RESILIENT TOURISM AND BLUE ECONOMY DEVELOPMENT PROJECT IN CABO VERDE (PROJECT ID: P176981)

Consultancy for designing exploratory fishing exercise of deep demersal resources in Cabo Verde, beyond 100 m bathymetry

TERMS OF REFERENCE

1) Context and background

Currently artisanal fishers in Cabo Verde exploit only a relative small fraction of oceanic fishery resources using handlines in the coastal fringe down to depths of approximately 80 to 100 m depth. However, for complex conjunctural reasons, these resources have not been exploited beyond the previously mentioned depths of maximum reach of artisanal fishing, leaving an important and significant fringe of the ecosystem of demersal populations to be exploited. This situation has led to what is currently being observed as an over-exploitation of coastal demersal resources in the shallow water fringe by artisanal fishers. In order to mitigate the problem of shallow water depletion of coastal food fish, national institutions have stressed the need for measures to take reduce fishing effort in the shallow water fishing grounds through sustainable exploitation of demersal resources at greater depths. Doing so would diversify fishing effort as well as expand the existing economic and social potential of the artisanal fisheries sector in a sustainable manner.

Over the last few decades, research institutions in Cabo Verde have promoted experimental fishing campaigns prospecting for deep-sea demersal resources using a range of artisanal fishing gears such as bottom set longlines and demersal traps in deeper water to determine whether potential exists to: (i) reduce fishing pressure on shallow water fish species in the less than 100 m water depth, and (ii) determine whether potential exists for the development of semi commercial fishery in water depths beyond 100 m. Using scarce national resources and through strategic partnerships with development partners, a series of exploratory fishing trials using bottom longlines and demersal traps in water depths down to 1000 m have been completed. The results of the trials noted the capture and identification of a relatively large number of species of fish, molluscs and crustaceans that colonize depths of up to 1000 m and which could form the basis of a new fishery. The efforts have also generated considerable scientific and technical knowledge and provided the evidence base to support further phased investments in the fisheries sector through the establishment of a semi-industrial fishery for deep water species.

In June 2022, the Government of Cabo Verde concluded with the World Bank, an important financing agreement for the Resilient Tourism and Blue Economy Development Project (RTBED). This project aims at strategic interventions to support the current phase of economic recovery in the country after the COVID-19 Pandemic, targeting investments, policies and institutions that allow for a resilient and sustainable recovery. Specifically, among the planned interventions, there are, namely: (i) rehabilitation/construction of coastal, port and fisheries

infrastructure; (ii) promotion of fisheries development knowledge and opportunities, and their integration into tourism development; and (iii) training and engagement of private operators in the different sectors of the blue economy, involving different ministries (Ministry of the Sea, Ministry of Tourism, Ministry of Infrastructure, Territorial Planning and Housing, Ministry of Culture and Creative Industries, Ministry of Finance) and several central departments, including public institutes

Specifically, the project recognizes the potential of fishing for tourism and provides specific technical assistance in actions for the sustainability of fishing practices and sanitary conditions, including the exploration of new demersal resources with the potential to respond to the local demand of the HORECA segment, in a context of modernization and optimization of fishing fleets.

In this context, the national institution responsible for marine and fisheries research (IMar) intends to explore biological diversity in depths greater than 100m, through the development of a new semi-industrial fishery for deep-sea demersal fish and crustacea, using selective fishing gear that has minimal impact on the marine environment. It is intended that such development will be carried out in multiple phases, the first of which will be the design of a costed work plan to collect biological, social, technical and economic data for exploring deep demersal resources in Cabo Verde, beyond the 100 m bathymetry. Depending on the results of this first phase, a second phase may be supported to implement the plan.

2) Description of benefits

2.1 Objetivos

The objective is to design and cost activities to support development of a semi-industrial fishery for demersal fish and crustacea in depths beyond 100m for the islands of Santo Antão, São Vicente and Santiago, based on literature review, stakeholder consultations and market research.

The plan should include, among others, the following aspects:

(i) A biological and fisheries sampling program, aimed at estimating the biological and fisheries potential of targeted demersal resources;
(ii) An assessment of Sanitary and Phytosanitary measures, seafood cold chain, and transportation constraints on the export potential for deep sea fisheries products into select markets and their mitigation;
(iii) Gap analysis of fisheries policy and fisheries legislative frameworks with respect to the development of new fisheries in a sustainable manner with due regard to social protection of artisanal fisheries;
(iv) A 360 assessment of social, economic, biological and technical risks (likelihood and severity) associated with developing a semi commercial deep-sea fishery and how they can be mitigated
(v) A costed operational exploratory fishing program, which integrates the assessment of the potentially targeted demersal resources, the characterization of fishing gears and their effectiveness, efficiency and selectivity, in the target islands;

(vi) Selection criteria for vessels to be used for exploratory fishing, the modality through which they will operate, and the role of government and the private sector in deep-sea demersal fishing operations;

(vii) Fisheries policy and fisheries management considerations to be considered with exploratory, experimental and new emerging fisheries;

3) Expected results

The expected result are as follows:

a) a comprehensive study and risk assessment to determine the feasibility of establishing a semi-commercial fishery based on deep-sea demersal resources, and

b) if considered feasible, the preparation of a costed workplan to further assess the establishment of a semi-commercial fishery and pre-conditions to be met.

