



Ref.: 18983/2023-1.0 I

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# SOFF Readiness Funding Request Template

Version 1.0

17 January 2023

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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

<b>SOFF Beneficiary Country</b>	Suriname
<b>Country Focal Point</b>	Dewdath Bhaggoe MBA BTech Deputy Director of Research and Innovation Ministry of Public Works Permanent Representative of Suriname at WMO
<b>Peer advisor</b>	Royal Netherlands Meteorological Institute (KNMI)
<b>Peer Advisor Focal Point</b>	Ir.Rubert Konijn KNMI Strategic Business Manager Climate dr.Ir.Gé Verver Coordinator International Affairs
<b>Prospective Implementing Entity</b>	United Nations Development Programme (UNDP)
<b>Prospective Implementing Entity Focal Point</b>	Bryan Drakenstein Programme Specialist Energy and Environment UNDP Suriname
<b>Total budget USD</b>	150,000.00
<b>Delivery timeframe</b>	November 2023 to June 2024
<b>Date of approval</b>	
Signature SOFF Steering Committee co-chairs (after Steering Committee approval of the funding request)	

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## 2. SOFF Programming criteria

Table 1: Programming criteria

<p><b>Close the most significant data gaps</b></p>	<p><i>Currently, the Meteorological Service Suriname (MDS) operates 5 types of stations in its observations network: 3 synoptic stations that do all the measurements on an hourly basis, where 1 operates 24/7, and 2 of them close at certain times. There are 4 climatological stations that measure only essential parameters, 2 or 3 measurements during the climatological hours. One upper air observation system in Paramaribo, with weekly radiosonde and ozonesonde measurements. There are in total 17 AWSs and a large number of rainfall stations that only measure precipitation. 15 of them are automated rainstations. All data are shared on the network in near real-time</i></p> <p><i>The WMO Global GBON Gap Analysis for Suriname provides an estimate of four (4) surface and daily upper-air measurements that are needed to meet the GBON requirements.</i></p> <p><i>The MDS prepared a Meteorological Network Strategic Plan outlining the status of the network, the future needs, and a strategy for sustainable development and deployment of the observation network. In the plan, a significant increase in station density is proposed as well as a transition from manual to automated observations, and an increase of soundings.</i></p> <p><i>The SOFF readiness phase will further specify the gaps by comparing them with the GBON requirements and use the Network Strategic Plan also for the preparation of the National Contribution to GBON using the SOFF standard templates.</i></p> <p><i>The assessment and plan prepared during the Readiness phase will include the communication facilities. Currently, the real-time observational data transmission and connection are through the ICAO regional data center in Brazil.</i></p> <p><i>The assessment and plan will also include capacity development and the operation and maintenance of the measuring equipment in order to ensure the quality and reliability of the observed data.</i></p>
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	<p><i>The increase in information derived from the extension of the AWS network places higher demands on the data concentration center and the database in terms of infrastructure and database tools as well as on the need for training in the use of data quality control techniques. Currently, these are major challenges for the MDS.</i></p> <p><i>The items mentioned above will be further specified and motivated using the GBON criteria in the Gap Analysis and National Contribution plan delivered during this SOFF Readiness phase.</i></p>
<b>Target easy fixes</b>	<p><i>As described in the previous point, physically Suriname does already have an observation network, but some of the data received are not optimal or accurate, as a result of not maintaining the instrument in time or a lack of spare parts, such as solar panels, batteries, dataloggers, transmitters, sensors, etc. Rehabilitation of these stations is relatively easy if these spare parts are available.</i></p> <p><i>In the Network Strategic Plan, new automatic stations are planned to improve the density of the observation network, the time resolution of the observations and the timely dissemination of the data.</i></p> <p><i>Even though marine observations are not part of the current SOFF scope of support, marine observations are of great importance, since Suriname is a country highly vulnerable to climate change. Some main effects include sea level rise and increased storm surges leading to coastal erosion and flooding. The recovery of the stations are easy fix that will be further specified in the GBON National Contribution Plan delivered in the proposed Readiness Phase</i></p>
<b>Maximize delivery capacity</b>	<p><i>KNMI and UNDP (peer advisor and Implementing Agency respectively) both have the capacity to contribute effectively and efficiently to the Readiness Phase deliverables.</i></p> <p><i>Since 1999, KNMI and the Meteorological Service Suriname (MDS) have contributed to the weather forecasting and monitoring of climate change. Fixed radiosonde and ozonesonde measurements located in the tropics, such as the MDS, are unique in the world. That is why the observations in Suriname are not only important for the country itself but also important for weather forecasting</i></p>

