



Terms of Reference

Consultancy for Heat Stress Forecasting System relating to Livestock and Poultry

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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:	Short-term Consultancy for Provision of Heat stress forecast system relating to livestock and poultry

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, 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 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

The thrust to develop sector specific/targeted climate information will be strengthened in the poultry and livestock sub-sectors under this Action. It is expected that work done in the poultry sub-sector will be conducted in collaboration with the Caribbean Poultry Association, a regional private sector entity, which has expressed interest in this type of climate information and livestock sub-sector. CIMH will be cooperating with stakeholders in these sub-sectors for the very first time, in the testing of heat indices for forecasting of risk of heat stress. This work will also present a new opportunity for partnering with the Department of Food Production in the Faculty of Food and Agriculture of the University of West Indies, which does research on heat stress in animals.

This activity will engage a consulting team to conduct research and development activities related to:

- (i) one select small ruminant species, and
- (ii) one poultry, broilers, or layers, which are important to the economies of select countries of the Caribbean, into a forecasting system/approach;
- (iii) lead a capacity building exercise in agro-climatic spatio-temporal model development focusing on small ruminants and poultry for regional and national representatives

A regional workshop for presenting results and incorporating and applying forecast information for (i) small ruminants and (ii) poultry, will be hosted for NMHSs and sector practitioners.

3. Deliverables

The deliverables are set out in the table directly below:

No	Deliverables	Deliverable timeline
1	<p>Inception report outlining the technical approach to the Consultancy</p> <p><i>This should outline the technical approach to be undertaken; the methodology for research and data collection (type of tools/instrument to be utilized); It should also include a proposed schedule of tasks/activities and deliverables as well as what should be included in the final deliverable or report</i></p>	Month 1
2	<p>Literature review on the influence of temperature and heat on the behaviour and production of small ruminants and poultry</p> <p><i>This should include data relevant to 1) the past 10 years 2) similar geographic and temperate locations 3) as much as possible, similar breeds of poultry and small ruminants reared in the Caribbean</i></p>	Month 3
3	<p>Technical report on the recommended forecasting approach and its tested results</p> <p><i>This should include significant thresholds of temperature, or Temperature Humidity Index (indices) or similar measures for manifesting impactful heat stress in poultry and small ruminants. Limitations of research should be clearly noted</i></p>	Month 7
4	<p>Regional workshop for presenting results and incorporating and applying forecast information for (i) small ruminants and (ii) poultry</p> <p><i>This includes the facilitation of a one-to-two-day workshop which showcases the methodology utilized; the challenges/limitations; significant thresholds of atmospheric conditions, and the potential for decision making in the agriculture sector</i></p>	Month 10

4. Duration & Expected Start Date

The duration of the consultancy is 12 months with an expected start date in February 2024.

The working time includes home/office-based work. The breakdown of the deliverable payments can be found in the Deliverables section.

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 chosen consultant/team.

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.

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) References of previous work completed that is similar to the TOR;
- c) Contact information for three (3) references.

Financial Proposal:

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

7. Selection Criteria

- a) The consulting team must at least have an advanced degree (MSc or PhD) in Animal Science, Veterinary Science or related field;
- b) The consulting team must demonstrate a strong background and have at least 3-5 working years of experience in climate and animal response and behaviour;
- c) Experience/background in animal behaviour/production in tropical conditions, particularly in the Caribbean, would be an asset;
- d) Track record of developing, testing, and validating of agro-climatic spatio-temporal modelling frameworks in tropical environments would be an advantage.

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 and qualifications of the Consultant Team proposed to execute the work	20
3	Experience in producing similar work	15
4	Evidence of track record with regards to developing, testing, and validating of agro-climatic spatio-temporal modelling frameworks in tropical environments	20
5	Financial	30
	Total	100

9. Cost Incurred to Develop the Request for Proposal

The CIMH is not liable for any costs incurred by any Consultant prior to issuance of a contract. The CIMH will not be responsible for any expenses, including but not limited to travel, lodging or other out-of-pocket expenses of any provider prior to the execution of a written agreement for services in a form acceptable to the CIMH.

Supervision of contract

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