

1.1 **Appendix 1 – Terms of Reference**



Terms of Reference

For Consultancy for Gridded Data Objective and Scope

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TERMS OF REFERENCE (TOR)

Title of project:	Intra-ACP Climate Services and Related Applications Programme (ClimSA)
Project duration:	Four years
Donor:	European Union
Executing Entity:	Caribbean Institute for Meteorology and Hydrology (CIMH)
Consultancy:	Consultancy for Gridded Data Objective and Scope

1. Programme Description

1.1. Project Introduction

The Intra-ACP Climate Services and Related Applications Programme (ClimSA) is a four-year project funded through the European Union (EU) African, Caribbean, Pacific (ACP) Secretariat and being implemented by the Caribbean Institute for Meteorology and Hydrology (CIMH).

Its goal is to support the climate information services value chain with technical and financial assistance, infrastructure, and capacity building. This will ultimately result in improved access and use of climate information, services, and applications at all levels of decision-making and will lead to improved adaptation measures that allow for the Caribbean region to become more sustainable and resilient.

The ClimSA work programme is aligned to the Regional Roadmap and Plan of Action 2020-2030 for Climate Services in the Caribbean to ensure:

- Interaction between the users, researchers and climate services providers is structured;
- Provision of climate services at regional and national levels is effectively guaranteed and secured;
- Access to climate information is improved;
- Capacity of the Caribbean region to generate and apply climate information and products relevant to particular concerns is strengthened;
- Climate-informed decision-making is enhanced and climate services are mainstreamed into policy processes at regional and national levels.

For the Caribbean, these activities are timely and necessary since climate variability and change are already having and will continue to have severe impacts on national economies and key socio-economic sectors in the absence of this type of large scale, resilience intervention.

The ClimSA Caribbean Programme will be executed through pilot activities aimed at strengthening climate services value chains in the:

- health sector of Dominica;
- water sector of Jamaica; and
- agriculture and food security sector of Guyana.

Key partners of the programme at the national level are the National Meteorological and Hydrological Services (NMHSs), government ministries with national responsibility for health, water and agriculture/food security sectors, private sector entities and end users of products and services from the three target sectors.

The 16 Caribbean Member Countries of the Organisation of the African, Caribbean and Pacific States (OACPS) will benefit from the programme through regional capacity building initiatives, sharing of results and lessons learned from the three pilot countries and institutional and capacity building at the CIMH.

1.2. Project Outcomes and Outputs

The ClimSA programme has the following Outcomes:

- Outcome 1 Interaction between the users, researchers and climate services providers in the Caribbean regions is structured
- Outcome 2 Provision of climate services at Regional and National levels is effectively guaranteed and secured
- Outcome 3 Access to Climate Information is improved
- Outcome 4 Capacity of the Caribbean region to generate and apply climate information and products relevant to particular concerns enhanced
- Outcome 5 Climate-informed decision-making is enhanced and climate services are mainstreamed into policy processes at regional and national levels

2. Objective of the Consultancy and Activities

Several gridded products derived from satellite estimates, reanalysis products, and coupled general circulation models (CGCMs) are currently in use within the research and operational climate fraternities in the Caribbean. These data sets have facilitated studies related to case-study diagnostics, climate change, climate modeling, as well as a better understanding of the physical processes underpinning key variables while also supporting operational climate monitoring and forecast products. These gridded datasets exhibit different levels of accuracy across regions, even when they are developed at relatively high resolution or using sophisticated procedures.

Under Activity 3.4.2 of the ClimSA programme the work under this consultancy will aim to assess biases in commonly used gridded data sets to build confidence in the application for climate services across the Caribbean region. The assessment will be facilitated with the use of in-situ land and buoy stations across the Caribbean.

Scope/Activities

The following activities to be implemented by the consultant in collaboration with CIMH are envisaged to support the achievement of the objectives:

- i. Review of existing research literature on the verification of gridded climate data sets across the Caribbean region including a thorough discussion on rainfall and temperature datasets including its metadata along with any related derived indices from such data;
- ii. Identify and compile relevant gridded datasets to assess verification analysis;
- iii. Perform verification analysis on agreed datasets;
- iv. Organise and present results and recommendations, including technical fact sheets (by season and/or sub-region) for rainfall, temperature and derived indices;
- v. Provide training in how to utilise the analysis software within the ClimSA station using Jupyter Notebooks.

3. Deliverables

Consultant deliverables and indicative schedule

No.	Deliverables	Deliverable timeline
1	Inception Report outlining approach and methods	1 month
2	Literature review of verification of gridded climate data sets and the metadata of the data sets across the region	3 months
3	Programming scripts and/or routines with comments of computational analysis	6 months
4	Presentation of results and demonstration of the analyses to the Caribbean RCC and NMHSs	7 months
5	Final consultancy report	8 months

CIMH inputs

- I. Daily rainfall and temperature data from situ stations across the Caribbean;
- II. Administrative and technical support for and at meetings/workshops
- iii. Collaborate as co-authors on peer-reviewed articles for publication

4. Duration & Expected Start Date

The duration of the consultancy is 8 months with an expected start date by May 2025.

The working time includes home/office-based work. The breakdown of the deliverable payments can be found in the Deliverables section. Some travel will be required (for example at CariCOF in November 2025 and the presentation of results).

5. Contract Type and Price

The assignment will be contracted through a fixed-priced consultancy agreement. Remuneration will depend on the level and degree of expertise of the consultant and can be subject to negotiation.

The contract will be concluded between the Consultant and CIMH and will contain the above-stated deliverables.

Payment for consultancy services will be made upon satisfactory delivery of services and based on the agreed payment schedule.

6. Proposal Requirements

The technical proposal should include the following:

- a) A detailed curriculum vitae of the candidate including a description of main achievements
- b) A Proposed methodology for completion of the work.
- c) References of previous work completed that is similar to the TOR with contact information

for three (3) references.

Financial Proposal:

- a) Full financial proposal.
- b) Hourly rate for any additional work beyond this scope.
- c) Full work plan inclusive of time for the provision of feedback.

7. Eligibility

The consultant is required to have demonstrated experience in

- i. The use and verification of gridded climate datasets
- ii. Programming, preferably in Python, with experience programming in R being an asset
- iii. The use of Jupyter Notebooks (would be an asset)

The consultant should also possess at least a master's degree in an area relevant to these areas of experience (e.g. Data Analytics, Climatology)

8. Evaluation and Selection Process

Proposals will be evaluated according to the Combined Scoring method – where the technical criteria will be weighted at 70% and the financial will be weighted at 30%. Specific weighting is detailed below:

Category	Description	Weighting
1	Level of education of consultant	15
2	Experience of the consultant proposed to execute the work – in programming.	20
3	Experience in producing similar work using and verifying gridded climate datasets	25
4	Evidence of use of Jupyter Notebooks or equivalent, annotated, analysis code	10
	Total	70

Supervision of contract

The Consultant shall report directly to the Head of Regional Climate Centre for the Caribbean or his designate.

Review and feedback on consultants' outputs will be provided by CIMH and its partners and the outputs will be approved by the CIMH.