*and climate monitoring worldwide. Climate series have been set up in the meteorological cooperation between the Netherlands and Suriname, from which new knowledge about the climate can be gained precisely by maintaining the same measurement activities together.*

*The weekly measurements with radiosondes are done at the MDS. The employees are specially trained for this. The partnership is small-scale and is driven entirely by a shared commitment to persevere and complete what began in 1999. Time is an important partner for the ambition to measure climate change. The KNMI invests knowledge and time in this collaboration. KNMI has ample experience in providing support to peer NMHSs outside Europe: i.e., in South America, Southeast Asia, and Africa, and is SOFF peer advisor for Senegal, Cabo Verde, Sao Tomé and Príncipe, and Uganda.*

*UNDP is one of the largest resident United Nations agencies in the country, with a strong programme offering comprising democratic governance, social development, natural resources management, and climate change. The UNDP with its presence in the country and strong partnerships with State and non-State actors, has a strong comparative advantage for SOFF partnerships and programme implementation. UNDP has a strong programme and niche in natural resources management, Climate Change Adaptation and supporting data collection, whilst contributing to Disaster Risk Management capacity strengthening and building resilience. The country programme document (CPD) 2022 – 2027 applies an integral and holistic programme approach between Natural Resource management and Climate Change and social development and governance. UNDP under the CPD will continue to build its programme areas, ensuring strong broad-based consultations, raise the visibility of the results achieved and advocate for inclusive development, including vulnerable and marginalized groups.*

*UNDP is also the implementation body of the Global Climate Change Alliance Plus (GCCA+) which is a European Union flagship initiative aimed at helping the world's most vulnerable countries to address climate change. The Global Climate Change Alliance Suriname Adaptation Phase 2 project and Climate Promise Adaptation Pipeline Accelerator and other initiatives support the*

	<p><i>government of Suriname to adapt to Climate change impacts by building resilience through integrated water resource management, sustainable use, and coastal ecosystems management. UNDP will hence look to integrate SOFF investments within a wider adaptation framework focused on enhancing national capacities for climate information and comprehensive early warnings, hence linking global objectives with national needs.</i></p>
<b>Create leverage</b>	<p><i>The Caribbean-CREWS (Climate Risk and Early Warning Systems), CIMH (Caribbean Institute for Meteorology &amp; Hydrology), and CARICOF (Caribbean Climate Outlook Forum) will benefit from the re-establishment and upgrade to GBON standards of the observation network in Suriname. It will contribute to more effective early warnings. The observations will also be submitted to the Regional Climate Centre strengthening the climate change assessments and underpinning of climate change adaptation actions.</i></p>
<b>Sub-regional gains</b>	<p><i>The MDS is open to collaborating with countries in the region to optimize the installation, operation, and maintenance of the observation network.</i></p> <p><i>The MDS has experience in collaborating with CIMH (Caribbean Institute for Meteorology &amp; Hydrology), the Caribbean Meteorological Organization (CMO), and the Caribbean Disaster Emergency Management Agency (CDEMA) which is a regional inter-governmental agency for disaster management that falls directly under the Caribbean Community (CARICOM)</i></p> <p><i>Regionally, MDS is available to be part of the initiative implementing EWS for the region, sharing the observational data in near real-time, which will be possible after the upgrade and installation of additional communication facilities as part of the SOFF initiative.</i></p> <p><i>If additional facilities for the operation and maintenance of the measuring equipment are installed through SOFF, these might also be used by other countries in the region.</i></p>



<b>Ensure country balance</b>	<i>Suriname is on the list of Small Island Development States (SIDS) designated by the UN. It is not a Fragile and Conflict-affected State.</i>
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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 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7
<b>National GBON Gap Analysis</b>							
<b>GBON National Contribution Plan</b>							
<b>Country Hydromet Diagnostic (on demand)</b>							
<b>Total budget USD<sup>1</sup></b>	150,000						

### 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-

<sup>1</sup> Eligible expenditures are limited to: Staff and consultants; Consultations, national technical workshops, and communications; Travel and transportation costs; Other incidental expenditures.



