

Terms of Reference (ToR)
on
Consultancy Services for Development, Management and Supervision of Biodiversity Conservation Plan

The Project at a Glance

Title of the Project	Bangladesh Regional Waterway Transport Project 1 (BRWTP-1)
Implementing Organization	Bangladesh Inland Water Transport Authority (BIWTA), Ministry of Shipping (MoS)
Funding source(s)	IDA (Cr. No.: 5842-BD)
Package Name of Consultancy Services	Development, Management and Supervision of Biodiversity Conservation Plan
Package Number	Ref. No. BRWTP-S17
Market Approach	Open-International
Assignment duration	Project period (to be ended on December 31, 2025)
Location of assignment	Within project area in Bangladesh
Contracting Entity	Project Director, BRWTP-I Project, BIWTA

1. Background

There are hundreds of rivers in Bangladesh with a large network of navigation routes. Transportation through waterways has always been a natural, environment friendly and relatively cheap mode of transport. Inland waterways have become the very important mode not only for maintaining transport link between various remote parts of the country; it is a means of transporting export - import cargo as well. Over the decades the navigability during dry season in many rivers of the country has been deteriorating because of morphological processes and for withdrawal of water from the rivers beyond the border and within the country. The navigability has been further aggravated by poor or no maintenance of inland waterways. A total length of 12,000 km. of waterways during monsoon was estimated by NEDCO, The Netherlands Engineering Consultants. Currently, the total length of navigable waterways during monsoon is about 4,000 km and 2,000 - 2,500 km is navigable during the low water period (IUCN, 2012).

The Government of Bangladesh has recently formulated sound Inland Waterway Transport (IWT) related policies which recognized to meet the poverty alleviation and to attain the millennium development goals, a well - developed sustainable and accessible multimodal transport network with special focus on inland navigation is of fundamental requirement for movement of people and goods. It is worthy to mention that the transport system of Bangladesh has changed substantially over the last four decades. Inland Water Transport is now playing an increasingly important role in the social and economic development of the country by maintaining communication between various remote parts of the country which are inaccessible by other modes of transport; particularly during the periods of peak monsoon. Over the decades transport demand in Bangladesh has grown faster than the GDP growth of the country. However, the shares of different transport modes particularly IWT and railway did not increase in the same proportion.

The Bangladesh Regional Waterway Transport Project 1 (Chattogram-Dhaka-Ashuganj Corridor) is the 'Project' by the Government of Bangladesh (GoB) to develop Inland Water Transport (IWT) sector and related infrastructure between Dhaka-Chattogram and Dhaka-Ashuganj river and linked corridors. The Project has three major components. Component-1 will include dredging and maintenance of the river corridors and ferry routes in the Project area through a performance-based contract over a period of about five (5) years; and construction and maintenance of four Vessel Storm Shelters and

two Idle Berthing Centers. Component- 2 includes construction and upgrading of six inland river ports (terminals) and rehabilitation/upgrading of fifteen landing stations (launch ghats) along these river corridors. Component 3 includes institutional capacity development measures, including civil works for retrofitting an existing training institution at Narayananj and activities to improve the technical, operational and financial sustainability of the Inland Waterway sector.

The proposed project (detailed in section 11 and 12 of this ToR) is located in an area of high biological diversity in which many important and endangered aquatic species are present. The project area, especially the river banks and chars, are home to a wide variety of terrestrial and aquatic birds and is an important area for migrating birds (winter visitors). Comprehensive Environmental and Social Impact Assessment (ESIA) has been prepared for Component 1; and an Environmental Management Framework (EMF) for Components 2 and 3 during the detailed preparation stage of the project; but a more comprehensive ecological baseline and detail biodiversity management plan is necessary and suggested in the ESIA for the project area. A longer-term biodiversity monitoring, based on indicator parameters during the project implementation phase is also envisaged. Thus, this assignment is to hire a Consultant to prepare an in depth biodiversity management plan for the project area and carry out biodiversity monitoring throughout the implementation phase.

