

Terms of Reference (ToR)
for
Baseline Assessment of Sonadia Ecologically Critical Area (ECA)

1. Background

Sonadia Island stands as a critical and unique ecological treasure along the southwestern coast of Bangladesh, designated as an Ecologically Critical Area (ECA) since 1999. This island provides essential wintering grounds for a significant number of globally recognized wader species, including the endangered Spoon-billed Sandpiper, underscoring its international importance for avian conservation. Furthermore, Sonadia serves as a vital nesting site for the Olive Ridley Turtle, with confirmed reports of Green Turtles, highlighting its crucial role in marine turtle conservation. The presence of at least three dolphin species further enriches the island's significant marine biodiversity. Notably, Sonadia represents the sole remaining area on the southwestern coast with extant mangrove ecosystems, offering indispensable habitat and ecological services. This exceptional biodiversity renders Sonadia invaluable for education and scientific research focused on coastal conservation. Recognizing this ecological significance, establishing and effectively managing a robust protection zone within representative habitat types is paramount for learning and implementing successful environmental conservation strategies based on natural ecosystems and species diversity. However, habitat degradation, over exploitation, and climate change impacts threaten its ecological integrity. To address this issue Government has taken a project namely "Strengthening capacity of MoEFCC, DoE and BFD for natural resource management and improved climate resilience." Under this project, there is a component for Sonadia ECA Management. This aims to conduct comprehensive assessments, implement conservation measures, and develop sustainable management strategies for Sonadia ECA.

2. Objectives

The objective of this service will be:

1. Conduct ecological baseline assessments and ecosystem valuation of Sonadia ECA.
2. Mapping degraded habitats and analyzing root causes of biodiversity loss.
3. Development of a Pilot Project to replicate the restoration and conservation activities of this project.

Scope of Area: Sonadia Island Ecologically Critical Area (ECA)

3. Scope of Service

3.1 Ecological Assessment

- Conduct baseline biodiversity surveys (flora, fauna, marine, coastal ecosystems).
- Socio-economic analysis

3.2 Habitat Restoration & Conservation

- Map degraded habitats (mangroves, dunes, coral reefs).
- Root cause analysis of biodiversity and ecosystem degradation

3.3 Database establishment

- Establishment of web-enabled database system on the biodiversity of Sonadia
- Prepare a comprehensive database recording people's traditional knowledge and insight into the status, uses, history, ongoing changes and forces driving these changes on the biological diversity resources of Sonadia
- **Capacity Building:** Training local community members and Govt. officials in data collection, input, and basic database management to foster local ownership and sustainability.

3.4 Policy & Replication Strategy

- Develop a pilot project to disseminate the outcomes of this project to replicate the restoration and conservation activities in other ECA's.

4. Output/Expected Deliverables

1. Baseline Assessment Report (biodiversity, ecosystem services).
2. Degraded Habitat Maps & Root Cause Analysis Report.
3. Final Project Report with Replication Strategy.

5. Implementation Modalities

The Consulting Firm shall closely work with the Department of Environment (DoE), Ministry of Environment, Forests and Climate Change MoEFCC and Stakeholders. The Team Leader shall time to time, share the progress of the planned activities with the relevant designated officials of the proponent. The relevant designated officer and her/his representative will supervise and provide assistance in performing the activities.

6. Required Qualifications of the Consulting Firm

1. Minimum 15 years of general experience of the firm.
2. Proven experience of 10 years in conducting Baseline Assessment, Carrying Capacity Assessment, Ecosystem Valuation, including Stakeholder Consultations.
3. Proven experience of 10 years in working Sonadia/Coastal ECA
4. Having valid and updated legal documents including VAT and TAX Certificate
5. Financial capacity to be supported by three years Audit Reports by independent and enlisted Audit Firms and Bank Solvency Certificates.
6. Registration status of the Consulting Firm.

7. Required Expertise & Team Composition

Position	Qualification & Experience	Key Responsibilities
Team Leader (Ecologist/Conservation Expert)	PhD/MSc in Ecology/Environmental Science, 10+ years in coastal/marine conservation, ECA management experience.	Overall project coordination, technical oversight, and stakeholder engagement.
Marine Biologist	MSc/PhD in Marine Biology, 7+ years in marine ecosystems	Marine biodiversity assessment
GIS & Remote Sensing Specialist	MSc in GIS/Remote Sensing, 5+ years in habitat mapping, spatial analysis and integrating geospatial data with web applications.	Degraded habitat mapping, integrate mapping functionalities (GIS) if required for spatial data.
Socio-Economist	MSc/PhD in Environmental Economics/Social Science, 5+ years in livelihood projects.	Baseline assessment
Field Biologists (2)	BSc/MSc in Biology/Zoology, 3+ years in field surveys.	Data collection.
Database and Web Development Specialists	Bachelor's or Master's degree in Computer Science, Information Technology, Software Engineering, or a related field. Proven experience in database design, development, and administration (e.g., SQL, NoSQL databases). Strong proficiency in web development frameworks and languages (e.g.,	<ul style="list-style-type: none"> Design, develop, and implement the web-enabled database system for biodiversity data. Develop user interfaces for data input,

Position	Qualification & Experience	Key Responsibilities
	Python/Django, Ruby on Rails, PHP/Laravel, Node.js/Express, HTML, CSS, JavaScript, React/Angular/Vue.js). Experience with cloud platforms (AWS, Azure, GCP) and API development. Understanding of data security and privacy best practices.	retrieval, and visualization. <ul style="list-style-type: none"> • Manage database administration, including backups, performance tuning, and security.

8. Duration & Reporting

- Duration: 08 months (phased implementation).
- Reporting: Monthly progress reports, final technical and financial reports.

9. Responsibilities of the Client

- (1) Facilitate and support data collection process for vulnerability and impact assessment.
- (2) Provide necessary documents to enable the Consultant to perform the services
- (3) Facilitate arrangement of meetings/interviews with Key Stakeholders if required.
- (4) Issue instructions to the officials, agents and representatives of the Government which may be necessary or appropriate for the prompt and effective implementation of the services
- (5) Provide the Consultant with any such other assistance as and when required.

10. Payment Schedule: Payments linked to deliverables (20% after a month, 40% upon mid-term, 40% after final approval).


Fahmida Hoque Khan
 Project Director
 Strengthening Capacity of MoEFCC, DoE
 & BFD for natural resource management
 and improved climate resilience