

Government of the People's Republic of Bangladesh
Office of the Project Director
Sundarban Tiger Conservation Project (STCP)
Sundarban West Forest Division, Khulna.
<http://forest.khulnadiv.gov.bd/>

TERMS OF REFERENCE (TOR)

For

Selecting Consultancy Firm for the Program on Parasitic Infection, other communicable diseases and their extent in Sundarban Tigers (data collection of tigers, transmission and analysis of data to local/foreign labs, report printing)

1. Introduction and Background:

The Bangladesh Sundarbans, a UNESCO World Heritage Site and the largest mangrove forest in the world, represents a unique and irreplaceable ecosystem. This extraordinary region, nestled at the intersection of land and sea, provides a sanctuary for a myriad of flora and fauna, with one of its most iconic and revered inhabitants being the Bengal tiger (*Panthera tigris tigris*). The significance of the Sundarbans and its tiger population extends far beyond national borders; it is a global treasure and a cornerstone of biodiversity conservation. The Bengal tiger, characterized by its striking orange coat and distinctive black stripes, is a subspecies of tiger that has been teetering on the brink of extinction due to habitat loss, poaching, and conflicts with humans. In the Sundarbans, however, it has found a unique refuge. The conservation and protection of this emblematic species are imperative for several compelling reasons.

First and foremost, Bengal tigers are vital for the preservation of biodiversity in the Sundarbans. As apex predators, they regulate prey populations and maintain the intricate ecological balance of this mangrove ecosystem. Their presence reverberates throughout the food web, influencing the abundance and distribution of various species. Furthermore, the Sundarbans, with its delicate equilibrium of land and water, holds economic importance for local communities, providing sustenance through fishing, honey collection, and ecotourism. The presence of Bengal tigers amplifies the allure of this unique habitat, drawing visitors from around the world, thereby contributing to the local economy and fostering appreciation for nature. The cultural and national significance of Bengal tigers cannot be overstated. They embody the spirit and identity of Bangladesh, adorning the nation's flag and instilling a sense of pride and responsibility in its people. Protecting this subspecies transcends conservation; it reflects national heritage and the global commitment to safeguarding irreplaceable species.

In this context, understanding the health and disease dynamics of the Bengal tiger population in the Sundarbans becomes paramount. Monitoring their health, diagnosing diseases, and addressing parasitic infections are essential components of conservation. A robust understanding of their well-being not only ensures their survival but also safeguards the broader ecosystem and supports the livelihoods of local communities. The Bengal tiger, in all its majesty, remains an enduring symbol of the delicate balance we must strike between human progress and the preservation of our natural world.

The People's Republic of Bangladesh approved the project **Sundarban Tiger Conservation Project (STCP)**, being implemented GoB funded **Sundarban Tiger Conservation Project (STCP)** for the period of 03 years (April 2022 to March 2025) by the Bangladesh Forest Department (BFD) under the Ministry of Environment, Forest and Climate Change. Total project cost is BDT 3,593.80 Lakh; and a part of which will be expended for procuring the services of different Consultants for Project implementation.

2. Objectives:

The overall objectives of the project are : (i) Conservation of Tiger & prey animals through tiger and prey animal survey & research in Sundarbans; (ii) Conservation of tiger habitat through translocation of tiger in “no tiger areas’ in Sundarbans; (iii) Mitigation of tiger human conflict (THC) through construction of nylon fencing along the forest edge; Minimizing THC through engaging the Village Tiger Response Team (VTRT) & Community Patrol Group (CPG); and (iv) Capacity development of Forest Department Officials through proper training & procure essential equipment.

3. Major activities under the project:

Major activities under the project includes: (i) training of Forest Department officials who are working in the Sundarbans to increase their efficiency on conservation of Tiger & prey animals through survey & research in Sundarban; (ii) translocation of tiger from densely populated areas to comparatively less populated areas of Sundarban in accordance with age & sex; (iii) conduct research works and survey activities by engaging researchers and research firms; (iv) survey of river and canals of Sundarbans using drone, construction of infrastructures in the Sundarbans (like watch tower, tiger shelter or Killa etc.; and making documentary on tiger & its habitat; (v) conflict management between tiger & human adjacent to Sundarban through constructing nylon fencing along the locality, organizing Village Tiger Response Team (VTRT) & Community Patrol Group (CPG) etc.

