

TERMS OF REFERENCE AND TECHNICAL SPECIFICATIONS

I. General information

Assignment name	Offshore marine energy expert
Name of the Project	Euroclima Caribbean
Country	The Bahamas
Duration and total estimated number of days	35 working days (remotely), spread over a period of 12 months
Deadline for Submission	May 11th, 2025

II. Context and justification of the need

1. Presentation of Expertise France

Expertise France (EF) is a public agency and the inter-ministerial actor in international technical cooperation, subsidiary of the Agence Française de Développement Group (AFD Group). As the second largest agency in Europe, it designs and implements projects that sustainably strengthen public policies in developing and emerging countries. Governance, security, climate, health, education... It operates in key areas of development and contributes alongside its partners to the implementation of the Sustainable Development Goals (SDGs). For a world in common.

For more information: www.expertisefrance.fr

2. The Euroclima programme

Euroclima is the European Union's (EU) flagship cooperation programme on environmental sustainability and climate change in Latin America and the Caribbean (LAC). It aims to contribute to the LAC region's green transition, through efforts to mitigate and adapt to climate change and to protect and conserve biological diversity. Two main outcomes are expected:

- The enabling environment for a green transition (integrated policies, legal frameworks, sector plans and financial instruments) will be strengthened, in line with climate, biodiversity and circular economy objectives.
- Transformative approaches in key areas for the green transition will be developed, demonstrated and scaled up through the mobilization of public and private funding.

Euroclima contributes to the implementation of the Global Gateway Investment Agenda in the region. Global Gateway is the EU's offer to bridge the infrastructure investment gap by using public financing to leverage private capital and investment for projects that contribute to the green and digital twin transition. In the Caribbean region, Euroclima is funded by the European Commission, for a 5-year period, and is implemented by EU Member States agencies or MSAs (AECID, Expertise France, FIIAPP, GIZ) and the UN (ECLAC, UNDP, UN Environment). The programme forms part of the regional Team Europe Initiatives "Latin America and Caribbean Green Transition" and "A Partnership for a Caribbean Green Deal".

Through Euroclima, the EU has initiated Country Dialogues to enhance its role in defining cooperation priorities. The Country Dialogue is conducted with the key institutions for climate action in each country, which allows for the alignment of the program's strategies with nationally established priorities to ensure cohesion and synergies with other activities. In consultation and coordination with the country and under the leadership of the National Focal Point (NFP), the programme supports the design of the Dialogue process on a case-by-case basis.

For more information: <https://www.euroclima.org/>

3. The Euroclima programme in The Bahamas

The Bahamas is heavily dependent on imported fossil fuels which meet approximately 99% of the country's energy demand. Price volatility in the global energy market causes continuous fluctuation of production costs and poses a risk to the competitiveness of the Bahamian economy. Furthermore, the electricity rate in The Bahamas is one of the highest in the Caribbean region, with an average cost amounting 0.36 USD/kWh in 2019, compared to 0.25 USD/kWh regionally. This situation directly impacts water security as more than 50% of the country's potable water supply is sourced from seawater reverse osmosis (SWRO), an energy-intensive process primarily.

In this context, the government seeks to reduce its dependence on imported fossil fuel and set a target in its NDC to reach 30% of renewable energy in the energy mix by 2030. To achieve this result, the government is looking at encouraging the development of innovative, sustainable and affordable energy generation systems that would secure water and energy access for the population, particularly the OTEC technology. OTEC is a marine renewable energy that harnesses the temperature difference between the warm surface water of the ocean and cold deep waters, typically at depths of around 1,000 meters. This technology provides a sustainable alternative to generate electricity to power SWRO plants, while also reducing national dependence on fossil fuels to meet water supply and energy demands.

The European Union, through the Euroclima programme, committed to support The Bahamas in assessing the feasibility of developing OTEC technology. The prefeasibility study will include selection of suitable sites, confirmation of the required temperature gradient, assessment of environmental and social considerations and the proposal of a preliminary financial scheme, as well as its integration with cobenefits such as desalinated water and deep seawater cooling. The prefeasibility study will include a preliminary market assessment, and the identification of key stakeholders and potential partners, particularly from the European technical and industrial sectors.

