Technical assistance to evaluate fisheries and aquaculture value chain and assess sustainable/renewable energy interventions for improving energy efficiency to reduce carbon footprint in the marine fisheries and aquaculture sectors

Terms of Reference

BACKGROUND

The Caribbean Regional Fisheries Mechanism (CRFM) was established in 2003 as an institution of CARICOM, to promote and facilitate the conservation, management and responsible utilization of the region's fisheries and other living marine and aquatic resources for the economic and social benefits of the people of the region. The CRFM consists of three bodies – the Ministerial Council; the Caribbean Fisheries Forum; and the CRFM Secretariat. The members of the CRFM are: Anguilla, Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago and the Turks and Caicos Islands.

The Global Affairs Canada (GAC), under the leadership of the Minister of Foreign Affairs; the Minister of Export Promotion, International Trade and Economic Development; and the Minister of International Development, is responsible for advancing Canada's international relations, including, *inter alia*: Developing and implementing foreign policy; Fostering the development of international law, international trade and commerce; Providing international assistance (encompassing humanitarian, development, and peace and security. Global Affairs Canada manages Canada's relations with foreign governments and international organizations, engaging and influencing international players to advance Canada's political, legal and economic interests, including poverty reduction, the empowerment of women and girls, the promotion of a rules-based international order, international peace and security, human rights, inclusive and accountable governance, peaceful pluralism, inclusion and respect for diversity, and environmental sustainability. GAC Overseas Development Assistance (ODA) approved countries are Belize, Dominica, Grenada, Guyana, Jamaica, St. Lucia, St. Vincent and the Grenadines, and Suriname

The STAR-Fish – Sustainable Technologies for Adaptation and Resilience in Fisheries project has been approved by GAC with the CRFM as Project Executing Agency, to be implemented in the ODA-eligible countries. The overall object of the project is to improve the resiliency of Caribbean fisheries and aquaculture sectors by promoting clean energy transition while strengthening gender-responsive governance arrangements for the adoption of renewable energy solutions and technologies.

The countries participating in this project share many similar socio-economic and developmental challenges: small but growing populations, economic recession, poverty, vulnerability to climate change, economic vulnerability, social and environmental vulnerability, and exposure to natural disasters.

Notwithstanding the progress made to date in the enabling policy framework and specific interventions on the ground, there are several key barriers that must be addressed to facilitate gender-responsive uptake and adoption of renewable energy options, to reduce vulnerability of fishing and aquaculture communities in project countries and increase their resilience to the impacts of climate change.

The fisheries sector relies on the use of energy and to a great extent on fossil fuels which makes it highly sensitive to energy costs, especially taking into consideration fuel cost instability. While post-harvest's, processing's and distribution activities' demand for energy is significant, the catching sector, having few short-term alternatives to fossil fuels, is especially dependent on fuel and vulnerable to the fuel price fluctuations. Despite the challenges that the sector faces, including strong dependence on fossil fuels, small-scale fisheries are increasingly being recognized for their contribution to sustainable food systems and the opportunities they present for sustainable development. There is need to fully assess and understand the opportunities and challenges of applying renewable energy technologies in small-scale fisheries of the Caribbean to reduce carbon footprint, as an indispensable baseline assessment to inform next steps in renewable applications in the fisheries sectors of project countries.

It is important to identify specific areas of renewable energy interventions with demonstrable on-the-ground pilots, the application of knowledge and capacity acquired, and the generation of lessons and results that will facilitate replication and upscaling of the transition from fossil fuels to renewables/low carbon sources across the value chain in Caribbean fisheries and aquaculture sectors. Linked to this, given the potential negative impacts on biodiversity and ecosystems, would be development of a process to track the renewable energy options to be implemented at the selected facilities.