4. Objective of the Assignment:

The overall objective of this consultancy is to detect **Parasitic Infection, other communicable diseases, with their causal agents and extent in Sundarban Tigers**. For this purpose, the Bangladesh Forest Department decided to hire a consultancy firm for providing intellectual and professional services on it through this project.

5. Scope of Services:

The selected consultants will undertake the following tasks in collaboration with local and international laboratories:

Literature Review: The consultant shall conduct a comprehensive review of existing literature related to health, diseases, and parasites affecting tigers, especially in the Sundarbans region.

Laboratory Collaborations: The responsibility of the preferred consultant is to establish collaboration with local and international laboratories with expertise in wildlife health, pathology, and parasitology.

Sample Collection: The consultant shall coordinate and oversee the collection of biological samples from tigers in the Sundarbans. This includes collecting blood samples, fecal samples, and any other relevant specimens such as hair etc.

Diagnostic Testing: The consultant shall utilize the expertise of collaborating laboratories to conduct diagnostic testing for parasitic infections and contagious diseases.

Molecular Analysis: If necessary, perform molecular analysis to determine the species and strains of parasites or diseases found within the tiger population.

Health Assessment: Assessment of the general health of tigers through visual observations and other non-invasive techniques.

Data Analysis: The consultant shall analyze the data collected to determine the prevalence and distribution of parasites and contagious diseases among the tiger population.

Risk Assessment: One of the tasks of the consultant shall be to conduct a risk assessment to identify potential sources of infections and their implications for tiger conservation.

Reporting: The consultant shall prepare a comprehensive report detailing the findings, methodologies, and recommendations. This report should be scientifically rigorous and suitable for dissemination to relevant stakeholders.

Capacity Building: Collaborate with the Project Director to build the capacity of the forest officer and staff in wildlife health and disease research.

The selected firm will undertake the following tasks:

- (a) Need of detailed survey of detecting parasitic infection and other communicable diseases with their extent in Sundarban Tigers covering whole of the Sundarbans by taking representative samples of reliable precision.
- (b) Identification of the causal agents of this infection and diseases as well.
- (c) Possible remedy of these health hazards of the **Sundarban Tigers**.
- (d) To assess and diagnose other contagious diseases that may be affecting the tiger population.
- (e) To determine the levels of parasites and diseases within the tiger population of Bangladesh Sundarbans
- (f) Literature review and consultation with Forest Department, relevant Government Agencies, Local fishermen and other stockholders.
- (g) Determining the impact on Tiger Population of the Sundarbans caused by these Parasitic Infection and other communicable diseases.
- (h) Conduct programs based Focus Group Discussion or workshop at project level to share the findings of the assignment.
- (i) There might be other relevant issues, which are not included, which could arise from the assessment and survey, should be considered and included in the final report by the consultants.

6. Activities and tasks to be performed by the firm:

- a) Conduct survey for sample collection of tigers from Sundarbans
- b) Assess and diagnose other contagious diseases that may be affecting the tiger population
- c) Determine the levels of parasites and diseases within the tiger population of Bangladesh Sundarbans and village cattle or pet animal disease
- d) Under take tiger disease survey and mapping
- e) Disease transmission and analysis of data in local/foreign labs;

- f) Preparing Report; validation and finalization of the survey report.
- g) Quality printing of approved assessment report- 100 copies. Soft copy of the report also has to supply to PD.

7. Qualification and experiences of the firm:

The Consultancy Firm should have-

- a) **Legal Documents:** The consulting firm should have Legal Documents: (i) Updated Valid Trade License, (ii) VAT Registration Certificate, (iii) TIN Certificate with update Income Tax Return Certificate, (iv) Bank Solvency Certificate;
- b) **General Experience:** Minimum 10 (ten) years of proven work experience in the field of natural resource especially wild animal survey/research activities in the Sundarbans / other forest areas in Bangladesh;
- c) **Specific Experience:** The Firm should have experience to implement at least 01(one) contracts/ assignments of similar nature/ research/study works related to the wild animal parasitic infestation and/or disease completed over a period of last 03 years with a minimum contract value of Tk. 10,000,000/- (Ten Million);
- d) **Annual Turnover:** At least average yearly Tk. 10,000,000/- (Ten Million) over the period of **last 02 (Two)** years;
- e) **Liquid Assets:** Minimum Tk. 2,000,000/- (Two Million) of liquid assets (i.e. credit line(s) of the consulting firm);
- f) **Office Staff and Logistics:** The Firm should have valid Government registration with experienced office staffs and logistics.