4) Tasks

In order to achieve the expected results outlined in 3), the following tasks will be essential:

Phase 1

a) Data Collection and Review

- Compile and exhaustively analyse past and ongoing exploratory and experimental fishing campaigns for deep-sea demersal resources in Cabo Verde; review the availability of scientific and commercial fisheries data on species to be targeted including data on catch per unit effort (CPUE), (its quality and quantity) and types of fishing gears used in such fisheries;

- Assess potential domestic and export demand for targeted deep-sea demersal resources, including through stakeholder consultations; conduct research on market trends, demand patterns, and regulatory requirements in the target markets (e.g., European Union (EU)) for deep sea fish species; identify key players, market entry barriers, and potential opportunities; carry out a gap analysis of Cabo Verde's capacity to access export markets and actions that need to be taken to access export markets

- Review the operating environment in Cabo Verde, including climate and extreme weather events, sea conditions, anchorages and boat harbours, slipway and repair facilities, cold chain infrastructure, Seafood Competent Authority, costs and availability of fuel, ice, bait and other requirements for fishing operations, facilities for landing and marketing catches, the availability of trained fishing crew and value-chain operators including in ancillary activities;

- Review policy, legislative frameworks and regulatory requirements for exploratory, experimental and new emerging fisheries and make recommendations, where appropriate, for strengthening Cabo Verde fisheries frameworks, with particular focus on sustainability and environmental/social protection;

- Analyse the results obtained in comparison with activities of the same nature, in regions and ecosystems similar to those of the Cabo Verde Archipelago, including particular lessons learned from other small island developing states (SIDS);

b) Risk assessment: Using best available data collected under a), assess the social, economic, technological, and biological risks (likelihood and severity) that may be encountered developing new and emerging deep-sea demersal fisheries and how such risks can be mitigated. Particular attention should be paid to inter alia:

- Weather conditions and sea states likely to be encountered;
- Areas and depths fished;
- Types of fishing vessels and fishing gears required to safely carry out scientific and commercial deep-sea exploratory fishing year-round;
- The quality and quantity of data available on abundance and distribution of selected deep-sea demersal species to be targeted and to inform management decision making processes;
- The susceptibility of target species to overfishing and the types of management measures that need to be put in place prior to the development of a new fishery;
- Market access (including sanitary and phyto sanitary conditions and supply costs);
- Analysis of stakeholder interests / disinterests to invest in developing new fisheries and recommendations on the types of public-private partnerships (PPP) needed to support development of new and emerging fisheries;

c) Recommendation and stakeholder validation: Conduct meetings and consultations with IMar as the project promoter and with the main partners - Ministry of the Sea (MM), National Directorate of Fisheries and Aquaculture (DNPA), National Association of Fishing Shipowners (APESC), Maritime and Port Institute (IMP), National Directorate of Environment, community and professional class associations, and NGOs, with a view to presenting the outcome of the data collection and risk assessment and recommending if an exploratory fishing exercise is considered feasible;

<u>Phase 2</u>

d) Exploratory fishing exercise: If considered feasible, design the exploratory fishing exercise and critical fisheries conservation and management measures: identify the work and analyses required including associated sequencing and timeline, the experiments, equipment and human resources necessary, and the associated budgets:

- Prepare a well-reasoned and costed case for the selection of vessels, use of national / foreign crews, the number of vessels required, and the type of charter agreement to be used;
- Identify location and costs of boats for exploratory fishing (availability, suitability, cost, crewing arrangements, delivery time after award of contract);
- Prepare detailed specifications for the boat(s), fishing equipment and crewing arrangements to carry out exploratory fishing;

- Estimate total costs and duration for completing exploratory fishing;
- Prepare detailed costed work plan and ensure that best practice approaches are applied as needed;
- Identify conservation and management measures, as needed. Cautious conservation and management measures should be adopted until sufficient data are available to allow an assessment of the impact on the long-term sustainability of stocks and ecosystems;

e) Organize a presentation, consultation and validation seminar for the exploratory fishing exercise design, which should result in a report containing an assessment of stakeholder participation;

f) Prepare the final report containing: (i) a description of the exercise's elaboration process, (ii) outcomes of the data collection, (iii) outcome of the risk assessment, (iv) recommendations on feasibility of exploratory fishing exercise, and if feasible, (v) design of the exploratory fishing exercise and expected results, and (vi) draft terms of reference (TOR) for implementation of the exercise.