Among the many different value chains of the fisheries and aquaculture sectors of the Caribbean, there are points along some chains which may present a more favourable enabling environment for the demonstration of transition from fossil fuels to cleaner energy, thus presenting better chances of project success. These must be assessed, and criteria developed for a transparent selection process of those value chains that will receive project support. Selection will consider fisheries value chains which collectively will cover all 8 countries. There might be a fishery that is relevant for 3 countries, another that is relevant for another 3, and one that is relevant for the other 2 countries, while recognizing there may be overlaps of multiple fisheries between countries as well. The intention is to demonstrate that value chains of all 8 countries would be addressed, even if not the same value chains for all 8 target countries

Fishers and aquaculturists in project countries do not possess the sufficient knowledge on renewable and cleaner energy options and application to assist in their decision to embark on the transition. Targeted and gender-responsive interventions must be implemented to impart knowledge to resource users in renewable energy options, suitability at different points of the value chain, initial transition costs and need for capital investment, rate of return to recover initial capital investment, know-how in the installation of renewable energy technology, maintenance, and adaptability at small operational scales

In this regard, the CRFM, is seeking the services of a firm or consortium ("the Consultant") to evaluate Caribbean fisheries and aquaculture value chains and assess sustainable/renewable energy interventions for improving energy efficiency to reduce carbon footprint in the marine fisheries and aquaculture sectors as part of the above-mentioned project; as per the terms and conditions outlined below.

SCOPE OF WORK

The Consultant will work under the general direction of the STAR-Fish project coordinator to evaluate fisheries and aquaculture value chain and assess sustainable/renewable energy and improving energy efficiency to reduce carbon footprint in the marine fisheries and aquaculture sectors as part of the above-mentioned project as per the terms and conditions outlined below.

EXPECTED DELIVERABLES are:

- Consultancy inception report with agreed work plan
- Report on energy costs linked to production, challenges and opportunities for integrated sustainable energy uptake
- Report on technology, national policies and financing available to support the application of renewable/low carbon energy technology
- Report on selection of fisheries and aquaculture value chains for sustainable energy interventions
- Final technical report on the consultancy

The ***MAIN TASKS/ACTIVITIES*** are as follows:

1. Attend an initial virtual briefing meeting with the STAR-Fish Technical Team, and other key stakeholders as far as possible, to discuss the objectives, activities, approach, expected outputs and any other issues related to the execution of the assignment that require clarification;
2. Within five (5) days of the briefing meeting, The Consultant will prepare a report of the briefing (inception report) and work plan clearly identifying an outline and timelines for the execution of the actions.
3. Identify energy costs linked to production, challenges and opportunities for integrated sustainable energy uptake.
4. Undertake detailed examination of technology, national policies and financing available to support the application of renewable/low carbon energy technology
5. Identify challenges and opportunities for integrated sustainable energy uptake
6. Facilitate National and regional workshops to present findings of all technical assessments conducted relating to renewable energy
7. Evaluate appropriate fisheries and aquaculture value chains for sustainable energy interventions.
8. Select at least four (4) value chains for sustainable energy intervention.
9. Develop, draft, revised and final versions of a final technical report which would comprise at least the following sections: Acknowledgements; Abbreviations and Acronyms; Executive Summary; Introduction; Approach to the Assignment; Comments on Terms of Reference; Organization and Methodology ; Delivery of Terms of Reference ; Description of Activities Carried Out; Project Mobilization; National/regional consultations; Reporting; Comments and Conclusions; Recommendations (including lessons learned); Annex 1 Terms of Reference ; Annex 2 Inception Report and work plan ; Annex 3 Mission/workshop Reports ; Annex 4 Consultancy Products defined in above, consultancy final financial report; other agreed reports

Drafts of each product are to be reviewed by the CRFM, prior to finalization.

ROLES AND RESPONSIBILITIES

The consultant is responsible for execution of the main activities and accomplishing the Expected Results and Deliverables as outlined above.

In the conduct of the assignment the Consultant will be supported by the Project Coordinator, ESS Specialist and CRFM Secretariat, which will provide overall guidance on implementation of the contract. The CRFM Secretariat will assign staff who will work closely with the team at all times. The CRFM Secretariat will also assist in the circulation of documents for regional-level review, and support the finalization of all documents produced.

