



Regional Flyway Initiative · Site Study

July 2026

RFI Priority Site · Xe Pian National Park

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General Site Information

Country	Lao PDR		
RFI Site Name	Xe Pian National Park		ID035
City/ Municipality, Province, Region	Pathoumphone District, Champassak Province		
Geographical coordinates	14°45'N 106°03'E	Area	258,634 has
Key species	Masked Finfoot, Asian Openbill		
Key habitats (biomes)	Peat swamps, dry deciduous and semi-evergreen broadleaf forests		
Key ecosystem services	Provisioning services (freshwater, aquatic products), flood mitigation services and cultural services		
Key drivers of change	Agricultural expansion, deforestation and unsustainable use of fisheries		
Conservation status (mark all that applies)	☐ Protected Area	☐ Flyway Network Site	
	☐ Ramsar Site	☐ Others _____	
IBA/ KBA name (and number) and other designations	Xe Pian National Park		
Management Stakeholders	Ministry of Natural Resources and Environment (MoNRE), Ministry of Agriculture and Forestry (MAF) and subordinate agencies, Pathoumphone district government. Villages		
With management plan?			
Project concept themes	Nature-based tourism, small-scale fisheries, rice agriculture, improved wetland management		
Length of project	3-5 years		
Sector/s	Agriculture, fisheries, tourism		
No. of potential beneficiaries	At least 11,000 people across eight villages, who are involved in flood-plain agriculture (rice), raising livestock (cattle, water buffalo), and the collection of non-timber forest products		
Indigenous Peoples	☐ No	☐ Yes, _____	
Anticipated Implementation Risks	Increased pollution and disturbance to wildlife from tourism and agricultural expansion		
Estimated Project Budget (US\$)	14,750,000		
Potential Source/s of Financing	☐ Loan (to be identified)	☐ Private Sector (to be identified)	
	☐ Grant (to be identified)	☐ Public-Private Partnership	

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Abbreviations

ADB	Asian Development Bank
AWC	Asian Waterbird Census
CCA	Community conserved area
CSR	Conservation Status Review
DAFO	District Agriculture and Forestry Office
DALaM	Department of Agriculture Land and Management
DFRC	Division of Forest Resource Conservation
DLF	Department of Livestock and Fisheries
DMC	Developing Member Country
DOA	Department of Agriculture
DOI	Department of Irrigation
EAAPF	East Asian-Australasian Flyway Partnership
IBA	Important Bird and Biodiversity Area
IUCN	International Union for the Conservation of Nature
LNTA	Lao National Tourism Association
NCA	Nature conservation area
NGO	Non-governmental Organization
NLMA	National Land Management Authority
NTFP	Non-timber forest products
NUOL	National University of Laos
PAFO	Provincial Agriculture and Forestry Office
RFI	Regional Flyway Initiative
TESSA	Toolkit for Ecosystem Services Assessment
USD	United States Dollars

Executive Summary

Xe Pian National Park (XPNP) is located in the far south-west of Lao PDR, straddling Champasak and Attapeu provinces on the border with Cambodia. The site is approximately 530 km southeast from Vientiane. The site is partly situated on the Mekong River floodplain and the Xe Khampho River and the Xe Pian River flow southward from the Bolhaven Plateau through the eastern part of the area. The Bueng Kiat Ngong wetlands cover 2,360 ha of swamps, lakes and freshwater marshes in the northern sector of the vast Xe Pian National Park, which sprawls over 258,634 ha of low-lying dry deciduous and semi-evergreen forests at an elevation of 150-844 m. Xe Pian National Park is expected to support globally significant populations of two waterbird species (>1% of the regional population), the Masked Finfoot *Heliopais personatus* (CR) and Asian Openbill *Anastomus oscitans* (LC). In addition, the site supports several bird, mammal and reptile species of global conservation concern. Xe Pian National Park wetlands have been formally recognized by the Ramsar convention as holding important value for conservation and is one of only two Ramsar sites in Lao PDR. Xe Pian National Park's wetlands support a population of over 11,000 people across eight villages, who are involved in flood-plain agriculture (rice), raising livestock (cattle, water buffalo), and the collection of non-timber forest products. As a whole, Xe Pian National Park provide key regulation services for local communities through significant water storage and flood mitigation for the Lower Mekong region.

