

## USAID Climate Resilient Agriculture in the Mekong Delta (CRM)

### Scope of Work

#### Consultancy Services: Mekong Delta Biodiversity Assessment

*As part of the USAID Climate Resilient Agriculture in the Mekong Delta (CRM) project, Winrock International is seeking a group of individual consultants to perform a biodiversity assessment of the Mekong Delta as part of the project's planning and preparation process. The project estimates that five to six individuals will be needed for this assessment. Applicants are encouraged to apply as a group, and the project expects to contract each consultant individually. A detailed description of the anticipated scope of work, and instructions on how to apply can be found below.*

#### 1. Introduction

The goal of the USAID Climate Resilient Agriculture in the Mekong Delta (CRM) Activity is to advance low-emissions, climate-resilient, agricultural livelihoods combined with biodiversity conservation to support carbon sequestration, healthy ecosystems, and resilience of vulnerable communities in the Mekong Delta.

CRM's Objective 2 is to *strengthen management and restoration of natural ecosystems to provide ecosystem goods and services* in CRM's five focal provinces: Ca Mau, Dong Thap, Kien Giang, Soc Trang, and Tra Vinh. Ca Mau, Dong Thap, and Kien Giang have wetlands with high value for biodiversity conservation. Ca Mau and Kien Giang also contain melaleuca forests in need of increased protection. Ca Mau, Kien Giang, Tra Vinh, and Soc Trang have potential for mangrove restoration for biodiversity conservation, carbon sequestration, and climate adaptation.

Under Objective 2, CRM will work with provincial government departments to enhance Protected Area (PA) management and coverage and to improve ecosystem management outside PAs. Since PAs cover only 7% of the Vietnam's land area (and only 3% of the delta), improving conservation outside of PAs is essential to achieving the effective protection and management of 30% of its terrestrial, inland water, and coastal and marine areas by 2030. This 30x30 target is part of the new Global Biodiversity Framework that Vietnam signed up to at the Convention on Biological Diversity COP in December 2022.

Objective 2 indicators include:

- 250,000 hectares of natural ecosystems in the delta are conserved, restored, and managed
- 100,000 people receiving livelihood co-benefits (monetary or non-monetary)
- 10,000 people trained in sustainable NRM and/or biodiversity conservation

Improved management of these ecosystems, especially forest areas (coastal and terrestrial), will also help contribute to the project's goals of reducing greenhouse gas emissions.

To support implementation of Objective 2, CRM will carry out a rapid delta-wide biodiversity assessment to identify opportunities for improved biodiversity conservation inside and outside of PAs. This biodiversity assessment will complement other scoping assessments, including a climate vulnerability assessment, a value chain assessment, and an Applied Contextual Analysis (similar to a Political Economy Analysis) conducted by CRM during the project preparation period pre-approval. Together, the findings of these assessments will be used to focus project planning efforts on specific priority activities, locations, issues, and stakeholders.

#### 2. Background

The Mekong Delta is the southernmost region of Vietnam, characterized as flat low-lying terrain and some scattered limestone hills in the western part. About 18 million people live in its four million hectares, with

1.5 million rice farmers cultivating 1.6 million hectares. They produce about half of Vietnam's total annual rice harvest, including 90% of the country's rice exports and 13% of global rice production.<sup>1,2</sup>

In the upper delta, which includes the CRM provinces of Kien Giang and Dong Thap, rice intensification has driven biodiversity loss and ecosystem degradation. Starting in 2000, the construction of large ring dikes (polders) in the upper delta to grow a third rice crop isolated hundreds of thousands of hectares of floodplain from the annual flood pulse. This blocked the delivery of nutrient-rich sediment and resulted in a huge increase in fertilizer and pesticide. High levels of water pollution have driven loss of aquatic biodiversity. The de-intensification of the three rice crops will reduce pollutants input into the environment and consequently minimize the impacts to the biodiversity and ecosystem.

The goal of de-intensifying rice production and transitioning farming to a more diverse, higher value crop mix has been officially endorsed through Government Resolution 120 in 2017, CPV Resolution 13 in 2022, MARD Decision 1490 on the million hectares of high quality low-emission rice in 2023, Decision 1662 on coastal vegetation protection in 2021, and the Mekong Delta Integrated Regional Master Plan (the first of this kind in Vietnam) in 2021. As a result, the issue is how to accelerate the transition. However, in the coastal provinces, which includes the CRM provinces of Soc Trang, Tra Vinh, and Ca Mau, there is no settled position on whether to resist sea level rise and sea water intrusion at all costs or to transition to a brackish economy.

Large areas of mangrove are under private ownership, where the approach to mangrove conservation must be fundamentally different than mangroves inside protected areas (100% state control) or on "green book" land (where control is shared between forest management boards and shrimp farmers). An initial assessment shows that about 25% of the delta's mangroves are on red book land, either households or businesses. Mangrove restoration (through natural and assisted regeneration) and/or nature-based solutions (NbS) that combines mangrove restoration and the conversion of shrimp production to sustainable aquaculture models would increase mangrove cover and reduce environmental burden (less water demand and antibiotic use, etc).

