



Ministry of Fisheries, Agriculture and Ocean Resources

Malé, Republic of Maldives

Transforming Fisheries Sector Management in South-West Indian Ocean Region and Maldives Project
(Transform, Swiofish5) - P179242

TERMS OF REFERENCE

Invertebrate Aquaculture Research Specialist (Individual Consultant)

Procurement Reference: MV-MOFMRA-428730-CS-INDV-3

A. BACKGROUND

The Government of the Republic of Maldives through the Ministry of Fisheries, Agriculture and Ocean Resources is implementing Transforming Fisheries Sector Management in South-West Indian Ocean Region and Maldives Project financed by the World Bank. The project will be managed by the Project Management Unit (PMU) set up within the Ministry of Fisheries, Agriculture and Ocean Resources. The project is implemented in accordance with the Project Implementation Plan (PIP), Project's Procurement Manual, and the Project's Financial Management Manual all of which are consistent with the World Bank's guidelines and procedures on procurement and financial management.

The aim of the Project is to strengthen regional, evidence-based fisheries management in the South-West Indian Ocean Region and to improve competitiveness in the fisheries sector in the Maldives. The project comprises of the following components.

COMPONENT 1: Enhance Evidence-based Management Advice to the Fisheries Sector in the South-West Indian Ocean Region (*implemented by the IOC*)

- 1.1. Promoting the Development and Coordination of Relevant Innovative Regional Research with a Focus on Capacity Development Programs and Initiatives
- 1.2. Coordinating and Consolidating Regional Cooperation for Evidence-based Advice on Management of Fisheries and Other Uses of Marine and Coastal Ecosystems
- 1.3. Linking and Coordinating the Fisheries Initiatives and Programs in the Region

COMPONENT 2: Supporting Maldives as the Catalyst for Strengthened Regional Capacity for Fisheries Governance and Management

- 2.1. Improved and Innovative Implementation, Enforcement and Monitoring of Fisheries Management Plans and Sharing Results with SWIO Countries

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- 2.2. Augmented Comprehensive Quarantine, Disease Surveillance and Management and Experience Sharing with SWIO Countries
- 2.3. Skills and Capacity Building for Supporting Enterprise Development in Fisheries Sector
- 3.4. Augmentation of Project Management Capacity of MoFOR including Building Capacities for Enhanced Regional Cooperation

COMPONENT 3: Enhanced Competitiveness and Private Sector Participation for Improving Business Climate for Fisheries in Maldives and the South-West Indian Ocean Region

- 3.1. Decarbonization of the Fisheries Sector
- 3.2. Diversification/Expansion of Fisheries Sector through Facilitating Small and Medium Enterprise Businesses

B. OBJECTIVES OF ASSIGNMENT

The objective of this assignment is to design and implement one-year experimental research study focusing on the spawning and early life cycle of White teatfish (*Holothuria fuscogilva*), to support evidence-based aquaculture development in the Maldives and contributing knowledge to conservation through development of future re-stocking strategies.

C. KEY TASKS AND RESPONSIBILITIES

The overall responsibilities of the consultant include, but are not limited to the following:

1. Design and implement a 1-year experimental research program on culture of White teatfish (*H. fuscogilva*)

Develop and implement a detailed experimental design for White teatfish (*H. fuscogilva*) seed production, covering broodstock management, hatchery protocols, nursery rearing, grow-out culture, and clearly defined study objectives. Establish a comprehensive methodology, including sampling strategies, data collection procedures, and a monitoring framework for each phase of the study.

2. Direct and monitor broodstock conditioning, conduct spawning trials, egg incubation, larval rearing, nursery culture, juvenile production and grow-out culture. Apply species specific aquaculture knowledge and techniques.
3. Oversee and document embryonic development, larval development, hatching rate and survival rate.
4. Analyze collected data to assess spawning success, spawning, egg incubation, embryonic development, hatching and survival rate and water quality parameters.

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5. Provide technical assistance in establishing and maintaining live feed stocks required for culture of *H. fuscogilva* and provide technical guidance to staff on broodstock care, live feed management, feeding protocols, and water quality management.
6. Ensure appropriate biosecurity and aquatic animal health management measures are incorporated throughout broodstock handling, spawning trials, hatchery operations, and experimental activities, including protocols to minimize disease risks, contamination, and potential environmental impacts relevant to future restocking initiatives.
7. Coordinate closely with MMRI and PMU to ensure smooth implementation of research activities. Prepare required reports, Standard Operating Procedures (SOPs), and other technical documents related to invertebrate aquaculture and restocking and share with MMRI and the Project.
8. Ensure data generated from the research activities of the Project are shared with MMRI in accordance with agreed implementation timeline.
9. Prepare and submit technical reports documenting experimental progress, study findings, performance indicators, and data analysis in accordance with the agreed timeline, including evaluation of spawning success, larval survival, and juvenile development outcomes.
10. Provide evidence-based recommendations for future seed production and restocking strategies based on experimental results, survival performance, and overall hatchery trial outcomes.

