



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 to 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 to during the Readiness phase 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	Trinidad and Tobago
Country Focal Point	Shakeer Baig Director, Trinidad and Tobago Meteorological Service. Permanent Representative of Trinidad and Tobago with WMO dirmettt@gov.tt
Peer advisor	Finnish Meteorological Institute (FMI), Finland
Peer advisor Focal Point	Anni Karttunen anni.karttunen@fmi.fi
Prospective Implementing Entity	Inter-American Development Bank
Prospective Implementing Entity Focal Point	Gerard Alleng gerarda@iadb.org
Total budget USD	129745
Delivery timeframe	6 months from financial decision
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

<p>Close the most significant data gaps</p>	<p>The Meteorological Service of Trinidad and Tobago (MSTT) is a Division of the Ministry of Public Utilities and provides forecasts and services to the public and important economic sectors such as aviation, maritime and agriculture. The mission of the service is to provide meteorological information and advice consistent with international standards towards the pursuit of national, scientific, economic and cultural goals and sustainable development. The country covers an area of 5 131 km² and is split to the two main islands Trinidad and Tobago with a terrain that has a mixture of mountains and plains.</p> <p>Trinidad and Tobago complex topography and terrain interact with the climate to control the local extreme weather in ways that leads to significant variability in space and time of terrain-driven changes in rainfall and temperature micro-climates and localized weather patterns across the islands.</p> <p>In Trinidad and Tobago there are two manned GBON surface weather stations with automatic weather stations distributed, with one station on each island. Each of these stations currently exchange observations internationally using the internet to satisfy the WDQMS and WIGOS required data availability. The stations have less than 90km distance between them and are located on each of the islands thus fulfilling the GBON horizontal resolution regulations. The stations are located on Piarco International Airport and Crown Point Airport.</p> <p>Both manned stations face increasing challenges of reduced daily observation availability due to an acute shortage of observers at times, as well as conventional instruments, which at times limit the weather parameters being observed and recorded.</p> <p>Given the complexity and difference in climatology within and across each of the islands, the location of the two manned GBON stations in the context of the needs and relevance for the Global Numerical Weather Prediction centres places Trinidad and Tobago as a data sparse area with missing observations globally, which is critical issue for the global weather prediction centres; since these two stations would not sufficiently represent the islands weather within the context of the needs of Numerical Weather Prediction models that the GBON is envisaged to satisfy.</p>
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The missing national representative observations is critical for the NWP and their forecasts skill across the region as a whole. Given the importance of NWP products to the MSTT and Trinidad and Tobago, it is important that the national GBON network design assist not only with enabling sufficient inter-station distance but also cover un-observed areas as well as under-observed areas that are important in the context of relevance for NWP. This is critical to ensure appropriate representation of high spatial and temporal variability of the local weather is provided by the NWPs.

Even though the MSTT has two designated GBON stations, it faces a critical GBON data transmission challenges associated with telecommunication and connectivity issues that facilitate data transmission to the WMO Information System (WIS 2.0).

The MSTT requires assistance and funding for sustainable access to cloud services that will enable the MSTT to exchange its observations nationally, regionally and internationally using WIS 2.0, directly from its existing observation infrastructure and network.

Upper-air soundings are made at Piarco International Airport. These have been provided once a day instead of the GBON required twice a day due to staffing issues and the operations has suffered recently of malfunctions with the existing Hydrogen Generator. The station is part of the US National Weather Service (NWS) led Cooperative Hurricane Upper-Air Stations Network. By MoU, the Meteorological Service of Trinidad and Tobago has received assistance from the National Weather Service to maintain and operate the station.

The main challenges experience are largely related to availability of resources to purchase hydrogen gas when the system malfunctions or there is a component failure that requires the NWS to procure and ship the relevant component, which could take a relatively long time. Strengthening the reliability of operations and preventing operational gaps for the future need to be considered.

The importance of strengthening soundings operations in Trinidad and Tobago is highlighted by the poor network in the neighbouring countries (Venezuela, Guyana and Grenada).

Marine weather observations is critical to Trinidad and Tobago. The majority of extreme weather events occurring in Trinidad and Tobago develop in the water east of the islands and within the country's Exclusive Economic Zone (EEZ), where the MSTT is significantly challenged with observations availability. The country does not have any observation stations in waters to its east in the EEZ where the most significant weather traverse prior to impacting the island.