III. Objectives and desired results

To ensure high technical quality and relevance, EF is recruiting a short-term expert in offshore marine energy to support the design, review and validation of the prefeasibility study on OTEC technology for potential deployment in The Bahamas.

IV. Description of the assignment

1) Planned activities

The expert must perform the following activities:

Phase 0: Assignment preparation

- Desktop study on international best practices on offshore OTEC
- Review available background documentation (context analysis, oceanography data, energy policies, etc.)
- Identify relevant stakeholders and potential partners

Deliverable: Diagnostic note, including a stakeholder map, with initial recommendations and preliminary partnership options (max. 20 pages)

Phase I: Draft Terms of Reference

- Identify key components to be addressed by the prefeasibility study on offshore OTEC, including (i) temperature gradient confirmation, (ii) technology options, (iii) grid integration, (iv) environmental and social considerations, (v) preliminary financial scheme. This list is not exhaustive and must be completed/revised by the expert.
- Virtual workshops with key stakeholders to co-construct the ToRs
- Virtual meeting to validate the ToRs

Deliverables: Draft ToR for the prefeasibility study (in line with available resources) and Final ToR incorporating stakeholder and contracting authority comments

Phase II: Technical support for bids assessment

- Develop an evaluation grid
- Review and analyze submitted bids
- Provide technical recommendations based on the evaluation

Deliverable: Evaluation grid, analysis of the bids and recommendations

Phase III: Monitor the implementation of the service

- Closely monitor the implementation of the activities carried out by the service provider
- Review deliverables and provide technical recommendations for final revisions and approvals

Deliverables: Quality review fiche on key deliverables

Regular coordination meetings will be held with Expertise France to facilitate the smooth implementation of the assignment and address any potential challenges.

2) Anticipated deliverables

- Diagnostic note, including a stakeholder map, with initial recommendations and preliminary partnership options (max. 20 pages)
- Draft ToR for the prefeasibility study (in line with available resources)
- Final ToR incorporating stakeholder and contracting authority comments
- Evaluation grid, analysis of the bids and recommendations
- Quality review fiche on key deliverables

3) Coordination

The service provider shall designate a single contact person for project implementation purposes. Ms. Julie Grunner of the Sustainable Development Department will be the service provider's sole contact person for Expertise France

E-mail: julie.grunner@expertisefrance.fr

Cc1: Elodie AFONSO, Program Coordinator elodie.afonso@expertisefrance.fr

Cc2 : Florian FILIN, Administrative & Financial Officer, florian.filin@expertisefrance.fr

A launch meeting shall be held 2 working days after the contract award has been notified.

V. Place, duration and terms of performance

- 1) **Implementation period:** 12 months from the notification of the contract
- 2) **Effective duration per assignment:** 35 days

The assignment can be carried out remotely with virtual consultations, documentation review and potential field mission.

VI. Required expertise and profile

- Holder of a postgraduate university degree in marine energy engineering, renewable energy systems, oceanography, or related field
- At least 10 years of experience in marine/offshore renewable energy, specific expertise in OTEC technology will be considered an asset
- Demonstrated experience in drafting ToRs, feasibility studies, or donor funded project documents
- Strong understanding of environmental, technical, and economic aspects of OTEC and/or marine renewable energy systems
- Familiarity with island energy systems and/or SIDS context is considered an asset
- High proficiency in written and spoken English

VII. Application Modalities

Form of contract: Service contract with purchase orders

Submission Deadline: May 11th, 2025 11:59 pm (Paris time).

Expertise France reserves the right to choose a candidate before this date.

Bid Composition:

- A resume highlighting the skills and experience in line with the required ones (5 pages max)
- A methodology and tentative workplan
- A financial offer (daily fee presented in euros).
- Candidate Form

Incomplete bids will not be considered.