2. Objective of the assignment

A plan to monitor, mitigate and compensate for the impacts of the project on terrestrial and aquatic biodiversity is proposed in the ESIA; that plan outlines measures for developing a comprehensive biodiversity baseline, development of a detailed biodiversity management, monitoring of indicator-parameters, and awareness campaign for protecting biodiversity in the project impact area. The objective of the consulting services is to develop a comprehensive biodiversity baseline, detailed biodiversity management plans to address environmental issues including habitat and species conservation in relation to the implementation of various project activities and to carry out regular monitoring of the impacts on sensitive habitats and species. The selected Consultancy Firm will closely collaborate, maintain regular communication and share information with Supervision and Monitoring Consultant and Dredging Contractors duly engaged by BIWTA in order to integrate habitat and species conservation issues in to planned dredging and spoil dumping activities and to ensure implementation of biodiversity management plan. The selected consultancy firm will also monitor implementation of the Biodiversity Management Plan, which will be done by another organization selected through competitive bidding.

3. Scope of Services, Tasks and Expected Deliverables

3.1 Scope of Services and Tasks

The key activities to be carried out under the consultancy services and Tasks are:

- 1) Review and establish project impact area based on biodiversity profile of the project sites, indicator species and possible impacts from the project activities;
- 2) Review the baseline data collected by ESIA consultants of Component-1 (Improved Inland Waterway Navigation) and EMF for Components 2 and 3 as well as other relevant documents and carry out additional baseline data collection on biodiversity in the project area. The consultant will need to follow relevant GIIP utilizing desktop review, consultation with experts and field based approaches as appropriate.
- 3) Biodiversity survey needs to cover biologically important periods (breeding, migratory seasons, wet and dry season).
- 4) Field work should be commensurate with the level of baseline understanding required.
- 5) Establish baseline morphological behavior important to biodiversity management and conservation based on available data, model results and historical sounding charts available from BIWTA and/or other concerned Agencies;

- 6) Make an inventory of the flora and faunal diversity including fish within the project impact area to improve the baseline information;
- 7) Habitat mapping including identification of legally protected and internationally recognized areas, critical habitats, sensitive habitats and ecologically critical area based on government declaration, IUCN Red list or any other national or international recognized data sources;
- 8) Assess the impacts of dredging and other project activities on biodiversity of the impacted area, develop biodiversity management plans to address impacts associated with various project interventions, suggest conservation and management actions, develop habitat enhancement and protection plan for the key species and develop adequate monitoring protocol for sensitive habitats;
- 9) Monitor Hilsa (*Tenaulusa ilisa*, a national flagship fish) migration through catch assessment and identify impacts from dredging and associated activities and suggest mitigation plan;
- 10) Regular monitoring of the impacts associated with development & maintenance dredging, installation & maintenance of Aids to Navigation and dredged material disposal; and construction & operation of river terminals, landing ghats, vessel storm shelters and idle berthing centers on the biodiversity.
- 11) Develop and implement monitoring protocol for water quality for pollution and other factors that negatively affect water chemistry and biodiversity;
- 12) Collect and analyze samples of water, plants, benthos and animal life from selected locations as identified during the study as per required frequency based on international standards/good practices and as per discussion with the client;
- 13) Keep records on environmental changes, and maintain a catalogue of the biological organisms found in their assigned areas;
- 14) Review and monitor the dredging sites, based on present morphological process and erosion deposition pattern;
- 15) Develop and implement conservation programs in consultation with the flora and fauna specialists focusing on the threatened species;
- 16) Prepare the Draft Bidding Document (DBD) & Final Bidding Document (FBD) in line with World Bank (WB) Guidelines for Non-consultancy Services on Biodiversity Conservation & Implementation along the 21 (twenty one) river routes of the project mentioned in Sl. No. 12 for competitive bidding process based on the standard bidding document of the WB within 4 months from commencement of the assignment;
- 17) Arrange 2 (two) separate stakeholders' workshops to finalizing the i) Inception Report and ii) Biodiversity Management Plan through incorporating/addressing feedback/comments/suggestions received from the workshops;
- 18) Assist BIWTA in answering technical queries raised by the bidders/service providers;
- 19) Assist BIWTA in evaluating bids/proposals and preparation of Bid/Proposal Evaluation Reports from the technical points of view in line with the World Bank Guidelines.

