GBON National Gap Analysis and the GBON National Contribution Plan. It is a standardized, integrated and operational tool and approach for diagnosing National Meteorological Services across the meteorological value chain, their operating environment, and their contribution to high-quality weather,

climate, hydrological and environmental information services and warnings. Its assessment serves as a basis for investments beyond SOFF, across the whole value chain, by the SOFF Implementing Entity and other development partners.

The peer advisor should **assess the 10 CHD elements** with its respective indicators following the matrix provided in the CHD guidance document.

- Governance and institutional setting
- Effective partnerships to improve service delivery
- Observational infrastructure
- Data and product management and sharing policies
- Numerical model and forecasting tool application
- Warning and advisory services
- Contribution to climate services
- Contribution to hydrological services
- Product dissemination and outreach
- Use and national value of products and services

To develop the Country Hydromet Diagnostic, the following **steps** should be completed.

- Stage 1 – Information gathering. As input, the WMO Monitoring Evaluation Risk and Performance unit will provide available country data structured along the CHD elements and their indicators (performed remotely)
- Stage 2 – Validation and analysis (performed in-country if feasible)
- Stage 3 – Closure

4. Delivery process

The peer advisor in collaboration with the beneficiary country and in coordination with the prospective Implementing Entity should establish the specific activities and consultations needed to complete the outputs. The development of the outputs should include the following:

- Collaboration arrangements between the beneficiary country and the peer advisor, including at least one country visit, unless the country context does not allow it

    1. Kick off virtual meeting between INSMET-AEMET-UNDP.
        a. Information about the status of the observing and relevant communication networks of the NWS. Set up of available documents and reports about actual AWS and upper air stations. Verification of gaps.
        b. Planning for first country mission: tasks and dates.
    2. First country mission. Completion of steps 1 and 2
        a. Review 1.a via combination of interviews, with NMS staff, site visits and analysis of online data flows from www.wdqms.int
        b. Meeting with stakeholders-INSMET-AEMET-UNDP
    3. Periodic videoconferences between INSMET-AEMET-UNDP

4. Progress report virtual meeting between AEMET-INSMET-UNDP in March/April
5. Second country mission: Final validation national workshop with participation of peer advisor experts and stakeholders. April.

- Coordination arrangements with the prospective Implementing Entity

Republic of Cuba (INSMET) and AEMET and UNDP will have all agreed to hold regular coordination virtual meetings for sharing information.

- In-person or virtual consultation meetings with relevant national and international stakeholders and partners

Regular in-person or virtual consultation meetings with relevant national and international stakeholders and partners will be planned and organized by Republic of Cuba through INSMET in collaboration with the peer advisor and the prospective Implementing Entity. Point 2 to 5.

- Delivery partners that support the peer advisor in the delivery of the outputs, as applicable ***INSMET and UNDP.***

- Peer advisor delivery team and focal point

AEMET, Spain. Focal point: Fernando Belda
AEMEt team: José Luis Camacho Ruiz, Margalida Jaume Pujol, Javier Torres Ballester. AEMET will incorporate new staff for SOFF's projects.

- Timeline for the development of the outputs

November 2023-April 2024
Steps 1 and 2. November-January.
Steps 3 and 4. February-April

5. Reporting and completion

Reporting. For assignments for which the delivery of advisory services takes more than six months, the SOFF peer advisor shall submit a semi-annual progress report to the SOFF Secretariat (form to be provided by the SOFF Secretariat).

Completion

- **Step 1.** The peer advisor submits the draft GBON National Gap Analysis and the GBON National Contribution Plan reports to WMO Technical Authority and, as applicable, the draft Country Hydromet Diagnostics to the Monitoring Evaluation Risk and Performance unit of the WMO Secretariat. The draft reports have to follow the templates provided in the SOFF operational guidance documents.
- **Step 2.** WMO Technical Authority screens the draft GBON National Gap Analysis and the draft GBON National Contribution Plan to ensure consistency with the GBON regulations. The WMO Monitoring Evaluation Risk and Performance unit screens the draft Country Hydromet Diagnostics and provides feedback for revisions as needed.
- **Step 3.** The peer advisor submits the report with the Readiness phase outputs for beneficiary country and prospective Implementing Entity feedback.
- **Step 4.** The peer advisor finalizes the report for confirmation of receipt by the beneficiary country and, as needed, beneficiary country comments. Following beneficiary country receipt of the report, the peer advisor submits the report, including beneficiary country's comments and the prospective Implementing Entity's feedback, to the SOFF Secretariat.
- **Step 5.** The SOFF Secretariat confirms the satisfactory receipt of the report and informs the country and the prospective Implementing Entity accordingly. The SOFF Secretariat authorizes WMO to proceed with the release of the final payment and informs the SOFF Steering Committee of the completion of the SOFF readiness phase.

6. Signatures

By signing this document, the beneficiary country, peer advisor and the prospective Implementing Entity agree with the provisions stated in this Terms of Reference.

Beneficiary country	Ministerio de Ciencia Tecnología y Medio Ambiente Dr. Celso Pazos Alberdi Director General INSMET CI: 60111404761
Peer advisor	
Prospective Implementing Entity Ivan Zverzhanovski Deputy Resident Representative	DocuSigned by: 52007F7A8820418...