Xe Pian National Park is afflicted by multiple threats and drivers of change. Primarily these are the result of human activities, although climate change is expected to have long-term impacts. Local communities living in and around XPNP have limited access to livelihoods and poverty has driven unsustainable resource use, resulting in clearance of forest and wetland. Overfishing and overhunting using unsustainable methods have decimated local biodiversity, with several large waterbirds now extinct in Xe Pian. Part of XPNP's wetland areas have been overgrazed by domestic livestock whilst fires have resulted in further degradation. Tourism development in XPNP is limited at present and has not provided substantial benefits to the local economy.

Key priorities for the improving management of XPNP Ramsar Site are the strengthening of management and zonation of the protected area, including the updating of the site management plan (first produced in 2012). Strengthening the management and protection of the wetlands will require interventions to improve local capacity across several villages in Pathoumphone District to manage and protect the site, build co-management frameworks with the local communities, and strengthen enforcement activities. Livelihood interventions here is expected to focus on agriculture, small-scale fisheries and nature-based tourism. Given limited tourism development at present, there is scope to continue expanding wetland and nature-based tourism at XPNP through investment into maintaining or expanding ecotourism infrastructure such as jetties and viewing structures. Targeted programmes in collaboration with tourism operators and can be scaled up to build local capacity in managing tourism. Like in Thailand and Cambodia, there are also opportunities for piloting rice agriculture transition with a focus on biodiversity-friendly rice farming approaches piloted elsewhere in the region. If successful, wet rice cultivated using biodiversity-friendly methods can expand net habitat for wildlife in XPNP into surrounding rice fields.

1. Background of the Regional Flyway Initiative

In July 2021, the Asian Development Bank made a commitment to develop a long-term Regional Flyway Initiative (RFI) in the East-Asian Australasian Flyway (EAAF) (Sovereign Project 55056-001) to protect and restore priority wetland ecosystems and the associated ecosystem services they provide in the EAAF, the most threatened migratory bird flyway globally. The Initiative is slated for implementation in nine ADB developing member countries (DMCs) in East, South and Southeast Asia: Mongolia, People's Republic of China (PRC), Bangladesh, Viet Nam, Cambodia, Philippines, Thailand, Malaysia and Indonesia. In 2023, the geographic scope of the RFI was further extended to two DMCs in Southeast Asia and the Pacific respectively, Lao People's Democratic Republic (Lao PDR) and Papua New Guinea.

The primary aim of the RFI is to enhance and expand the existing efforts in conserving and managing wetlands of the highest priority for migratory birds within the EAAF through innovative loan and grant financing, and at scale. Consultations and analyses over the development period help identify key interventions to strengthen the management of wetlands, enabling the implementation of nature-based solutions while strengthening biodiversity protection. Over time, the RFI seeks to leverage collaborative opportunities by developing partnerships among important stakeholders including national governments, civil society organizations, communities, regional organizations like the East Asian-Australasian Flyway Partnership (EAAFP), development agencies, the private sector, and other relevant entities.

Through the RFI Technical Assistance (TA) implemented over the RFI's development phase from 2021 to 2024, BirdLife International takes the lead in providing and coordinating technical support for development of the RFI. This is carried out in collaboration with the EAAFP and a consortium of international non-governmental organizations including Wetlands International and the Paulson Institute, as well as two universities, namely the University of Southampton, UK and the National University of Singapore. Over the development phase, the TA team undertook a site selection analysis to identify priority wetland sites in all 10 countries based on recent bird data benchmarked against internationally accepted criteria under the Convention on Wetlands of International Importance (or Ramsar Convention), EAAFP Flyway Network Sites and Important Bird and Biodiversity Areas (IBAs). The team further developed ecosystem services profiles for prioritized wetlands using a multi-pronged approach used the TESSA ecosystem services assessment tool, and data-driven modelling of water-based ecosystem services and stored carbon.