8. Team composition of the consulting firm:

Interested consultant Firm feature at least the following key professionals along with Financial and Admin officer and support staffs needed to accomplish the assignment. The qualification and experience of key professionals are outlines in the following table.

SI	Description	Qualification	Experience
1	Team Leader	Masters in Veterinary Science/Zoology/ or relevant subject. Experience in research on conservation of Wild Animal and related PhD degree will be given preference.	12 years' experience in related field.
2	Animal Parasitologist	Masters in Veterinary Parasitology/Zoology/ or relevant subject. Experience in research/work on parasitic infestation of big cats/carnivore and related PhD degree will be given preference.	10 years work/ research experience in related field.
3	Animal Microbiologist	Masters in Veterinary Microbiology/Zoology/ or relevant subject. Experience in research/work on parasitic infestation of Cats and related PhD degree will be given preference.	10 years experience in related field.
4	Animal Pathologist	Masters in Veterinary Pathology/Zoology/ or relevant subject. Experience in research/work on parasitic infestation of Cats and related PhD degree will be given preference.	10 years' experience in related field.
5	Data Analyst	Bachelor in Statistics/ computer science with related experiences in data analysis will be given preferences.	5 years experience in related field.

9. Reporting obligation:

- (a) Inception Workshop: The consultant will submit an inception report stating methodologies for data collection, survey, assessment and detailed work plan with key milestones within 4 weeks of signing the contract. The planning and organization of project team should be defined during the inception phase and approved by the Project Director.
- (b) Interim Progress Report: Quarterly.
- (c) Draft Report: The draft report must be submitted 6 weeks before the end of the contract.
- (d) Validation Workshop: The result of the study must be validated by an expert group that will include representatives of the Universities, Government and non-government organizations.
- (e) Final Report: Accepted by PD.

All reports shall be submitted in hard copies (10 copies) and in editable soft copy. The language of the assignment shall be in English. There shall be no security restrictions on printing or editing in the deliverables.

10. General Terms & Conditions:

The reports produced in connection with this assignment, shall be strictly confidential. All documents shall become the property of Bangladesh Forest Department. However, in case of any emerging need to use it or any part of it by any academics or other users, prior informing and written endorsement from Bangladesh Forest Department is mandatory. The copyright of the final product will be endowed with Bangladesh Forest Department. In the event of any emerging priorities and needs Bangladesh Forest Department shall enjoy all authority to reschedule operational framework of this assignment. The consulting firm shall submit all collected data to Bangladesh Forest Department along with the final report. Final payment will be made only on the final deliverables, and these final deliverables should be to the satisfaction of the Project Director or concerned authority.

Ethical Considerations: The consultants are expected to conduct their work in accordance with ethical standards, ensuring the welfare and safety of tigers and other wildlife during the study.

Intellectual Property: All data, reports, and findings resulting from this consultancy will be the property of Bangladesh Forest Department, Ministry of Environment, Forests and Climate Change and may be published as deemed appropriate.

Evaluation: Consultants will be evaluated based on the quality of their work, adherence to the agreed timeline, and the comprehensiveness of the final report.

Submission of Proposals: Interested consultants or consulting firms should submit their detailed proposals, including their methodology, budget, and qualifications.

11. Selection method:

The Consultancy firm will be selected following the Quality & Cost Based Selection (QCBS) method described in the PPA, 2006 and PPR, 2008.

12. Duration of the assignment:

The duration of the contract will be 18 months continuously or intermittently within the project period i.e. March 2025.

13. Institutional arrangement:

The Consultancy Firm will work under direct control of the Project Director or assigned DFO. Reporting will be directly to the Project Director with close collaboration with other officials of the Project. The firm will be accountable to the Project Director for its day-to-day activities. Office accommodation will be provided at Khulna by the project.

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