TERMS OF REFERENCE

Biodiversity assessment on flood-based models in Upper Mekong delta

1. Background

Ecosystem in upper Mekong Delta- Vietnam is currently degrading. There are many causes for this problem. The main causes are the construction of dykes to develop three-crop rice, the overuse of fertilizers and chemicals in farming, and inappropriate water management, which have caused the ecosystem to deteriorate and become exhausted.

In that context, agricultural activities adapted to the flood season are considered as a suitable and sustainable nature-based adaptation solution (NbS), which is encouraged by the government and international organizations to be applied in agricultural cultivation.

NbS models are believed to be environmentally friendly, support biodiversity development, improve soil-water quality and restore ecosystems. With that belief, IUCN has been implementing many suitable livelihood models in three upstream provinces of the Mekong Delta. Among them, lotus cultivation is a priority subject to be considered and applied.

Biodiversity assessment- as a component of the project, IUCN seeks to contract an eligible consultant entity with the appropriate experience and expertise to perform the assignment of Tasks mentioned above.

2. Objectives

2.1. The overall objectives of the tasks are to restore the regional ecosystem and develop sustainable agricultural livelihoods through NbS models, in which environmental quality will be improved and developed in a positive direction.

2.2. The specific objectives:

To conduct biodiversity assessment in project areas in order to:

- ✓ Assess biodiversity in farming models related to adaptive agriculture based on flood season
- ✓ Identify optimal farming models that are beneficial for biodiversity development in the area

- ✓ Provide appropriate recommendations for agricultural activities in the upper delta to satisfy the balance of socio-economic and environmental factors.

3. Scope of Work and Methodology

Key Tasks:

- Desk study: collect and list out context of flood based-agriculture in Upper Mekong delta which is considered as Natural Based-Solutions (NbS).

- Field study:

Conduct field data collection on related models in project sites include intensive lotus; lotus-rice; 3-crop rice inside and outside of ring dikes at different times (dry season and flood season) in the focal provinces

Indicator of the field survey:

- Water quality, soil quality;
- Zooplankton; phytoplankton; Plants;
- Benthic animals, aquatic species, amphibians, reptiles and related basic indicators in biodiversity assessment activities;
- Measure the total amount of carbon absorbed and stored on each farming model, analyze factors that can potentially impact (negatively and positively) on the amount of carbon absorbed and stored on each model
- Analyze the ecosystem services created by each livelihood model (such as water regulation services (water storage and supply), sedimentation accumulation, etc.)
- Based on reliable historical data to assess the environmental, economic and social changes of each livelihood model.

- **Reporting:** Prepare a comprehensive final report and present findings at a consultancy workshop.

4. Expected Results

Outputs:

- Biodiversity information of project areas is assessed and analysed with related indicators.
- Optimal farming models that are beneficial for biodiversity development in the area are identified.
- A full report with appropriate recommendations for agricultural activities in the upper delta to satisfy the balance of socio-economic and environmental factors are completed.

Timeline:

- March 30, 2025 – Dec 30, 2025

5. Timeline and Deliverables

No.	Activities	Deadline	Deliverables
1	**Design and submit proposal for the survey**	March 2025	
2	**Conduct field survey in dry and flood season**	April 2025	First report in dry season
3	Conduct survey in flood season	August-September 2025	Second report
5	Write final report, presentations and present at consultancy workshop	November 2025	Full report

6	Finalize final reports in English and Vietnamese	30 June 2025	Final report

6. Travel and Meeting Organization

The consultant will work with the IUCN office in HCMC to arrange travel, meetings, and stakeholder workshops. Travel cost, including transportation, hotel and DSA are arranged and paid directly by IUCN.

7. Consultant Qualifications

1. **Education:** Relevant degree in ecology, environmental science, agriculture, or related fields.
2. **Experience**: Proven track record in biodiversity assessments and nature-based solutions (NbS).
3. **Skills:** Data collection, analysis, and reporting on environmental indicators.
4. **Stakeholder Engagement:** Experience working with local communities and stakeholders.
5. **Language Proficiency:** Fluency in Vietnamese and/or English.

8. Reporting

The consultants/firm will report directly to IUCN Vietnam Mekong Delta Program Manager, Nguyen Thanh Phong.

9. Application Submission

Interested consultants/firm and consulting firms must submit:

- Comprehensive CVs
- Detailed proposal outlining the proposed approach
- Submission deadline: 20 February 2025

10.Evaluation Criteria

Consultants/firm will be assessed based on:

- Professional qualifications
- Relevant professional experience
- Proposed methodological approach
- Competitive and reasonable budget

11.For inquiries and application submissions, please contact:

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