3.2 Expected Deliverables

- Inception report explaining the detailed work plan
- Baseline Biodiversity Survey Report
- Draft Bidding Document (DBD) & Final Bidding Document (FBD) for Non-consultancy Services on Biodiversity Conservation & Implementation
- Biodiversity Management Plan
- Biodiversity Monitoring Plan
- Annual Biodiversity Monitoring Reports (Year 1 to Year 5)
- Monthly and Quarterly Progress Reports
- Project Completion Report (End of the Assignment)

4. Team Composition and Qualification Requirements for the Key Experts

4.1 Team Composition (Minimum)

National Consultants			
Sl.	Position	Number in person (Minimum)	Inputs in person- months (Minimum)
K-1	Team Leader (Natural Resources Management Specialist/River Ecologist)	1	50*
K-2	Fisheries Biologist	1	24 (Intermittent over the whole 50 months' period)
K-3	Wildlife Biologist	1	24 (Intermittent over the whole 50 months' period)
K-4	Ornithologist	1	24 (Intermittent over the whole 50 months' period)
K-5	Botanist/Aquatic Plant Ecologist	1	24 (Intermittent over the whole 50 months' period)
K-6	Water Resource Specialist/River Morphologist	1	24 (Intermittent over the whole 50 months' period)
K-7	Environmental Engineer	1	24 (Intermittent over the whole 50 months' period)
K-8	GIS/RS Specialist	1	24 (Intermittent over the whole 50 months' period)
Total		8	218

* Spread over the project tenure (to be ended on December 31, 2025)

4.2 Qualification Requirements for the Key Experts

Sl. No.	Position	Education	Experience and Expertise
K-1	Team Leader (Natural Resources Management Specialist/River Ecologist)	At least Master's in natural resource management, ecology, life science or relevant background from any recognized university	<p>Minimum of 15 years post graduate experience on his/her profession, of which at least 5 years working experience in area or similar nature of job.</p> <p>Shall have experience working as Team Leader/Deputy Team Leader/Project Manager at least in two similar assignments.</p> <p>Shall have experience working with donor's funded projects, at least one funded by IDA/ADB/JICA/IDB.</p>

K-2	Fisheries Biologist	At least Master's in any discipline of fisheries science from any recognized university	<p>Minimum of 10 years post graduate experience on his/her profession, of which at least 3 years working experience in area or similar nature of job.</p> <p>Shall have experience for working at least in two similar assignments.</p> <p>Shall have experience working with donor's funded projects, at least one funded by IDA/ADB/JICA/IDB.</p>
K-3	Wildlife Biologist	At least Master's in relevant discipline from any recognized university	<p>Minimum of 10 years post graduate experience on his/her profession, of which at least 5 years experience as working in area or similar nature of job.</p> <p>Shall have experience for working as similar position at least in two similar assignments.</p> <p>Shall have experience working with donor's funded projects, at least one funded by IDA/ADB/JICA/IDB.</p>
K-4	Ornithologist	At least Master's in relevant discipline from any recognized university	<p>Minimum of 10 years post graduate experience on his/her profession, of which at least 5 years experience as working in area or similar nature of job.</p> <p>Shall have experience for working as similar position at least in two similar assignments.</p> <p>Shall have experience working with donor's funded projects, at least one funded by IDA/ADB/JICA/IDB.</p>
K-5	Botanist/Aquatic Plant Ecologist	At least Master's in relevant discipline from any recognized university	<p>Minimum of 10 years post graduate experience on his/her profession, of which at least 5 years experience as working in area or similar nature of job.</p> <p>Shall have experience for working as similar position at least in two similar assignments.</p> <p>Shall have experience working with donor's funded projects, at least one funded by IDA/ADB/JICA/IDB.</p>
K-6	Water Resource Specialist/River Morphologist	At least Bachelor Degree in Water Resources Engineering or Master's in relevant discipline from any recognized university	<p>Minimum of 10 years post graduate experience on his/her profession, of which at least 5 years experience as working in area or similar nature of job.</p> <p>Shall have experience for working as similar position at least in two similar assignments.</p> <p>Shall have experience working with donor's</p>

