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Ministry of Fisheries and Ocean Resources
Transforming Fisheries Sector Management in South-West Indian Ocean Region and
Maldives Project (TransFORM)
Republic of Maldives

Terms of Reference (ToR) for
Economic Feasibility Study and Market Analysis for the Proposed
Aquaculture Species

1 Introduction and Background

Mariculture, the cultivation of marine organisms for food and other products, has seen significant development in the Maldives due to its vast territorial waters and abundant marine resources. With over 99% of its territory consisting of water, the Maldives has recognized mariculture as a vital component of its fishery.

Government has been proactive in supporting mariculture development through policy initiatives, research funding, and technical assistance to local farmers. Maldives Marine Research Institute (MMRI), founded in 1984, is the research arm of the Ministry of Fisheries and Ocean Resources. MMRI is mandated to undertake research on living marine resources and to provide scientific advice on marine resource management and on the state of the marine environment.

During the course of mariculture development by MMRI, some species have been cultured on a pilot scale. These species included Penguin shell (*Pteria penguin*) culture for half-round pearl production, Maldives clownfish (*Amphiprion nigripis*) culture for aquarium trade and red seaweed culture (*Eucheimia cottanaii*) for carrageenan extraction. Sandfish sea cucumber (*Holothuria scabra*) and Brown-marbled grouper (*Epinehalus fuscoguttatus*), which are intended for the food market, have been cultured on a commercial scale.

Scaling up mariculture activities and effectively marketing the end products represent significant challenges in developing mariculture as a sector within the fisheries industry. Expanding mariculture into a commercially viable sector necessitates substantial investments. The government aims to address this challenge by establishing mariculture farms capable of commercially cultivating

multiple species. This initiative not only aims to boost exports to enhance GDP and national income but also aims to cater to local consumption needs simultaneously.

MMRI through the Transforming Fisheries Sector Management in South-West Indian Ocean Region and Maldives Project (TransFORM) is seeking a consultant to undertake a financial/economic feasibility and market analysis for the proposed candidate species to establish commercial mariculture farms the Maldives.

2 Objectives

The objectives of this consultation are as follows:

1. Analyze the commercial viability of the selected candidate species for mariculture for exports and domestic markets and to recommend the species that are commercially viable in the future.
2. Study the financial and economic feasibility of establishing mariculture farms capable of cultivating multiple species and sustainable growth of mariculture within the fisheries industry
3. Identify potential markets for the products derived from mariculture locally and internationally.

3 Tasks

1- Economic Feasibility Study:

- a) Conduct a comprehensive financial and economic viability study of each selected candidate species for mariculture.
- b) Assess the initial investment required for establishing mariculture farms for each species, including infrastructure, equipment, and operational costs.
- c) Estimate the potential revenue generated from the sale of mariculture products from each species, considering market demand and pricing trends.
- d) Evaluate the profitability and return on investment (ROI) for cultivating each species over the short, medium, and long term.
- e) Identify key factors influencing the economic feasibility of mariculture ventures, including regulatory frameworks, resource availability, and market dynamics.

2- Market Analysis:

- a) Identify and analyze potential markets for the mariculture products from each selected candidate species, including both domestic and international markets.
- b) Evaluate market demand and trends for each species, considering factors such as consumer preferences, dietary habits, and cultural influences.
- c) Explore niche markets and specialty products within the broader seafood industry, such as organic or sustainably sourced products.

- d) Assess the competitive landscape for each species, including existing suppliers, pricing strategies, and market positioning.
- e) Investigate opportunities for value addition through product differentiation, branding, and certification schemes.
- f) Develop market entry strategies for each species, including product types, quantities, packaging options, pricing structures, and distribution channels.
- g) Analyze logistical considerations, such as shipping routes, transportation costs, and export/import regulations, for accessing target markets.
- h) Recommend strategies for market development and expansion, including promotional activities, partnerships, and market access agreements.

3- Recommendations:

- a) Provide strategic guidance to the government and MMRI on prioritizing research activities based on the findings of the economic feasibility study and market analysis.
- b) Identify research priorities and areas for innovation that align with the identified market opportunities and economic potential of mariculture in the Maldives.
- c) Offer recommendations for policy interventions and regulatory reforms to support the sustainable growth of mariculture and enhance its contribution to the fisheries industry and national economy.

4 Selected Species

Given below are the selected species for this consultation.

English Name	Scientific name
Squairetail coral grouper	<i>Plectropomus areolatus</i>
Humpback red snapper	<i>Lutjanus gibbus</i>
Brown marbled grouper	<i>Epinephelus fuscoguttatus</i>
Roving coral grouper	<i>Plectropomus pessuliferus</i>
Mangrove red snapper	<i>Lutjanus argentimaculatus</i>

5 Deliverables and Expected Duration

The assignment shall be completed within 90 calendar days period with the following deliverables completed as per the schedule below.

Deliverable	Timeline
Inception report	Within 15 calendar days from the signing date
Draft Financial/economic feasibility report and market analysis report with recommendations	60 calendar days after finalization of inception report
Final Financial/economic feasibility report and market analysis report with recommendations	15 calendar days after receiving the comments from MMRI

**Reporting language is English*

6 Qualification Requirement

- A master's degree or above in marketing, business administration, financing or equivalent with at least 5 years of relevant experience.
- Experience in aquaculture will be an added advantage
- Fluency in English and Dhivehi language
- Have excellent interpersonal skills and demonstrated ability to work in a team environment.

7 Evaluation

Proposals submitted will be evaluated against pre-determined technical criteria. The selection criteria are as follows:

- (a) Technical proposal – 50 Marks (Literature, Methodology, Sampling, Data collecting and analyzing methods – each carries 10 marks)
- (b) Financial proposal – 10 Marks (pro-rata basis, lowest proposal gets full marks)
- (c) Experience in similar projects – 10 Marks (each verified project gets 2 marks, Maximum 10 marks)
- (d) Qualification Requirement– 30 Marks (Masters (15 x number of related masters), PhD (30))

8 Fee and Payment Schedule

The proposed remuneration for the service is between MVR 40,000 to 60,000. There will not be any reimbursable expenditure. Payments will be made as per the following payment schedule:

- 25% up on acceptance of the inception report
- 45% upon acceptance of Draft reports.
- 30% upon submission of Final reports.

9 Submission of Proposals

- (a) A technical proposal.
- (b) Financial proposal.
- (c) CV and the notarized copies of the qualifications.

- (d) A detailed list of similar assignments with letters from past clients that had conducted similar assignments with consultant in the past 5 years. Notarized copies of these should be provided.

10 Services and Facilities Provided by the Client

- All costs associated with domestic logistics and travel for the purposes of the assignment. Additional inter/intra island transfers of consultant staff not directly related to the tasks covered under this assignment will be at the cost of the Consultant.
- The Client will also provide the consultant with a counterpart staff to facilitate administrative arrangements as required. The counterpart staff will also endeavor to assist the Consultant in locating and accessing materials available within MMRI/MFOR for the purpose of the assignment.