A key challenge in protected area management is that PAs are only legally responsible for reporting on forest cover and forest fires. There is [no legal requirement to report on the status of biodiversity](#). As a result, Tram Chim and U Minh Thuong are kept flooded during the dry season to eliminate fire risk. This has had two effects. First, in the absence of high frequency/low intensity burns, organic matter has built up and now represents a much greater fire risk. Second, by keeping the land permanently flooded, species whose life cycles depend on the seasonal flood pulse, notably the Sarus crane, have almost disappeared. Reforming land and water management in PAs is politically sensitive and will require agreement with the provincial government.

### **3. Goal and major tasks**

The goal of this Biodiversity Assessment is to identify specific areas and approaches for CRM to implement over the five-year project period to improve ecosystem health and biodiversity in the project's five priority provinces, including design of a protocol to use biodiversity to monitor the health of the terrestrial and freshwater ecosystems that underpin the delta's natural productivity.

While the outputs will be used to prioritize efforts under CRM in the five project provinces, the assessment will consider issues across the entire interconnected ecosystem of the Mekong Delta. It is also important to note that this assessment is not a biodiversity survey, as WWF recently completed a study of the distribution and status of species in the delta.

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<sup>1</sup> [The Domestic Rice Value Chain in the Mekong Delta \(2020\)](#)

<sup>2</sup> [USAID Climate Change Risk Profile: Vietnam \(2017\)](#)

To achieve its overall goal, the assessment includes the following three tasks in the five focal provinces and adjacent areas. These cover work inside and outside PAs, and the design of a monitoring system to monitor ecosystem health:

1. Using the IUCN Green List (GL) Standard, assess management effectiveness in PAs and identify specific opportunities to improve habitat and species quality.
2. Map opportunities to expand, connect, or designate new PAs by de-intensifying rice, restoring mangroves, reconnecting the freshwater and coastal hydrology, etc.
3. Design a monitoring system to report on biodiversity and ecosystem health across the five focal provinces based on an assessment of the impacts of triple vs. double rice cropping.

#### 4. Management

CRM is being implemented by a consortium of partner organizations led by Winrock International. Within the consortium, IUCN is the lead partner for implementation of Objective 2 and will be taking the role of overall oversight and technical management of this Biodiversity Assessment.

The team of consultants will be comprised of experts with specialized knowledge of the biodiversity and ecology of different parts of the delta.

IUCN will assign one overall technical manager to coordinate closely with the Team Leader. Additional IUCN technical experts will provide targeted inputs and contributions to the assessment. Winrock will also provide a Biodiversity Conservation Specialist from the CRM team to provide additional support, and ensure close coordination with similar planning and scoping assessments taking place under CRM's other Objective areas.

Overall, the team will work closely with MARD's Management Board of Forest Projects and Department of Forestry, MONRE's Department of Climate Change, DARDs and DONREs in the focal provinces, PA Management Boards, Protection Forest Management Boards, and farmers for effective coordination and inputs into the assessment process.

#### 5. Expected team composition and level of effort

It is expected that the team will be comprised of approximately five or six experts, covering a range of technical areas of expertise needed to complete this type of assessment. Candidates should have technical degrees in the relevant areas of focus, and should have demonstrated experience working on similar assessments, preferably in the Mekong Delta. The total estimated LOE for these positions is 220 days.

*Table 1. Anticipated team members, roles and LOE*

No.	Team member	Main roles	LOE (Days)
1	Team Leader: NRM and/or PA management specialist	<ul style="list-style-type: none"> <li>• Lead to whole team to implement the activities agreed in the Inception Report/ Work Plan</li> <li>• Be responsible for managing and delivering report timely in close collaboration with other assessment team members.</li> </ul>	45
2	Wetlands and species specialist	<ul style="list-style-type: none"> <li>• Assess wetland ecosystem services</li> <li>• Assess biodiversity conservation and restoration</li> <li>• Assess management effectiveness in PAs</li> </ul>	35
3	Biodiversity specialist	<ul style="list-style-type: none"> <li>• Assess biodiversity of the Mekong and Protected and Conserved Areas (PCAs)</li> <li>• Assess biodiversity conservation and restoration</li> <li>• Assess management effectiveness in PAs</li> </ul>	40
4	Ecological landscape and vegetation specialist	<ul style="list-style-type: none"> <li>• Assess plant biodiversity of mangrove in agriculture farming</li> <li>• Assess ecosystem conservation and restoration</li> <li>• Landscape analysis and propose planning tailored with national and provincial master plans</li> <li>• Assess soil health (including factors such as humidity, invertebrates, earthworms)</li> </ul>	35

