



SOFF Readiness Funding Request Djibouti

Version 1.0

17 January 2023

Systematic Observations
Financing Facility

**Weather
and climate
data for
resilience**



SOFF Readiness Funding Request

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**.

1. Basic information

SOFF Beneficiary Country	<i>Djibouti</i>
Country Focal Point	<i>Omar Gouled Allaleh, Deputy Director General of the National Meteorological Agency omarallaleh@gmail.com</i>
Peer advisor	<i>GeoSphere Austria</i>
Peer advisor Focal Point	<i>Giora Gerhstein, International relations expert, GeoSphere Austria, Vienna. Giora.gerhstein@geosphere.at</i>
Prospective Implementing Entity	<i>UNDP</i>
Prospective Implementing Entity Focal Point	<i>Emma Ngouan-Anoh (UNDP Djibouti)</i>
Total budget USD	147217 USD
Delivery timeframe	8 months
Date of approval	19 September 2023
Signature SOFF Steering Committee co-chairs (after Steering Committee approval of the funding request)	

2. SOFF Programming criteria

Table 1: Programming criteria

Close the most significant data gaps

The National Meteorological Agency (NMA), created by Law No. 108/AN/10/6 on the reorganization of the Ministry of Equipment and Transport, is a public administrative body with a public service remit. The Agency has legal personality and enjoys financial and accounting autonomy in the exercise of its public service mission. The mandate of NMA was defined with the Government Ordinance No. 2012-167/PR/MET, which includes its mission, observation networks organization and services.

The Republic of Djibouti has only one surface synoptic station and no upper-air stations. Djibouti is lacking sufficient surface, marine and upper-air stations to meet GBON's minimum spatial resolution specification of 200 km, let alone the high resolution GBON requirement. Our surface station is conventional (manned) and is located at Ambouli International Airport, where observations are made at hourly intervals. Data from this station is transferred by intranet and telephone to the air navigation and transmission section for transmission to the WMO GTS. It is not unusual for data to be missing due to the absence of observers, instrument failure and communications. There have been no upper air observations by radiosonde in Djibouti.

The AFTN system via CopperChase software was used as a means of GTS communication between Djibouti and Addis, but this system has failed since 2018 and data are sent by email to the regional center in Réunion. A GTS/Message Switching System should be installed to build up GTS connection with the WMO Regional Telecommunication Hub (RTH) in Kenya to exchange meteorological data/information with other countries. Therefore, Djibouti GBON gaps are multi-faced including spatial coverage, observation frequency, communication, operation and maintenance of potential GBON stations as well as skills of observers and maintenance engineers, and lack of spare parts.

Membre de l'OMM: Djibouti					
Superficie: 23.200 en km ²					
Type de station	Objectif	Rapports	Écart (total de stations requises)	Écart (stations devant faire l'objet d'améliorations)	Écart (stations devant être de nouveau installées)
Stations d'observation terrestre en surface du ROBM (densité standard)	1	0	1	1	0
Stations d'observation terrestre en surface du ROBM (haute densité)	3	0	3	1	2
Stations d'observation terrestre en altitude du ROBM	1	0	1	0	1