In Lao PDR, a total of eight wetland sites, including three Asian Waterbird Census (AWC) count sites, were initially assessed through data analysis and expert consultation, of which eight were short-listed for assessment based on the available (recent) data. Of these sites, three (3) were defined and identified to be candidate RFI priority sites on the basis that they support at least 1% the flyway population of at least one EAAF migratory waterbird species. All three (3) sites are floodplain wetlands along the Mekong River basin. Three EAAF species exceeded the 1% threshold at the site level in Cambodia, the Masked Finfoot, Asian Openbill and Little Ringed Plover. The most important wetland site in Lao PDR is the Xe Pian National Park in south Lao PDR, a large floodplain landscape of dry dipterocarp forests, a part of which falls within the boundary of the Bueng Kiat Ngong Ramsar Site.

2. Site profile of Xe Pian National Park

Location: Xe Pian National Park is located in the far south of Lao PDR (approximately 530km SE from Vientiane) close to the border with Cambodia, and straddles Champasak and Attapeu provinces. To the west of Xe Pian is the Mekong River and its floodplain. The Xe Khampho River and the Xe Pian River flow southward from the Bolaven Plateau through the eastern part of the area, before joining the Tonle Song at the border with Cambodia. To the south of Xe Pian is the international border with Cambodia, and the Siem Pang Wildlife Sanctuary, which is contiguous with Xe Pian, on the Cambodian side of the border.

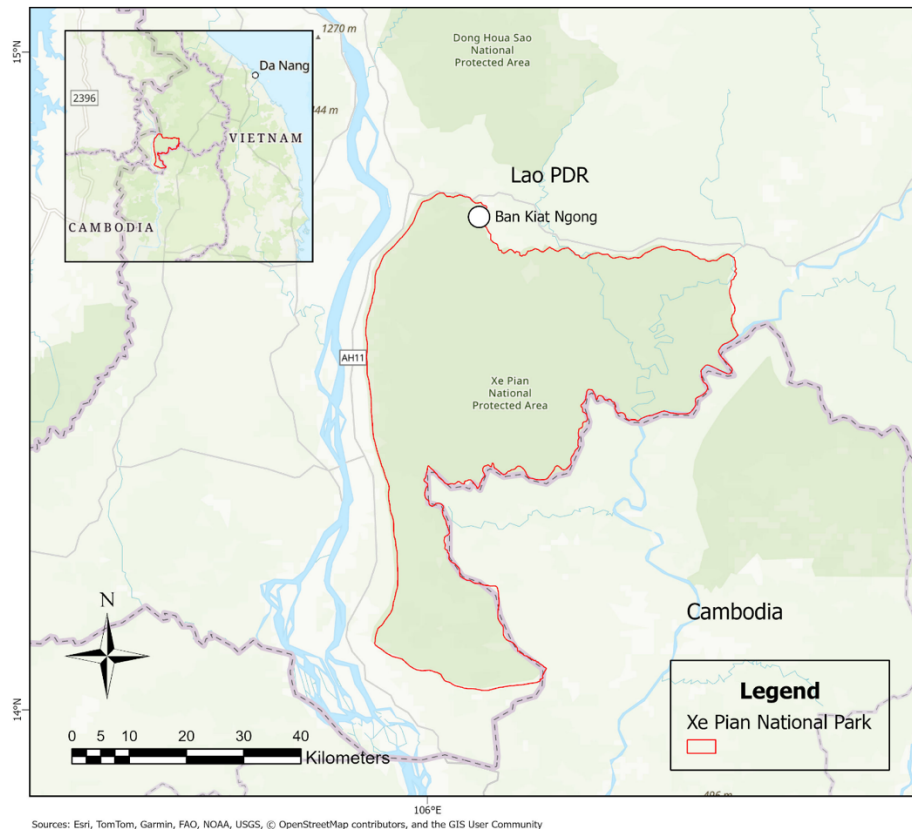


Figure 1. Map of Xe Pian National Park

Area: The Ramsar wetlands of Bueng Kiat Ngong cover 2,360 ha while Xe Pian National Park covers 258,634 ha.

Altitude: 150-844 m asl.

Geographical coordinates: 14°45'N 106°03'E

Description of site: This important wetland complex includes a mosaic of swamps, lakes and freshwater marshes and is the only place in Lao PDR where peatland areas are found. The vast majority of the low-lying Xe Pian landscape remains covered in broadleaf evergreen and dry deciduous forest, with rivers and scattered seasonal pools, similar to landscapes further south in Cambodia.