D. EXPECTED DELIVERABLES

The deliverables of the Invertebrate Aquaculture Research Specialist are as follows:

2.3-E	Conducting mariculture research and training programmes		
	Deliverables	Description of work	Timeline
D-1	Inception Report with Experimental Design	Site visit K.Maniyafushi Research and Training Facility and Submission of a detailed research plan outlining objectives, methodology, experimental design, data collection protocols, and implementation schedule for the 1-year study	Within 20 days of Signing the contract
D-2	Project Implementation	Conduct broodstock conditioning and spawning trials, observations and data collection. Prepare and submit an initial progress report summarizing findings from the first spawning trails.	Initial spawning trial report to be submitted after 3-4 months



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D-3	Data Collection and Mid-term Progress Report	Compilation of all experimental data with proper documentation and Submission of mid-term progress report summarizing activities conducted, data collected, preliminary findings, and any challenges encountered.	<u>Mid-term (6 months)</u>
D-4	Final Research Report	Submit a comprehensive final study report detailing the methodology, results, and data analysis, along with key findings, identified challenges, and recommendations for future aquaculture development and research on White teatfish (<i>Holothuria fuscogilva</i>) culture in the Maldives.	Within 30 days after completion of the study.

E. QUALIFICATIONS AND EXPERIENCE

The Invertebrate Aquaculture Research Specialist should possess the following qualifications as a minimum standard for recruitment:

1. Master's or bachelor's degree in the field of Aquaculture, Fisheries, Marine Science or related field.
2. At least 5 years of demonstrated experience, with a strong focus on sea cucumber culture and research, particularly *Holothuria* species. Proven experience in conducting experimental studies, including spawning trials, broodstock management, and early life cycle research of sea cucumbers.
3. Practical experience in hatchery operations and seed production techniques for sea cucumbers will be an added advantage.
4. Applicant should provide academic certificates and reference letters to demonstrate experience.
5. Strong organizational and planning skills with ability to work independently as well as in a team
6. Should have strong interpersonal communicative skills, with the ability to write clearly in English to international reporting standards, experience in team leadership and participatory management.

The successful individual must be willing to work for extended periods without direct supervision based at islands, when needed for execution of this consultancy.



F. REPORTING REQUIREMENT

1. Report directly to the Project Manager on all aspects of Project Management throughout the duration of the contract unless otherwise advised by the Implementing Agency.
2. Report to the MMRI on the implementation of the mariculture research activities of the Project.

G. SCHEDULE FOR THE ASSIGNMENT

The contract duration will span 12 months, depending on the work schedule submitted by the Consultant. The Consultant will undertake at least three visits to the Maldives; each aligned with critical phases of the sea cucumber seed production cycle. During these visits, the Consultant will stay at the K. Maniyafushi Research and Training Facility

H. PAYMENT SCHEDULE

Deliverables	Payment
D1 - Inception Report with Experimental Design	25 % of contract price upon acceptance of report
D2 - Project Implementation	20 % of contract price upon acceptance of 3 months progress report
D3 - Data Collection and Mid-term Progress Report (6 months)	25 % of contract price upon acceptance of mid-term report
D4- Final Research Report	30 % Upon acceptance of final report

I. SELECTION CRITERIA

Competency assessment

Details	Maximum points
<p>Technical proposal</p> <ul style="list-style-type: none">• Proposed methodology to achieve key objectives/deliverables of the assignment, expected outputs and degree of detail in such outputs. [10]• Proposed workplan with timeline and milestones, identifying constraints, risk and mitigation measures.[10]• Data collection methods proposed to document key aquaculture process and deliver scientific outputs required for the assignment. [10]	30
Academic qualification	30



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<ul style="list-style-type: none"> • Applicant with Master's degree or higher in the field of Aquaculture, Fisheries, Marine Science or relevant field [30] OR • Bachelors in the field of Aquaculture, Fisheries, Marine Science or relevant field [15] <p><i>Note: No points will be awarded for a Bachelor's degree if the applicant holds a Master's or higher qualification.</i></p>	
<p>Experience</p> <ul style="list-style-type: none"> • Demonstrated experience of minimum 5 years working in aquaculture or in a related field (10) • Proven experience in sea cucumber culture and research, particularly Holothuria species (e.g., spawning, broodstock management, early life cycle studies) (10) • Experience in conducting experimental studies, including experimental design, data collection, analysis, and reporting or assignments that reflect key tasks of this ToR. [10] • 2 points each additional year of experience in aquaculture, up to additional 5 years [10] 	40

Only consultant's scoring a minimum of 70 out of 100 points will be considered technically qualified. The consultant with the lowest evaluated financial proposal among technically qualified candidates will be recommended for contract award.

J. SERVICES AND FACILITIES TO BE PROVIDED BY THE IMPLEMENTING AGENCY

- Airfare and travel expenses, as well as food and accommodation during stays at the project site, will be provided by the Project.
- The project will assist the consultant in obtaining any necessary documentation and visa.
- Office space will be provided as required.

K. APPLICATION

Interested applicants may submit their Expression of Interest in a sealed envelope indicating the following:

- Letter of Expression of Interest (EOI)
- Updated Curriculum Vitae (including description of similar assignments, experience in similar conditions, availability of appropriate skills etc.)
- Work reference letters
- Technical proposal including
 - Methodology to achieve deliverables
 - Proposed workplan with timeline and Milestones
 - Data collection methods



L. SUBMISSION

Interested candidates may submit the proposals on or before the time provided in the advertisement to the following address **by email**:

Project Management Unit
Ministry of Fisheries, Agriculture and Ocean Resources
H. Palmeyra - 3A, Sosun Magu
Male', Republic of Maldives
Email: procurement.transform@fisheries.gov.mv