			funded projects, at least one funded by IDA/ADB/JICA/IDB.
K-7	Environmental Engineer	At least Bachelor in Environmental Engineering/Environmental Science/Civil & Environmental Engineering from any recognized university. Master's in relevant discipline from any recognized institution/university will be given preference.	Minimum of 10 years of practical experience on his/her profession, of which at least 5 years experience as working in area or similar nature of job. Shall have experience for working as similar position at least in two similar assignments. Shall have experience working with donor's funded projects, at least one funded by IDA/ADB/JICA/IDB.
K-8	GIS/RS Specialist	At least Bachelor Degree in Geography, Computer Science, Earth Science, or related field from any recognized university.	Minimum of 10 years of practical experience on his/her profession, of which at least 5 years experience as working in area or similar nature of job. Shall have experience for working as similar position at least in two similar assignments. Shall have experience working with donor's funded projects, at least one funded by IDA/ADB/JICA/IDB.

The Consultant may add personnel (additional key experts/non-key experts and support staff) in their required staffing pool as to successfully accomplishing the assignments, however their CVs will not be accounted for evaluation.

5. Reporting Requirements and Time Schedule

Activities by the engaged Consultant will be conducted at fields whereas obligatory reporting on activities done and ongoing shall be submitted to Project Director (PD)/Project Implementing Unit (PIU). Reporting shall contain:

- 1) **Inception Report:** The report shall be submitted within 4 (four) weeks from the effective date of the contract. Report shall cover detailed realistic work plan for IWT Corridor.
- 2) **Monthly & Quarterly Progress Reports:** The reports shall cover progress during each month & quarter respectively of each year and recommendation as would be required; and relevant supporting documents including location map(s) etc..
- 3) **Annual M&E Reports:** The report shall cover progress during the year and recommendation as would be required; and relevant supporting documents including location map(s) etc.
- 4) **Draft Final Report:** Report covering all Biodiversity activities done, status of implementation of plans and recommendations shall be submitted at least two months ahead the closing of project operation. Draft Final Report shall be presented before the officials from Ministry (ies), WB, BIWTA, Consultant(s) and relevant stakeholders for having suggestions/comments to make the report to its final version. Soft copy of the Report shall be submitted to the PD.

- 5) **Final Report:** Final version and approved copy of the Final Report covering all activities done, status of implementation of plans and recommendation shall be submitted four weeks ahead the closing of project operation.

Fifteen (15) copies of Final Reports and ten (10) copies of all other reports must be submitted with colour copies, book binding along with soft copies.

6. Client's Input and Counterpart Personnel

The Client as an Employer will provide the Consultant with all available studies and reports and data relevant to the services. The Client will provide access to the related government offices and information required for the study and shall provide assistance where the Consultant, for the purpose of executing these services, needs to coordinate with other Government agencies, and non-government agencies. The Client will also participate in all stakeholder consultation events, with the technical and logistical support of the Consultant as required.

7. Required Experience for Consultant

7.1 General Experience

The Consultant should have minimum 10 years of experience in carrying out the assignments related to collection of ecological baseline data, development and management of biodiversity, limnological survey and biodiversity conservation programs in Bangladesh.

7.2 Technical Capacity

The Consultant should have in-house capacity of doing biodiversity management plan and monitoring for riverine and estuarine environment. Preference will be given to the organization equipped with manpower and logistics regarding both surface and under water survey and monitoring with certified diving license and have long term experience of carrying out benthic investigation. Capacity of working in the Bay of Bengal and Meghna Estuary will be an advantage. Own laboratory facility to test water, noise, ambient air and soil quality shall be an added advantage.

7.3 Organizational and Legal Aspects

The Consultant must have valid legal document to work in Bangladesh with a valid bank account with regular transaction and with solvency.

7.4 Financial Capacity

Average annual turnover of the Consultant over the last three years that shall be supported by audited statements and reports;

7.5 Approach and Methodology

The Consultant must submit with EoI briefed outlines on Approach and Methodology to reflect how the Consultant as a Service Provider will competitively perform the target assignments.