Site administration, management and land tenure: The wetlands at XPNP are a Ramsar Site designated in 2010 (Ramsar Convention 2025), one of two in Lao PDR. The Ramsar-designated wetlands overlap with Dong Hua Sao National Park; both were gazetted in 2021 and are managed by the Department of Forestry (DOF) and the Ministry of Agriculture and Forestry (MAF) (UNEP-WCMC 2025). Water resources are managed by Ministry of Natural Resources and Environment (MONRE). Much of Xe Pian falls within an IBA (2003) and a KBA (2004), named 'Xe Khampho / Xe Pian' (BirdLife International 2025). At a regional level the site straddles Champasak Province and is located about 50 km south of the provincial capital of Pakse.

Social and economic values: Approximately 27,000 people from nine ethnic groups inhabit 58 villages around Xe Pian (Scotson 2012). On its own, the XPNP Ramsar Site supports a population of around 11,500 people distributed across eight villages (IUCN 2012). The main economic activities across the area are flood-plain agriculture (rice) and pastoralism (cattle, water buffalo), additionally elephants are kept in the wetlands. Other income sources include hunting and fishing, wildlife trade, wetland burning, logging, timber collection, non-timber forest products (Bezuijen *et al.* 2007). The area also includes sacred sites e.g. Vat Phou Asa. The area is visited by tourists and there is a lodge at the edge of the wetlands (also IUCN 2012) in Ban Kiat Ngong.

3. Biodiversity value of Xe Pian National Park

3.1. Key habitats

XPNP includes a mosaic of swamps, lakes and freshwater marshes and is the only place in Lao PDR where peatland areas are found. The vast majority of the low-lying Xe Pian landscape remains covered in broadleaf evergreen and dry deciduous forest, with rivers and scattered seasonal pools, similar to landscapes further south in Cambodia.

3.2. Importance of Xe Pian National Park for migratory waterbird species

Count data from the 2024 Asian Waterbird Census (AWC) was used in the site prioritization analyses (Piot, B., Berryman, A. in litt. 2024), alongside published data in peer-reviewed, expert opinion and grey literature sources such as project reports. AWC data was unavailable for Xe Pian National Park, so the analyses relied entirely on grey literature sources and studies (e.g. Chowdhury *et al.* 2021). Two migratory waterbird species are expected to exceed the 1% population estimates during (see Table 1).

Table 1. List of migratory species (based on the EAAFP list of species) with globally significant congregations in Xe Pian National Park

Species name	IUCN	Average count	CSR1	CSR1 score
Masked Finfoot <i>Heliopais personatus</i>	CR	11 (estimate)	3 individuals	3.6
Asian Openbill <i>Anastomus oscitans</i>	LC	2,380 (counted over several sites)	3,000 individuals	Approaching 1.0

3.3. Other notable biodiversity

Lesser Fish-Eagle *Ichthyophaga humilis* (NT) and Asian Woolly-Necked Stork *Ciconia episcopus* (NT) are still thought to survive in Xe Pian in small numbers even though there are few recent records. There have been suggestions that several species of conservation concern at least up till recently occurred in Xe Pian, but it may now have been extirpated. This includes White-winged Duck *Cairina scutulata* (CR), Giant Ibis *Pseudibis gigantea* (CR), Greater Adjutant *Leptoptilos dubius* (NT), Sarus Crane *Antigone antigone* (VU), Spot-billed Pelican *Pelecanus philippensis* (NT) (IUCN 2015). As with waterbirds there is a paucity of current data for other genera. However, the following species are expected to occur in Xe Pian, albeit in small numbers: Gaur *Bos gaurus* (VU) and Banteng *B. javanicus* (CR) (Steinmetz 2004) Asiatic Black Bear *Ursus thibetanus*, Sun Bear *Helarctos malayanus* (Scotson 2012), Fishing cat *Prionailurus viverrinus* (VU), Sambar *Rusa unicolor* (VU) (IUCN 2012).

There is evidence for several reptile species of conservation across the area, as per above there is limited evidence as to their ongoing survival in the area; Yellow-headed Temple Turtle *Heosemys annandalii* (CR), Giant Asian Pond Turtle *Heosemys grandis* (CR), Mekong Snail-Eating Turtle *Malayemys subtrijuga* (NT), Elongated Tortoise *Indotestudo elongata* (CR), Asian Giant Softshell Turtle *Pelochelys cantorii* (CR) (Stuart 2004) and Siamese Crocodile *Crocodylus siamensis* (CR) (Bezuijen et al. 2006). There are at least 43 fish species known from the wetlands in the Xe Pian National Park area.