5) Products

The products to be elaborated by the consultancy, as a result of the tasks described above, are the following:

Nº	Description	Language	Period of validity
1	Inception report containing a detailed planning of all phases of the consultancy's development, the methodological approaches, the work teams, the partnerships to be mobilized and the delivery schedule of the products;	Portuguese and English	15 calendar days counting from the start date of the contract.
2	Report on the i) compilation and analysis of exploratory and experimental fishing of deep-sea resources carried out in Cabo Verde, ii) available scientific and commercial fisheries data on species to be targeted and types of fishing gears used; iii) analysis of targeted markets; iv) review of the operating, policy, legislative and regulatory environment; v) comparison with activities of similar nature; vi) risk assessment; and vii) recommendations.	Portuguese and English	60 calendar days, counting from the start date of the contract.
3	Stakeholder validation and consultation		
4	Costed operational exploratory fishing program	Portuguese and English	90 calendar days, counting from the start date of the contract.
5	Stakeholder validation and consultation	Portuguese and English	120 calendar days, counting from the start date of the contract
6	Final consultancy report		

6) Duration

The planned technical assistance will last for 4 (four) months, starting from the date of signature of the contract.

7) Profile and requirements of the consultant

The intention is to recruit an international firm specialized in fisheries research and management, with at least 15 years of experience in prospecting, evaluating and exploiting deep demersal resources, in island regions and systems, integrating the skills of diagnosis, planning, elaboration, management and evaluation of marine and fishing prospecting projects.

The firm must demonstrate experience and skills in carrying out consultancy of similar complexity in island countries with characteristics similar to those of Cabo Verde.

The firm must demonstrate the ability to work on the ground, with fishing operators and fishing communities, in a context of cultural, socioeconomic, environmental and gender inclusion, constituting the development of consultancies of a similar nature in Cabo Verde, an advantage.

Of the key staff presented by the consultancy team, one must be a Cape Verdean national with Portuguese language skills, knowledge and experience of the national context of fisheries, environment and marine ecology in Cabo Verde, to support and coordinate stakeholder consultations, field observations, data collection and logistical work. This requirement aims to ensure, and facilitate, data collection, coordination with local counterparts, understanding and integration of the local context.

The proposed team must present the following qualifications, skills and experience, both technical and scientific.

Staff	Qualifications	Overall experience	Specific experience
Fisheries management specialist	PhD and/or master's degree in fisheries, biological sciences or related fields	15 years of experience in biological, scientific and/or commercial fisheries assessments, exploratory, experimental fishing and fisheries management.	Recognized experience in prospecting and evaluating deep resources using diverse, selective and environmentally sound devices, covering the stages of diagnosis, planning, awareness, training, implementation, follow-up and evaluation. Presentation of proven experience in Cabo Verde, in the fields of intended benefits.

			Domain of Portuguese and English.
Specialist in Engineering and Fisheries Technology	Fisheries engineering and technology	10 years of experience in experimental fishing campaigns, fleet management, fisheries management and training of fishing operators.	Recognised experience in deep-sea resource exploration using diverse, selective and environmentally sound fishing gear, covering the phases of diagnosis, planning, awareness-raising, training, implementation, monitoring and evaluation. Proven experience in Cape Verde, in the areas of the services sought. Knowledge of portuguese and English.
Seafood marketing specialist	Master's degree in business, marketing, or related field	10 years of experience in seafood marketing, with a focus on developing domestic and export markets in SIDS; experience in the European Union (EU) and Portugal markets and previous work in Cabo Verde a plus	Strong knowledge of the seafood industry, market trends, and regulatory requirements for seafood exports. Familiarity with deep sea fish species and their market potential a plus. Fluent in Portuguese, with command of English being an asset.

8) REPORTING

The consultant will report directly to the Institute of the Sea – applied marine and fisheries research (IMar).

For matters related with the execution of the contract, the consultant reports to the UGPE (Unidade de Gestão de Projetos Especiais)-Special Projects Management Unit-, a government entity mandated to oversee public development programs-projects.

9) ADMINISTRATION AND LOGISTICS

All traveling and allowance costs related to the consultant's field missions and stakeholder consultations, are the consultant´s responsibility and should be included in the firm's financial proposal.

Meetings rooms and facilities for the seminars will be made available by IMar.

10) CONTRACT TYPE

A lump-sum form of Contract shall be signed. Payments to the international consultant of remuneration are linked to approval of deliverables.