



Terms of Reference

For Consultancy to assess and quantify the relationship between excess heat and human health outcomes in the Caribbean using heat related indices

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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:	To assess and quantify the relationship between excess heat and human health outcomes in the Caribbean using heat related indices

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 achieve

- 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 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 the 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 and private sector entities and end users of products

and services from the three target sectors.

The 16 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 lessons learned and results from the three pilot countries and the 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 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. Scope of Consultancy and Activities

2.1 Background and previous work

Substantial progress has been made in developing globally standardised indices for assessing climate extremes and trends under the leadership of the WMO Commission for Climatology (CCI). The CCI established an Expert Team on Sector-Specific Climate Indices (ET-SCI), which is working to identify and evaluate sector-specific climate indices to define climate risks in ways relevant to specific user groups.

As part of the ClimSA Project target to define regional thematic products for Climate Services supported by the project, Activity 2.5.1 specifically speaks to the development of sector specific climate indices. As such, the ClimSA project will be funding a consultancy relating to the health sector which will recommend indices for characterizing human heat stress. The main objective of the consultancy will be to assess and quantify the relationship between excess heat and human health outcomes in the Caribbean using heat-related indices, with primary focus on Dominica. The work completed under the consultancy will also be shared regionally through regional training and further shared with ClimSA global partners.

2.2 Activities

The following activities to be implemented by the consultancy team in collaboration with CIMH will support:

- I. Convening meetings with the relevant national agencies in Dominica and regional and international agencies including, CIMH, CARPHA, PAHO/WHO to identify challenges (including data availability for and access to both climate and heat-health outcomes);
- II. The analysis of temporal relationships between heat indices and heat-health outcomes at the national level;
- III. A workshop to build national capacity in Dominica on heat-health early warning services;
- iv. A workshop to build regional capacity on heat-health early warning through lessons learnt and key results from the Dominica experience:

3. Deliverables

No.	Deliverables	Deliverable timeline
1	An Inception Report outlining approach and methods	1 month
2	A report on national virtual and in-person meetings with national (Dominica) and regional agencies in the health and related sectors	3 months
3	A report on relationships between heat indices and heat-health outcomes for Caribbean countries, with primary focus on Dominica	7 months
4	A national capacity building workshop on heat-health early warning services for Dominica (this should be accompanied by a summary report on the workshop)	8 months
5	A regional workshop on lessons learnt and key results (including a report on the workshop)	9 months
6	A final consultancy report	10 months

CIMH Inputs

- i. In collaboration with NMHSs from the region, make available the relevant climate data including those from Dominica;
- 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 10 months with an expected start date in July 2025.

The working time includes home/office-based work as well as travel – up to 10 working days that includes meeting with relevant CIMH and CARPHA staff and representatives from health ministry's/departments in the Caribbean, in particular relevant agencies from Dominica. Also included are workshop days for presentation of 1. Preliminary results, 2. Final 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, expertise and competence of the consultancy team.

The contract will be concluded between the selected consultancy team and CIMH and will contain the above-stated deliverables. Payment for consultancy services delivered will be made upon satisfactory delivery of services and payments will be aligned to the Deliverables.

6. Proposal Requirements

Technical Proposal Inclusive of the following:

- a) A detailed curriculum vitae of each person engaged in the execution of the work assignment including a description of main achievements if applicable.
- b) Proposed methodology for completion of work as well as the proposed work schedule.
- c) References for previous work completed that aligns to the scope of the TOR.
- d) Contact information for three (3) references.

Financial Proposal:

- a) Full financial proposal – including costs for travel.
- b) Hourly rate for additional work beyond the defined scope.
- c) Full work plan inclusive of time for the provision of feedback.

7. Eligibility

The consultancy team is required to have recognised experience in:

- i. Mathematical, statistical modelling, or spatio-temporal modelling climate and health outcomes.
- ii. Modelling heat-health relationships and/or modelling forecast outbreaks of climate-sensitive diseases
- iii. Research focused on modelling climate-related health issues in the Caribbean would be an asset.

The lead consultant should also possess at least a Masters' degrees in an area relevant to the following areas of experience (e.g. public health, climatology, mathematical/statistical/spatio-temporal modelling)

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 consulting team	15
2	Experience of the consultancy team in mathematical/statistical/spatio-temporal modelling	20
3	Track record with regards to modelling heat-health relationships and/or modelling forecast outbreaks of climate-sensitive diseases	25
4	Experience working on similar topics in the Caribbean	10
	Total	70

9. Supervision of contract and Reporting Lines

The Lead Consultant shall report directly to:

Adrian Trotman, Chief Applied Meteorology and Climatology, atrotman@cimh.edu.bb the Chief of Section, Applied Meteorology and Climatology (AMC) or his designate.

Review and feedback on the consultancy outputs will be provided by CIMH and its partners. Output approval will be provided by CIMH.