REQUIRED SKILLS AND EXPERIENCE

In addition to the Key technical professional staff outlined above, additional specialist expertise in the team to cover relevant aspects in support of the consultancy would be viewed favourably.. The estimated key expertise requirements for performance of the services are:

<u>Sustainable Energy Specialist</u>

- At least five (5) years' experience working in sustainable energy
- Demonstrated knowledge of Caribbean sustainable energy policy and policy development, including the CARICOM Energy Policy approved by the Forty-First Special Meeting of the COTED on Energy, the Caribbean Sustainable Energy Roadmap and Strategy (C-SERMS) and the SIDS DOCK targets.
- Experience in evaluating energy costs linked to production in fisheries value chains and identifying challenges and opportunities (minimum 3 assignments)
- Experience in examination of technology, national policies and financing available to support the application of renewable/low carbon energy technology (minimum 3 assignments)
- Working experience in the Caribbean region is a requirement
- The Sustainable Energy Specialist should possess suitable/appropriate qualifications in energy management, engineering and/or related areas

<u>Fisheries Value Chain Specialist</u>

- At least five (5) years' experience working with fisheries value chains
- Demonstrated knowledge of Caribbean fisheries management policy and policy development
- Experience in reviewing of fisheries operations and fisheries value chain analysis (minimum 3 assignments);
- Working experience in the Caribbean region is a requirement
- The Fisheries Value Chain Specialist should possess a degree in fisheries management, living marine resources management, marine/maritime economics and/or related areas

Output manager

An output manager who will be responsible for ensuring the quality and timeliness of agreed outputs (other than and/or in support of the team leader) would be an asset

REPORTING

The Contractor will prepare an inception report, progress report and final reports. The progress report will be submitted as part of deliverable four (approximately mid-term of the contractual period). The final technical report should include methodologies used to deliver the various outputs, with lessons learned and recommendations for follow-up action, and include final technical deliverables in publisher-ready format. The report should be produced in Microsoft Word for Windows format and submitted electronically to the CRFM Secretariat.

LOGISTICS

All logistical arrangements pertaining to travel by the Consultant and any workshop participants are the responsibility of the Consultant. The CRFM guidelines for all travel and workshop expenses should be followed.

DURATION

The consultancy should be conducted over 8 months and must be completed no later than the end of February 2026

COST OF THE CONSULTANCY

The budget included in this section details the level of effort estimated for the activities programmed in this consultancy.

Table 1 – Consultancy Budget (CAD)

CONCEPT	Month	(CAD)
Consulting Fees	10	$90,000.00
Reimbursable Expenses (Travel and other costs)		$15, 000.00
Total		**$105,000.00**

The Consultant will receive the maximum of CAD 90,000.00 for professional fees and up to CAD 15,000.00 for Reimbursable Expenses (travel and other expenses), as it is expected that the consultant would be required to travel in the execution of this consultancy. The Consultant will be required to present receipts (airline boarding passes, hotel, airport and ground transfers, incidentals) for the travel and other expenses.

DISBURSEMENTS

The disbursement of consultancy fees will be made according to the payment schedule described in Table 2. The final payment to the Consultant shall be conditional upon terms of Deliverable 5 having been met, in addition to having reconciled reimbursable expenses with the CRFM.

Table 2 – Payment schedule

DELIVERABLE	DATE	% of Contract	Contract Value CAD
Deliverable 1: Inception report with Work Plan	19 June 2025	10%	9,000
Deliverable 2: Report on energy costs linked to production, challenges and opportunities for integrated sustainable energy uptake	5 September 2025	20%	18,000
Deliverable 3: Report on technology, national policies and financing available to support the application of renewable/low carbon energy technology	21 November 2025	30%	27,000
Deliverable 4: Report on selection of fisheries and aquaculture value chains for sustainable energy interventions	16 January 2026	30%	27,000
Deliverable 5: Final technical report	6 February 2026	10%	9,000