Observations within the country's EEZ are critical for Trinidad and Tobago given the economic effects of weather developing in this area

	<p>and moving on to impact the islands. Improved observations over the country's marine space will significantly improve the NWP products it depends on.</p>
Target easy fixes	<p>The most pressing need is to strengthen soundings operations on Piarco International Airport to meet the two soundings per day GBON requirements. This may include repairing the old Hydrogen Generator or replacing it with a new one.</p> <p>The status of surface weather station sensors needs to be analyzed and the possibility of automatizing the manual stations is investigated during the implementation of the readiness phase.</p> <p>The need to strengthen calibration, maintenance and data management system and processes will be considered in detail during the readiness phase.</p> <p>Currently, Trinidad and Tobago has an additional 12 automatic weather stations (AWS), across a relatively low-density AWS network, but these stations are not on the GBON network. This is due to challenges associated with limited resources for operation and maintenance, observation frequency, communication and telemetry issues, lack of continuous operation and maintenance due to the harsh tropical environment that can affect the AWS sensors. This latter point leads to increased needs for spare parts and maintenance support that are not always available or sustainable.</p> <p>The MSTT is also challenge with communication systems to get the data from the AWSs to its operations and the public, as well as issues with its data management component of the value chain. Together, these challenges prevent the MSTT existing network of AWSs to exchange and share the data that emanates from the network.</p> <p>Opportunities to upgrade and or rehabilitate the existing observation infrastructure will be looked into so that the stations are transmitting observations in real-time nationally, regionally and globally and with increased frequency in a sustainable manner.</p>
Maximize delivery capacity	<p>Implementing Entity IDB has extensive experience related to implementing projects in the Caribbean. IDB is also currently working with the SOFF funding instrument in other countries in the Caribbean region.</p> <p>The Peer Advisor has long and extensive experience in working worldwide in many hydro-meteorological development projects (projects in over 100 countries).</p> <p>FMI has completed a series of Finnish-funded capacity building projects during the recent years in SIDS's countries in the Caribbean (SHOCS I and II) and Pacific region (FPPICS and FINPAC). SHOCS</p>

	<p>projects that focused on improving Caribbean countries resilience to impacts of hydro-meteorological hazards including the impact of climate change with multi-hazard early warning systems and disaster risk reduction and the human capacity needed included 16 Caribbean countries including Trinidad and Tobago.</p> <p>Peer Advisor has currently no ongoing activities in Trinidad and Tobago.</p>
Create leverage	<p>SHOCS projects I and II focused on improving policies, communication and human capacity on national and regional level to strengthen resilience to impact of hydro-meteorological hazards was funded by the Finnish Government.</p> <p>The regional aspect of maintaining and harmonizing practices for the Caribbean network is present as FMI is acting as the SOFF Peer Advisor in five countries in the region. This is further emphasized as the Implementing Entity IDB is working with the same countries as well as countries with different Peer Advisors. To strengthen the regional capacity collaboration and knowledge sharing with other important regional organizations such as Caribbean Meteorological Organization (CMO), Caribbean Institute for Meteorology and Hydrology (CIMH) and Caribbean Disaster Emergency Management Agency (CDEMA) should be included when feasible. Especially crucial role plays the CIMH in the region in terms of the observation data quality as it operates the regional instrument calibration facilities in the Caribbean region. Synergies and means for the instrument calibration procedures in collaboration with the CIMH will be sought during the implementation of the SOFF.</p> <p>The WMO Regional Climate Center (RCC) hosted by the Caribbean Institute of Meteorology and Hydrology (CIMH) provides climate services and technical support to regions National Meteorological and Hydrological Services. SOFF support to Trinidad and Tobago will play a complementary role in strengthening the MSTT monitoring and observation capacity that will enable it to provide improved data density that can lead to improved and more effective climate services across the region by the RCC.</p>
Sub-regional gains	<p>The Meteorological Services of Trinidad and Tobago is a member of WMO and a part of the Caribbean Meteorological Organization (CMO). CMO headquarters are located on Trinidad.</p> <p>Caribbean SIDS are part of a wider Caribbean and Atlantic warning system linked to the Hurricane Center and NOAA.</p> <p>The enhancement of Trinidad and Tobago observation network and data transmission will assist with ensuring a regional and sub-regional GBON network design that provide enhanced and sufficient inter-</p>

	<p>station distance, along with previously unobserved or under-observed areas where complex topography and terrain impacts observations that are of particular interest and relevant to the global NWP.</p> <p>This SOFF support is expected to provide broader benefits to the Eastern Caribbean sub-region and will assist with long-term sustainability of the regional and global WIGOS program, including compliance requirements of the Regional WIGOS Center and its sub-regional node.</p> <p>The sub-region will have additional access to more observations that will strengthen weather and climate Services for resilient development for Eastern Caribbean Islands. The enhanced observation availability will enhance sub-regional capability to provide Impact-Based Forecast and Warnings and improve the effectiveness of the early warning</p> <p>The regional collaboration and capacity will be strengthened by facilitating regional calibration and maintenance workshop between Caribbean SOFF countries and the Caribbean Institute of Meteorology and Hydrology (CIMH) to ensure GBON network required uptime and quality and benchmarking good data management and communication processes between the institutes. Moreover, this workshop is proposed to find and design unified solutions for acquiring observation and data management systems in the FMI and IDB implemented SOFF projects in the Caribbean region.</p>
Ensure country balance	Trinidad and Tobago is a Small Island Developing State.

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					
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6 ¹
National GBON Gap Analysis						
GBON National Contribution Plan						
Country Hydromet Diagnostic (on demand)						
Total budget USD²	129745					

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

¹ It is expected that the assignment is completed within six months. If more time is required for exceptional circumstances, please add additional months to the table.