Target easy fixes	<p>There are several aspects that can be approached. An initial easy target could be the replacement of the only manual station with an AWS/AWOS automatic station and therefore reach the GBON minimal objective. This however should come with upgraded communications systems and ensure corresponding resources for handling and maintenance. In addition, new sites could also be identified based on GBON's high resolution requirements for the installation of new automatic stations.</p> <p>The required communications system between the station and the operation centre, should be updated to ensure sharing the data internationally through WIS/GTS. A consideration for using the Eumetsat Data Collection Service (DCS) for transmission of data to WIS/GTS and the operational centre would address the telecommunication issue between the observing station and the operational centre through 2G telecom system while allowing international sharing of data.</p> <p>For upper air observation, given the lack of existing capacity, it would require that a new station would be installed at a new site, in accordance with WMO Guide to Instruments and Methods of Observation Vol 1, Chapter 13.</p> <p>Last, but not least, spare parts for AWS/AWOS, installations, maintenance and calibration and capacity building for maintenance engineers need to be put in place to enable Djibouti to systematically comply with GBON requirements.</p>
Maximize delivery capacity	<p>Geosphere Austria, formerly known as the Austrian Meteorological and Geodynamics service, has performed the Hydromet Diagnosis in Kazakhstan, North Macedonia and has deployed EWS in Myanmar. In addition, Geosphere Austria is already active for three countries in the first SOFF batch constantly proving capacity delivery in this specific framework. Hence, based on this practical experience, Geosphere Austria can act as SOFF peer advisors with adequate capacity to deliver SOFF support efficiently and effectively in Djibouti.</p> <p>The Geosphere Austria peer advisor receives no funding from other sources for the planned activities in the country neither has ongoing projects in the country.</p>
Create leverage	<p>There are a few initiatives that must be approached to potentially establish synergies and create some leverage. In particular, as part of its integrated programme, financed by the Global Environment Facility (GEF) and the Green Climate Fund (GCF), the United Nations Development Programme (UNDP) has taken steps to better understand the impact of climate change by working on the collection of meteorological data. The UNDP recognizes the importance of reliable meteorological data for assessing the effects of climate change and taking appropriate action. UNDP intends to help the government strengthen and contribute to the establishment of a robust early warning system to</p>



	<p>address the impacts of climate change, particularly recurrent floods and droughts. A robust early warning system is essential to anticipate and respond rapidly to extreme weather events and climate phenomena that can have devastating consequences for vulnerable populations. Similarly, the World Bank, the International Fund for Agricultural Development (IFAD), the World Food Programme, the Intergovernmental Authority on Development (IGAD) and the African Development Bank (AfDB), in collaboration with the Ministries of Agriculture and the Ministries of Social Affairs and Solidarity, have launched ambitious initiatives to improve food security and strengthen resilience to shocks in Djibouti. These projects aim to meet the urgent needs of vulnerable populations and help them to cope with the challenges posed by natural disasters such as floods and droughts. An essential element of these initiatives is the strengthening and improvement of the coordination of actions as well as the collection and analysis of data to set up an early warning system.</p> <p>Upcoming CREWS-Djibouti (in preparation by WMO-WB) will consider addressing observational gaps in Djibouti and therefore will be leveraged to meet high resolution GBON requirement.</p> <p>Discussions with the coordinators of these projects shall take place to seek leverage actions with SOFF considering the time frame of its Implementation Phase.</p>
Sub-regional gains	<p>As part of a regional initiative funded by the Sahara and Sahel Observatory (OSS), Djibouti is implementing a project to strengthen regional cooperation on early warning systems and drought management. The project aims to increase the use of effective early warning systems by stakeholders, by facilitating the sharing of information and data between countries in the region. The project also plans to strengthen the drought resilience of key stakeholders at regional, national and local levels, by promoting strong and sustainable partnerships for drought management and adopting concrete and innovative drought adaptation measures, encouraging the exchange of best practices and knowledge between countries in the region. The sharing of Djibouti data internationally contributes to strengthening regional collaboration.</p> <p>Djibouti is also a member of the IGAD Climate Prediction and Applications Centre (ICPAC), a regional institution specialising in climate prediction and applications. As a member of ICPAC, Djibouti benefits from access to climate data, forecasts and early warnings to support decision-making in various climate-sensitive sectors, such as agriculture, water resource management, food security and disaster prevention. Djibouti's participation in ICPAC strengthens regional cooperation on climate and contributes to building resilience to climate challenges in the region.</p>

Ensure country balance	Djibouti is one of the least developed countries in sub-Saharan Africa. It is affected by frequent droughts and floods, and it is essential to build up its resilience to climate change and ensure sustainable development.
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3. 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.

Table 2: outputs, timeline and budget

Outputs	Timeline						Month 7	Month 8
	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	147217 USD							

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.