4. Ecosystem services

4.1. Ecosystem services provided by Xe Pian National Park

The Xe Pian National Park landscape is expected to support diverse wetland habitats, which provide valuable provisioning, regulating and cultural ecosystem services (Table 2), although this has never been comprehensively quantified. Provisioning services, such as fresh water and food provision, benefit communities both within and adjacent to the site. Cultural services, such as ecotourism and a sense of place, benefit the livelihoods of some local communities, especially at Ban Kiat Ngong, where ecotourism infrastructure (e.g., tourist lodges) is in place.

Within the Xe Pian landscape, the XPNP wetlands are a critical economic and ecological resource for approximately 11,500 individuals residing in eight core villages and several adjacent communities. A predominant proportion of the local population relies on these wetlands for their livelihoods, primarily engaging in subsistence agriculture, fishing, and the collection of wild vegetables and non-timber forest products (NTFPs). As of 2009, the aggregated economic value derived from these agricultural, fishery, and NTFP activities was estimated at around USD 850,000 annually (IUCN, 2011).

The wetlands are particularly significant for rice cultivation, especially within the seasonal wetlands, and provide essential grazing land for numerous cattle, buffalo, and even elephants, which are integral to the local cultural practices and economic systems. Fishing constitutes a major economic pursuit, with local communities harvesting over 227 tons of fish annually, supplemented by the collection of eels, frogs, snails, and aquatic vegetables. These resources not only provide essential proteins and nutritional sustenance but also contribute substantially to household incomes. The wetlands' biological diversity ensures a consistent supply of these vital resources year-round, even during the dry season when water availability is limited elsewhere. Additionally, the gathering of NTFPs, including Malva nuts, berberine, honey, and cardamom, enhances family incomes and supports local markets. Initiatives focused on sustainable management have been instrumental in improving the harvesting techniques and trade of these products, thereby amplifying their value within the community.

In addition to their direct economic contributions, the wetlands fulfil a critical role in supporting local agricultural practices by offering fertile soils and natural irrigation, thereby reducing the reliance on chemical fertilizers. The ecosystem services provided by wetlands—such as flood mitigation, sediment trapping, and groundwater storage—protect villages from natural disasters and ensure the long-term sustainability of farming and fishing activities.

Moreover, the wetlands have emerged as a tourist attraction, attracting thousands of visitors annually to both the wetlands themselves and nearby cultural sites. Activities such as elephant trekking, guided tours, and homestays generate supplementary income for residents while promoting the conservation of local traditions, including the distinctive mahout culture surrounding elephant stewardship. Furthermore, the wetlands possess significant cultural and spiritual value, serving as a venue for annual festivals and a repository for community identity and heritage.

Table 2. List of key ecosystem services provided by Xe Pian National Park, based on comparisons with similar wetland sites in Thailand and Cambodia

Ecosystem services	Essential or non-substitutable	Benefits to communities			Change	
		Within the site	Adjacent to the site	Distant to the site	Past	Future
Provisioning services						
Fresh water	Yes	✓	✓	✓	Unknown	Decrease?
Food	Yes	✓	✓	✓	Unknown	Increase
Genetic resources	Yes	✓			Unknown	Unknown
Cultural services						
Recreation, ecotourism	Yes	✓	✓	✓	Increase	Increase
Sense of place	Yes	✓	✓	✓	Unknown	Unknown

4.2. Global climate regulating services

The REDD+ project associated with Xe Pian National Park is projected to generate approximately 2.417 million carbon credits throughout the crediting period of 2011 to 2040, as documented in the project database records¹. However, the database does not provide the total carbon stock specific to the park itself.