No.	Team member	Main roles	LOE (Days)
5	Aquatic biodiversity and environmental specialist	<ul style="list-style-type: none"> <li>Analyse water environment and aquatic biodiversity</li> <li>Assess pollution impacts to biodiversity</li> <li>Environmental impact assessment of agricultural and aquaculture models</li> </ul>	35
6	GIS specialist	<ul style="list-style-type: none"> <li>Using land use planning, Red List, KBAs, and other PCA planning maps to map potential PCA expansion, propose new PCAs, corridors</li> <li>Using available data to map insect distribution vs. rice crop for impact evaluation</li> </ul>	30
	<b>TOTAL</b>		<b>220</b>

## 6. Anticipated methodology

The assessment will follow a process consistent with other CRM scoping assessments, including a value chain assessment and climate vulnerability assessment. This process includes four main steps:

### a. Preparation phase

The preparation phase includes a rapid literature review and team preparation. The team will review key documents including the CRM project document, WWF biodiversity study, and government policies and plans including the Mekong Delta Integrated Master Plan 2021-2030 and the One Million Hectare High Quality and Low Emission Rice Program.

Before the field visits, the team will work through MARD to brief the DARDs of the five focal provinces on the purpose and scope of the assessment and secure their support and cooperation.

### b. Field visits and stakeholder consultations

The team is expected to divide into two groups, one to work with PAs and one to work on landscapes outside of PAs. The team composition will be agreed upon based on the expertise of team members, and recommendations from the CRM team. Both teams will meet face to face with DARDs and other provincial departments to understand their perceptions of the challenges and opportunities, seek inputs in terms of data and documentation, and agree on specific sites to visit and stakeholders to meet.

The first team will meet and work with the management boards in the PAs in the focal provinces to assess management performance using the IUCN GL standards and criteria. This process will identify specific strengths and weaknesses in each PA that CRM can address.

The first team will also discuss with the provincial governments the possibility of establishing new PAs, notably a nature reserve to protect the last large intact karst hills in Kien Luong District in Kien Giang.

The second team will work with a wider range of stakeholders including district level officials responsible for land and water management, farmer cooperatives, rice buyers, and local communities. These interactions will take the form of one-on-one interviews and focus group discussions.

In Dong Thap, the team will use the results of recent double vs. triple cropping mapping analyses to assess patterns and trends in the de-intensification of rice farming and impacts in terms of biodiversity, particularly flying insects and freshwater species, which are highly sensitive to water quality. This technical approach has been tested in An Giang as part of an ESA-funded project with Hatfield and IUCN. These data will provide a spatial sampling framework for long-term biodiversity monitoring in the five focal provinces.

The team will visit coastal sites in Kien Giang, Ca Mau, Soc Trang, and Tra Vinh to assess the opportunity to increase mangrove cover inside protection forests and private land, along with related opportunities for reducing, sequestering, and/or avoiding greenhouse gas emissions from forest loss or degradation.

The team will meet RYNAN Technologies Vietnam, a Vietnamese-Canadian company based in Tra Vinh, to discuss use of flying insect data that the company collects in real-time from 57 [data collection stations](#) across the delta. This would be used as part of a CRM biodiversity monitoring system.

### c. Data analysis and draft report

The field visits and stakeholder consultations will be used to draft a report. Full use of GIS data will be made to improve the analytical quality and presentation of results. These include Sentinel and WorldView satellite and FORMIS, the national forestry database (which has already been acquired).

The key findings and recommendations will be presented and validated in a technical meeting(s) as appropriate with provincial, academic, and NGO stakeholders. Based on feedback from these consultative discussions, a draft report will be prepared and for review by the CRM team. Some additional field visits may be needed to confirm the results.

### d. Report finalization

Based on feedback from the CRM team, the target date for finalizing the report is 31 August 2024.

## 7. Deliverables

Table 2. Expected key deliverables

No	Description of the outputs/deliverables	Deliverables	Due date	MoV
1.	Inception Report, including the detailed work plan, methodology for carrying out the tasks in the field	Inception Report	10 days after signing of contracts	Approval by CRM Management Team
2.	Field report on effectiveness inside and outside PCAs, and assessment of aquaculture and agricultural systems	Field report	June	CRM technical team provide comments
3.	First Draft Report, including proposed measures for effective management of PCAs and aquaculture and agricultural systems, proposed potential PAs	First Draft Report	July	CRM technical team provide comments and concur for public consultation
4.	Final report incorporating comments from stakeholders	Final Report	August 31	Approval by CRM Management Team

## 8. How to apply

Interested groups or qualified individuals can apply by sending:

1. A letter of interest (1-2 pages, no more than 2 pages), briefly describing the proposed team and any recommended variations from the above outlined SOW
2. Full CVs in English of team members, clearly identifying which role each individual would be expected to serve

Applicants are encouraged to apply as a group, and the project expects to contract each consultant individually. Applications should be sent to the following email address: [VietnamJobs@winrock.org](mailto:VietnamJobs@winrock.org) with subject line of **“Applicant full name\_Biodiversity Assessment”** no later than **24 May, 2024**.

Applications will be reviewed as they are received, and candidates are strongly encouraged to apply as soon as possible.

We would like to thank all applicants for their interest but only candidates who meet requisite criteria and are short listed will be contacted.