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
<b>1. GBON National Gap Analysis</b>	GBON gap established and reviewed (Y/N)	GBON gap analysed and reviewed by WMO Technical Authority
<b>2. GBON National Contribution Plan</b>	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
<b>3. Country Hydromet Diagnostic (on demand)</b>	Country Hydromet Diagnostic developed (Y/N)	Country Hydromet Diagnostic developed

## 5. 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).

## 6. Readiness Phase Risk Management Framework

Table 3: Risk Management Framework

Risk category	Description	Probability	Mitigation action
<b>Contextual risks</b> Risks related to conflicts, safety and political insecurity jeopardizing the delivery of the Readiness phase outputs	The travel advice for Suriname by the Dutch government is negative (code Orange or Red) or travel is impossible for other reasons, making in-person meetings impossible. Deliverables might be delayed.	Low/medium	Meetings will be primarily online and will rely on digital sharing platforms. Further , meetings will be organized with a wider range of stakeholders.
<b>Institutional risks</b> Risks related to the beneficiary country's institutions participation in the Readiness phase activities	MDS currently does not have the full capacity to provide personnel, information, or expertise to complete the deliverables	Low	MDS will assign multiple persons to contribute to the deliverables, to ensure that information and duties are not focalized in one person. KNMI and UNDP will support in the preparation of deliverables and will ensure a close follow up to the work plan.
<b>Programmatic risks</b> Risks related to country ownership of the Readiness phase outputs	The gap analysis and the national contribution plan are not endorsed by the	Low	The IE engages in an early stage and monitors and takes part in the

	peer advisor, implementing agency and beneficiary country		assessment process of the readiness phase ensuring the development of a shared vision. In case there are remaining unresolved issues, the WMO technical authority may be consulted.
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## **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 the Royal Netherlands Meteorological Institute (KNMI) to Suriname 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:

There will be two visits of two KNMI experts and a consultant to Suriname: the first meeting will take place soon after the start of the Readiness Phase. The main goal will be to prepare the GBON Gap Analysis (step 1 and 2), and to plan and prepare for the National Contribution plan and the Country Hydromet Diagnostics (CHD). In month 2 the gap analysis will be sent to the WMO technical authority for screening. In months 2 to 5 regular virtual meetings (KNMI, UNDP, Consultant) will take place to discuss and prepare for the National GBON contribution plan. During these months the stakeholders in Suriname that will be consulted for the CHD will be selected and contacted.

The second visit will take place in month 5 or 6 with the goal to deliver the National Contribution Plan and to gather information from the stakeholders in Suriname to prepare the CHD.

The CHD will be delivered at the end of month 7.

- Coordination arrangements with the prospective Implementing Entity:

The Implementing Agency, UNDP, will be invited to all meeting, unless the agenda contains pure technical matters. Especially for the preparation of the CHD and the consultations of the stakeholders, UNDP will be involved.

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

This will be done in-person during the 2nd visit to Suriname as well as through virtual meetings. The consultant in Suriname in coordination with the MDS will organise this (selecting, inviting, and preparing the stakeholders, short reporting of these meetings).

- Delivery partners that support the peer advisor in the delivery of the outputs, as applicable:

KNMI works together regularly with Dutch private companies or consultants providing additional expertise on weather and climate services in developing

countries, such as Suriname. This will also be the case in this readiness phase contributing mainly to deliver the CHD.

- Peer advisor delivery team and focal point:

The team of experts from the KNMI will consist of Rubert Konijn (FP), Janet Wijngaard, Gé Verver, supported by an external, experienced consultant.

- Timeline for the development of the outputs:

If the project starts in time (November) the draft Gap analyses should be finalised by the end of 2023 and during the first visit. The national Contribution plan should then be ready by the end of the Q2 2024. It will be delivered right after the second visit to Suriname. We plan to also have a draft version of the CHD ready by the end of **Q2** if it is feasible to collect the input from the stakeholders for this during the second visit to Suriname. A final version of the CHD will be delivered in July 2024.

## 5. Reporting and completion

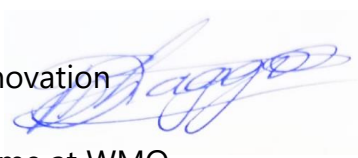


**Reporting.** For assignments for which the delivery of advisory services takes more than six months, the SOFF peer advisor shall submit a semi-annual progress report to the SOFF Secretariat (form to be provided by the SOFF Secretariat).

### 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.

<p><b>Beneficiary country:</b></p> <p>Dewdath Bhaggoe MBA BTech  Deputy Director of Research and Innovation  Ministry of Public Works  Permanent Representative of Suriname at WMO</p> 
<p><b>Peer advisor:</b></p> <p>Ir. Rubert Konijn  KNMI Strategic Business Manager Climate    Dr.Ir. Gé Verver Coordinator International Affairs</p> 
<p><b>Prospective Implementing Entity:</b></p> <p>Bryan Drakenstein  Programme Specialist Energy and Environment  United Nations Development Programme - Suriname</p> 

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