8. Duration of the Assignments

The Consultant will be engaged for fifty (50) months to provide services intermittently over the project operation period up to one month ahead of closing date of the project (currently scheduled to be ended by 31 December 2025).

9. Type of Contract

Type of contract will be Lump-Sum basis and local taxes (AIT & VAT) will be deducted from the contract price as per applicable law of Bangladesh.

12. Name of River Routes and existing/ proposed River Port Terminals, Landing Stations, Vessel Storm Shelters and Idle Berthing Centres

The River Routes are divided into 3 different **LOTs** as follows:

The indicative locations of assignment under **LOT-1** are as follows:

- Route 1:** Munshiganj to Dhaka along Dhaleshwari and Buriganga
- Route 2:** Munshiganj to Chattogram along Meghna
- Route 19:** Chandpur to Shariatpur along Meghna
- Route 20:** Lakshmirpur to Bhola along Meghna
- Route 22:** Boddarhat to Daulatkhan along Meghna

The indicative locations of assignment under **LOT-2** are as follows:

- Route 3 & 4:** Munshiganj to Ghorashal along Shitalakshya
- Route 5:** Munshiganj to Ashuganj along Meghna
- Route 6:** Nabinagar Loop along Meghna
- Route 7 & 8:** Nasingdi Northern & Southern approaches along Meghna
- Route 9:** Bancharampur/ Homna Loop along Meghna distributory
- Route 10:** Homna to Daudkandi along Meghna distributory
- Route 11:** Meghna to Daudkandi along Meghna distributory

The indicative locations of assignment under **LOT-3** are as follows:

- Route 12:** Chandpur to R-140 Bridge along Chandpur
- Route 13:** Alubazar to At Hazar along Meghna and Arial Khan
- Route 13a:** Char Hijla looping route along Meghna distributory
- Route 15 & 16:** Mehendiganj to Bheduria along Meghna distributory and Tentulia
- Route 17:** Bheduria to Route 14 along Tentulia
- Route 21:** Bheduria to Laharhat along Tentulia

Indicative locations of existing/ proposed River Port Terminals, Landing Stations, Vessel Storm Shelters and Idle Berthing Centres are as follows:

Construction and upgrading of two cargo terminals located at (i) Ashuganj in Brahman Baria, (ii) Pangaon in Dhaka. Four passenger terminals located at (i) Shashanghat in Dhaka, (ii) Narayanganj, (iii) Chandpur and (iv) Barishal. Four vessel storm shelters & two idle berthing centres located at different places along the Chattogram-Dhaka Corridor and linked routes to be developed within remote cyclone-prone areas on the Project Corridor route allowing vessels to seek shelter from inclement weather. Rehabilitation/upgrading of fifteen landing stations (Launch Ghats) along these river corridors located at (i) Bhairab Bazar in Kishoreganj (ii) Alubazar in Shariatpur (iii) Harina in Chandpur (iv) Hijla in Barishal (v) Ilisha in Bhola (vi) Moju Choudhury in Laskmipur (vii) Laharhat in Barisal (viii) Beduria in Bhola (ix) Daulatkhan in Bhola (x) Tojumuddin in Bhola (xi) Monpura in Bhola (xii) Chairman Ghat in Noakhali (xiii) Sandwip RCC Jetty (xiv) Boddarhat in Laskmipur and (xv) Tomuruddin in Bhola.

13. Institutional Arrangements

The Consultant, throughout the assignment, will work closely with the Client's Representative(s) who will take regular feedback and make decisions associated with the assignments.

14. Facilities to be provided by the Consultant

During the Assignment period, the Consultant shall provide all the facilities for their staff and other logistical requirements on their own to fulfil their obligations. These will also include support staff and well furnished office facilities within the vicinity of PIU, BIWTA, office equipment and supplies, required equipment (including computers, cameras, cell phones with ODK app to all the interviewers) as well as equipments & materials for field data collection, vehicles, and communications as required. The Consultant however, during the RFP (Request For Proposal) submission stage, will set out the requirements in the Technical Proposal and provide the financial costs for these in their Financial Proposal.