SOFF Readiness Funding Request – Saint Lucia

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	*Saint Lucia*
Country Focal Point	*Andre Joyeux, Director, Saint Lucia Met Services* *andre.joyeux@govt.lc*
Peer advisor	*GeoSphere Austria*
Peer advisor Focal Point	*Giora Gerhstein, International relations expert, GeoSphere Austria, Vienna. Giora.gerhstein@geosphere.at*
Prospective Implementing Entity	*WFP Caribbean Multi-Country Office (Barbados)*
Prospective Implementing Entity Focal Point	*Lilia Ramjeawan, Programme Policy Officer (Saint Lucia)* *Lilia.Ramjeawan@wfp.org*
Total budget USD	*135650 USD*
Delivery timeframe	9 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

<table>
<tr><td>Close the most significant data gaps</td><td>Saint Lucia currently does not fulfil the complete GBON criteria for all the three types of station network (table 1) as depicted in the initial GBON Gap Analysis performed by WMO. While some surface station capacity exists, no upper air stations are available. In addition, it is to be considered that Saint Lucia is highly vulnerable to climate change, especially the increasing frequency and severity of extreme weather events. Given the impacts of these hazardous situations, that hinder the country's development, additional observational capacity is relevant not only nationally but with a regional and sub-regional perspective. Particularly important would be to improve resilience through enhanced early warning systems capitalising on the observational infrastructure, and therefore linking to the SOFF activities.

<table>
<tr><td colspan="6">WMO Member: Saint Lucia</td></tr>
<tr><td colspan="6">Surface area: 16.087 square km</td></tr>
<tr><td colspan="6"></td></tr>
<tr><td>Station type</td><td>Target</td><td>Reporting</td><td>Gap (total)</td><td>Gap (improve)</td><td>Gap (new)</td></tr>
<tr><td>GBON Surface Land stations (standard density)</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>GBON Surface Land stations (high density)</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>GBON Upper-Air stations over land</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr>
</table>
</td></tr>
<tr><td>Target easy fixes</td><td>The Saint Lucia Meteorological Services (SLMS) and the Water Resources Management Agencies (WRMA) are the two principal government agencies that provide meteorological and hydrological data for Saint Lucia. An MOU exist between the two Agencies that defines intra-agency data sharing. A hydromet portal was developed to allow the two agencies to share information. SLMS meteorological forecast infrastructure includes a meteorological observational network, real-time communication system, database, data analysis and quality control procedures, meteorological models, product generation, and data dissemination systems. Saint Lucia does not have an upper air station and at present does not have the financial and human resources to maintain one, such a station can be very beneficial and is highly recommended.

The surface observation network of Saint Lucia consists of two hourly observation locations. SLMS also uses the NOAA global models to forecast weather on the island along with the adjacent island radar systems (Martinique and Barbados) and satellite data from the GTS. The SLMS website needs restructuring because it only contains daily and five-day weather forecasts. It does not contain any meteorological data, rainfall information, or satellite imagery. SLMS does not have IT personnel on staff and relies on support from</td></tr>
</table>

	the Ministry of Infrastructure. Saint Lucia can progress in meeting its GBON targets by strengthening the SLMS in a number of ways: • Upgrading the existing surface stations. • Enhance the high-density observational capacity with potentially the deployment of a third automated surface station. • Modernization and update of the data collection, data management and data exchange systems together with the generation of the corresponding standardised protocols and formats. • Enhance the staff capacity of the organisation with the corresponding capacity building actions. • Training to use the new technology and to improve forecasting skills. This includes sending staff to training courses and providing them with on-the-job training. • Potentially deploy, in a sustainable manner, an upper air station. • Strengthen the IT and communication infrastructure and data exchange mechanisms. • Strengthening partnerships with other meteorological organisations in the region. • Enhance the usage and awareness of updated climate models. • Enhance the access to updated software such as meteorological data collection and processing software, forecasting software, and climate change modelling software.
Maximize delivery capacity	Geosphere Austria, formerly known as the Austrian Meteorological and Geodynamics service, has performed the Hydromet Diagnosis in Kazakhsta, 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 Saint Lucia. 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. The World Food Programme (WFP) has been selected as the implementing entity for the project and will be collaborating with Geosphere Austria as SOFF peer advisors. With its extensive experience in providing technical assistance to Caribbean governments, including Saint Lucia, WFP is well-equipped to provide support and engagement in all phases of the project in line with its strategic goals. Globally, WFP has partnered with six governments as implementing entity under the SOFF and can provide considerable experience for the implementation of the project.