4.3. Flood mitigation services

The flood mitigation services provided by Xe Pian National Park were assessed using biophysical values only (see Table A1 and Annex 1 for details). When compared to the average of all other inland wetlands in Lao PDR (Table A2 in Annex 1), Xe Pian National Park shows some consistent results in terms of benefits and beneficiaries:

(1) for the average green storage capacity per sq. km of wetland, Xe Pian National Park is above average (741 Giga Liters or GL of water per km² vs. 511 GL/km² for all other inland wetlands);

(2) for the average population uniquely benefitting from influential green storage upstream per sq. km of wetland, Xe Pian National Park is also above average (184 vs. 123 people/km² for all other inland wetlands); and

(3) for the average built-up area uniquely benefitting from influential green storage upstream per sq. km of wetland, Xe Pian National Park is again above average (6.97 ha/km² vs. 4.30 ha/km² for all other inland wetlands).

¹ <https://www.reddprojectsdatabase.org/571-reducing-emissions-from-deforestation-and-carbon-enhancement-in-xe-pian-national-protected-area/>

5. Drivers of change and their potential impacts on Xe Pian National Park

5.1. Current drivers of change and their level of impact

High-impact drivers of change in XPNP include agricultural expansion (annual and perennial non-timber crop production) which has led to forest loss and degradation (IUCN 2012). Biological resource use, such as fishing, killing, and harvesting of aquatic resources, as well as hunting and collecting terrestrial animals are expected to pose a moderate threat to biodiversity. Livestock farming and grazing also contribute to some levels of habitat degradation. Other medium-impact drivers encompass activities like the collection of terrestrial plants, which can disturb native vegetation and alter the habitat. Infrastructure development, including roads, (planned) hydropower and tourism infrastructure may drive further habitat fragmentation, with impact on wildlife.

5.2. Potential alternative state of Xe Pian National Park

There is no current information.

5.3. Expected changes in the ecosystem services of Xe Pian National Park

Lao PDR is particularly vulnerable to climate change (World Bank 2023, Norris et al. 2024) and as with many parts of mainland Southeast Asia, mean daily temperatures are expected to rise over time while rainfall variability increases, with more pronounced rainfall during the monsoons. There are expectedly consequences on agricultural production, especially wet rice. Over time, ecological systems and local communities will be impacted by increased heat stress.

6. Capacity gaps and needs for the management of Xe Pian National Park

Four stakeholder groups were identified as important to the management of Xe Pian National Park wetland ecosystems. Capacity needs identified to improve wetland management are patrolling, management plan development, use of technology for local enforcement, and biodiversity knowledge. Table 3 summarizes the stakeholders' role, capacity needs, and proposed capacity development activities.

Table 3. Stakeholder capacity needs in Xe Pian National Park

Stakeholder Group	Current role in the wetland management (+/-)	Possible Future role in wetland management (in 10 years)	Current capacity for sustainable wetland management	Capacity Development support needed to improve wetland management	Form of capacity development needed
Ministry of Forestry and Agriculture	• Reporting • Patrols and enforcing regulations (including tackling violations) • Demarcation of site and land registration activities	N/A	N/A	• Provision of equipment and tools for patrols, including SMART devices, GPS, camera traps, and laptops • Zonation and development of management plans for Bueng Kiat Ngong (and Xe Pian) • Skill development and application of technology such as SMART Patrol, GPS and GIS to support patrol and enforcement • Biodiversity knowledge	• Training • Site visit (local & overseas) • National policy for management • Managing ecotourism activities?
Local authorities (at district, commune level and below)	• Raising awareness • Coordinating law enforcement efforts and management activities	N/A	N/A	N/A	• Training on law enforcement issues

Stakeholder Group	Current role in the wetland management (+/-)	Possible Future role in wetland management (in 10 years)	Current capacity for sustainable wetland management	Capacity Development support needed to improve wetland management	Form of capacity development needed
Local communities	• Site co-management, including through participating in patrols, outreach, and consultative meetings • Support ecotourism activities	N/A	N/A	• Play a major role in supporting the development of action plan and management plans	• Training to implement patrols and support site management
Non-government organizations	• Raising awareness • Promoting tourism opportunities • Coordinating law enforcement efforts and site management			• Play a major role in supporting the development of action plan and management plans	

7. Opportunities for RFI interventions

7.1. Recommended Interventions

The recommended interventions at Xe Pian National Park are expected to involve at least four major thematic areas, including the following:

1. Strengthening site-based management. XPNP can benefit from improved community-led management, but will require further capacity strengthening, an improved or updated management plan, training and resources for patrols.
2. Habitat restoration. Parts of the wetlands in XPNP have become degraded as a result of agricultural expansion and the project will aim to restore degraded areas of marshland and swamp forests.