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

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	There are no existing/known risks in this category that would disrupt project delivery. Instability at the border with Somalia might potentially affect the activities.	Low	Work essentially through Video conferences and emails and keep proper track of the political evolution.
	Extreme Weather or natural hazard threads that may limit accessibility of peer or the national personnel availability.	Medium	Organise the face to face visits outside the rainy seasons. Work remotely with partners.
	Personal Safety and Health.	Low	Avoid high risk areas. Use protective gears when and if needed Immunization against tropical specific illnesses as recommended by the health authorities.
Institutional risks Risks related to the beneficiary country's institutions participation in the Readiness phase activities	Potential difficulties of coordination between institutions and obtaining their support	Medium	Advance notice (minimum 7 days) to institutions/responsible staff on the need for their participation in any aspect of the intended activities. Routine engagement as needed.



			Briefings as required.
	<p>Cultural and traditional festivities.</p> <p>Awareness of communities with respect to the project objectives and deliverable.</p>	Low	<p>Plan all the activities in consideration of constraints related to national and religious festivities.</p> <p>Ensure communities are informed of the project before hand</p>
<p>Programmatic risks Risks related to country ownership of the Readiness phase outputs</p>	Lack of Country Ownership.	Low	<p>Meet with, and gather the support, of senior government officials.</p> <p>Obtain full commitment of the WMO PR</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 GeoSphere Austria to Djibouti National Meteorological Agency 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.* It is expected to have one one-week visit to:
 - Perform the GBON gap analysis.
 - Perform the interview/exploratory activities to gather the information for the CHD. This will include interaction with the PR and staff members, potential visits to station locations and exchange with stakeholders.
 - Perform a review and agreement of the CHD final version.
 - Have face-to-face discussions and exchange with all the relevant national/international key players for the preparation of the National Contribution Plan.
- *Coordination arrangements with the prospective Implementing Entity.* This activity envisages:

- 1 Initial Kick-off meeting with the implementing entity, peer advisor and beneficiary country. This meeting is going to be virtual.
- 1 workshops/meeting, if possible one face to face during the aforementioned visits.
- 1 Agreement meeting (virtual) to finalise and formally agree on the National Contribution Plan.
- *In-person or virtual consultation meetings with relevant national and international stakeholders and partners.*
 - Within the on-site visit, a set of face-to-face discussions with national stakeholders will take place. This aims at exploring both sustainability and usability of data and products to facilitate considerations of the complete value chain in all the SOFF activities.
 - A virtual workshop is expected at the end of the 8-month period together with the implementing entity and stakeholders, national and representatives of major international organisations (as possible)
- *Delivery partners that support the peer advisor in the delivery of the outputs, as applicable.* No additional support other than that of the SOFF Secretariat is envisaged. The performance of the SOFF activities will include the liaison and support of the consultant Abdoulaye Haro, who, through his background knowledge will act as facilitator, reviewer and general support in the on-site and off-site activities.
- *Peer advisor delivery team and focal point.* The activities include the following team members:
 - Giora Gershtein – Focal Point
 - Delia Arnold – SOFF support
 - On-demand technical expertise based on the initial assessment. The profile will focus on observational aspects including maintenance and data provision.
- *Timeline for the development of the outputs.* The outline follows that of the financial proposal:
 - Initial visit – November 2023
 - Finalisation of the GBON Gap Analysis – January 2024
 - Finalisation of the CHD - January 2024
 - Finalisation of the National Contribution Plan – April 2024

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.

MOHAMED ISMAEL NOUR
Beneficiary country
Représentant Permanent de
Djibouti Auprès de l'Organisation
Météorologique Mondiale (OMM)

Champs

MOHAMED ISMAEL NOUR
DG de l'Agence Nationale
de la Météorologie

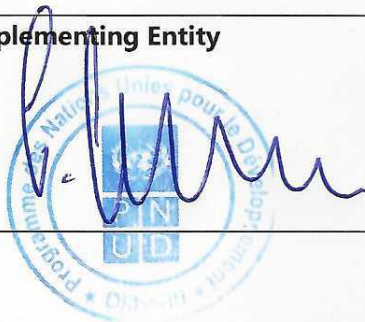
Peer advisor

Andreas Schöffhauer

[Signature]

Directorate General GeoSphere Austria

Prospective Implementing Entity



Gaël Olivier
Représentative a.i. UNDP