	WFP Caribbean has established strong relationships with different (Government) entities in Saint Lucia and has been supporting the Government in strengthening the national social protection system to become more shock-responsive.
Create leverage	The World Bank completed a Disaster Vulnerability Reduction Project (DVRP) in which SLMS was able to rehabilitate the HydroMet network, procure a flash flood guidance system, install an integrated hydromet data portal. Under the CREWS project Saint Lucia aimed to develop an integrated flood monitoring and forecasting system as a real-time E2E EWS that satisfies all types of flooding that occur in the country. Additionally, under Strengthening Disaster and Climate Resilience (SDCR) project, the United States Agency for International Development (USAID) assisted with radio communications and with the satellite receiving station, GeonetCAST system. The Caribbean Community Climate Change Center (5Cs) assisted with the funding for automatic weather systems, marine data buoys and facilitated the installation of an Italian X-band radar. In 2023, with technical support by WFP, the Government has started engaging in anticipatory action. Led by the Ministry of Equity, Social Justice and Empowerment, consultations and in-depth discussions with the National Emergency Management Organisation (NEMO), the Saint Lucia Meteorological Services, and the Ministry of Finance, resulted in decisions regarding the specific actions to be taken, transfer modalities and transfer value, target group, and cash flow arrangements. Strengthening EWS and forecasting capacities in Saint Lucia will largely benefit the forecasting and trigger side of the anticipatory action approach.
Sub-regional gains	Saint Lucia is a member of several regional institutions that provide support in meeting GBON targets including the Caribbean Meteorological Organisation (CMO), Caribbean Disaster Emergency Management Organisation (CDEMA), 5Cs, University of the West Indies (UWI). These institutions can support Saint Lucia in strengthening its hydromet services and resilience to weather-related disasters through: 1) establishing a collaborative framework with relevant organisations; 2) leveraging training and capacity-building opportunities; 3) transferring technology and best practices from across the region; 3) engaging in research and development; and 4) facilitating knowledge exchange. Additionally, through partnership with WFP Saint Lucia can gain access to technical assistance on data collection, analysis, and dissemination, as well as training on how to use early warning systems effectively. WFP can also provide support to coordinate the efforts of different organisations that are working on early warning systems, both regionally and nationally. This can help to ensure that there is a coherent approach to early warning across different sectors and levels of government.

	In addition, the Peer Advisor and Implementing Entity are advising and supporting other countries in the region and synergies will be explored to gain a more regional to sub-regional perspective.
Ensure country balance	Saint Lucia is classified as a middle-income SIDS which is vulnerable to natural hazards and climate change.

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[1]	Month 7	Month 8	Month 9
National GBON Gap Analysis									
GBON National Contribution Plan									
Country Hydromet Diagnostic (on demand)									
Total budget USD[2]	**135650 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	Extreme Weather or natural hazards / disasters that may limit accessibility of peer or the national personnel availability.	Medium	Organise the face to face visits outside the peak of the hurricane season. Establish remote communications periodic actions.
	Personal Safety and Health.	Low	Avoid high risk areas. Use protective gears when and if needed. Immunization against specific tropical illnesses as recommended by the health authorities.
	Social unrest due to deteriorating economic conditions	Low	None to be implemented.
Institutional risks Risks related to the beneficiary country's institutions participation in the Readiness phase activities	Lack of support from top management	Low	Aligning the project with the organization's goals and national strategies Endorsement from top management prior to engagement Advance notice (minimum 7 days) to senior management on the need for their participation in any aspect of the intended activities. Routine engagement as needed.

	Cultural and traditional festivities.	Medium	Plan all the activities to consider the constrains related to national and religious festivities.
	Lack of Country Ownership	Low	Endorsement from top management prior to engagement Involvement of senior level officials such as Permanent Secretary responsible for MET Office
Programmatic risks Risks related to country ownership of the Readiness phase outputs	Communication breakdowns	Medium	Routinely monitor progress of project implementation and assess respective capacities to fulfil functions.
	Resource constraints - limited time of technical focal points due to their involvement in multiple activities	Medium	Efficient scheduling of activities Setting realistic expectations for project timelines and deliverables
	Insufficient technical capacity of focal points to carry out agreed functions	Low	Putting contingencies in place, including providing additional capacity as required

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 Saint Lucia Met Services 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 visits 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, if possible one face to face during the aforementioned visit.
  - 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 6-month period with implementing entity and stakeholder, 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.
- *Peer advisor delivery team and focal point*. The activities include the following team members:
  - GeoSphere Austria
    - 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 – Late January 2024
  - Finalisation of the GBON Gap Analysis – February 2024
  - Finalisation of the CHD – February 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).

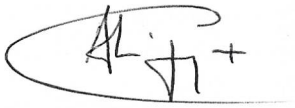
Completion

- **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.

Beneficiary country  Permanent Representative to WMO (Saint Lucia)
Peer advisor   Directorate General GeoSphere Austria
Prospective Implementing Entity  Regis Chapman Representative & Country Director WFP Caribbean Multi-Country Office