² Eligible expenditures are limited to: Staff and consultants; Consultations, national technical workshops, and communications; Travel and transportation costs; Other incidental expenditures.

3. Country Hydromet Diagnostic (on demand)	Country Hydromet Diagnostic developed (Y/N)	Country Hydromet Diagnostic developed
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3. 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).

4. 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	<p>Natural disasters or severe weather events may cause delay in the implementation (in the Hurricane season June-November)</p> <p>Pandemic/ epidemic related travel restrictions will delay the implementation</p>	<p>Low to Medium</p> <p>Low</p>	<p>Concentrating in-country missions outside of the hurricane season.</p> <p>Preparation to conduct relevant FMI work also remotely using online tools. Vaccinations.</p>
Institutional risks Risks related to the beneficiary country's institutions participation in the Readiness phase activities	<p>Manage to get all relevant stakeholders to participate</p>	<p>Low</p>	<p>Sufficient awareness and communication on GBON and SOFF to management and stakeholders.</p>
Programmatic risks Risks related to country ownership of the Readiness phase outputs	<p>All employees might not own the project as their top priority.</p>	<p>Low</p>	<p>Sufficient awareness and communication on GBON and SOFF to management and staff on all levels.</p>

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 Finnish Meteorological Institute to the Meteorological Service in Trinidad and Tobago 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 two country visits, unless the country context does not allow it
- In-person or virtual consultation meetings with relevant national and international stakeholders and partners
 - A mission on GBON Gap Analysis in Trinidad and Tobago including necessary site visits. The mission is planned for November.
 - A mission on the national contribution plan and workshop on Country Hydromet Diagnostics in Trinidad and Tobago, including relevant stakeholders. The mission is planned for early 2024 January/February.
 - Internal stakeholders will be contacted through online conference when necessary.
 - Continuous communication between FMI and Meteorological Service of Trinidad and Tobago will be organized through regular online meetings

- A mission for Trinidad and Tobago meteorological staff to attend regional calibration and maintenance workshop including tentatively Caribbean Institute of Meteorology and Hydrology as stakeholder. This workshop is designed to ensure GBON network required uptime and data quality as well as benchmarking good data management and communication processes between the institutes and to the WMO systems. Moreover, this workshop is proposed to find and design unified solutions for acquiring any observation and/or data management systems in the FMI and IDB implemented SOFF projects in the Caribbean region. The mission is planned for early 2024 January/February.
- Coordination arrangements with the prospective Implementing Entity
 - The work between Peer Advisor and Implementing Entity will be synchronized during regular online status meetings.
- Delivery partners that support the peer advisor in the delivery of the outputs, as applicable: not applicable
- Peer advisor delivery team and focal point
 - The peer advisor focal point is:
 - Ms. Anni Karttunen, anni.karttunen@fmi.fi
 - The delivery team members are:
 - Mr. Matti Eerikäinen, matti.eerikainen@fmi.fi
 - Mr. Harri Pietarila, harri.pietarila@fmi.fi
 - In addition to the dedicated delivery team members, the peer advisor will utilize experts from the SOFF delivery support expert pool, depending on the gaps found and required expertise needed. The SOFF delivery support expert pool:

Name	Expertize
Mikä Hyötylä	<ul style="list-style-type: none"> • Surface observation networks
Vilma Kangasaho	<ul style="list-style-type: none"> • Surface observation networks
Anu Petäjä	<ul style="list-style-type: none"> • Observation network operation and costing
Timo Laine	<ul style="list-style-type: none"> • Upper air radio soundings
Jaakko Siltakoski	<ul style="list-style-type: none"> • Observation equipment
Elmeri Nurmi	<ul style="list-style-type: none"> • Data management systems
Minna Huuskonen	<ul style="list-style-type: none"> • GBON and WIGOS compliance
Janne Kauhanen	<ul style="list-style-type: none"> • Data management • Forecast models
Sami Kiesiläinen	<ul style="list-style-type: none"> • Data management systems
Julia Warley	<ul style="list-style-type: none"> • Observation equipment
Anne Hirsikko	<ul style="list-style-type: none"> • Observation networks
Jenni Latikka	<ul style="list-style-type: none"> • Forecast production and service delivery

Juhana Hyrkkänen	<ul style="list-style-type: none"> • Business model and institutional development • Legal framework • Observation network operation design
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- Timeline for the development of the outputs
 - National GBON Gap Analysis: during the implementation months 1-3. The gap analysis report will be handed over by the end of the month 3.
 - National GBON Contribution Plan: during the implementation months 3-6. The National GBON Contribution Plan will be handed over the latest during the month 6.
 - Country Hydromet Diagnostic: during the implementation months 1-6. The Country Hydromet Diagnostic will be handed over the latest during the month 6.

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.

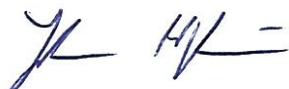
6. Signatures

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



Peer advisor



Prospective Implementing Entity