3. Fisheries management and sustainability. Fish (and other species) are harvested regularly across the site by small-scale fisheries. This may involve the application of microloans for small-scale fishers tied to the adoption of sustainable fishing practices, alongside improved provision of storage and processing capacity for local communities.
4. Scaling up ecotourism and strengthening benefits-sharing. Livelihoods in villages in XPNP and in the wider area can benefit from a fair and equitable approach to tourism through measures including, improved infrastructure for biodiversity tourism, best practices for tourism management and other capacity building opportunities. In addition, the project will train local guides and tour operators to use the site sustainably.
5. Biodiversity-friendly rice agriculture piloting, drawing from lessons in place in similar landscapes in parts of Thailand and Cambodia.

Table 4. List of proposed interventions for Xe Pian National Park and possible project indicators

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
<i>Component 1. Strengthening landscape management of Xe Pian National Park</i>					
Undertake scoping study of existing interventions and threats and disturbance at Xe Pian, including targeted work on long-term threats (from climate change, encroachment and invasive species management).	Assessment and scoping guidance to provide basis for proposed RFI interventions. Climate, topography and hydrology of site surveyed, with long-term climate impacts identified. Land use and water use planning recommendations developed to ensure the long-term sustainability of interventions.	Assessment report with key threats identified and recommendations for improved management published and disseminated to key stakeholders. Report to determine project impact of climate change, and recommendations for long-term management (including and use, water use and management) published and disseminated to key stakeholders Number of stakeholder meetings conducted for the assessment reports. Number of stakeholder groups engaged in the	100,000	1 year	MONRE, MAF Champassak Provincial Government, including PAFO DAFO, DFRC Pathoumphone District government XPNP management board Conservation organizations ADB

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
		assessment reports, ensuring a participatory approach.			
Review and update XPNP site management plan	XPNP is better managed with the updated site management plans.	Landscape-wide site management and zonation plans to conserve biodiversity developed and endorsed by government agencies. Number of stakeholder meetings conducted for site management and zonation plans Number of government agencies and stakeholder groups engaged in the site management and zonation planning, ensuring a participatory approach	100,000	1 year	
Component 2. Improve wildlife protection and monitoring, with a focus on waterbirds					
Pilot the development of community protected areas	Improved wildlife protection and enforcement at Xe Pian National Park through identifying and mapping community conservation areas with local communities and government, establishment of the community conservation areas, and developing the community conservation areas.	Community conservation areas identified, mapped, and prioritized with local stakeholders. Number of stakeholders engaged in the community conservation area identification, mapping, and prioritization. Number of stakeholder meetings conducted for the community conservation area identification,	500,000	5 years	MAF, MONRE Champassak Provincial Government (PONRE) DAFO NLMA National Committee for Wetland Management and Ramsar Convention

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
		mapping, and prioritization. At least one community group created for each community protected area, targeting up to three community conservation areas established with at least two villages (Ban) Community conservation area management plans (priority for the 3 targets) drafted and endorsed by local stakeholders. Number of stakeholders engaged in the community conservation area management planning. Number of workshops and stakeholder meetings conducted for the community conservation area management planning.			Pathoumphone District government Local community groups
Strengthen the legal protection and enforcement in Xe Pian National Park (including Bueng Kiat Ngong)	Improved wildlife protection and enforcement at Xe Pian National Park (including Bueng Kiat Ngong) through a co-management framework, increased patrol and enforcement efforts for wildlife protection and encroachment activities, and	Co-management framework with representatives from villages in reserve and conservation organizations, with at least village communities from two communes engaged developed. Number of people engaged and actively participating in co-	200,000	3 years	MAF DAFO XPNP management board Pathoumphone District government

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
	increased capacity of local rangers	management activities. Training program and modules on patrol and enforcement developed Number of training activities conducted Number of local rangers trained on patrolling and enforcement. Number of patrol activities using SMART approach strengthened and scaled up significantly against baselines.			Conservation and academic organizations
Increase biodiversity and natural resources' awareness of local communities	Improved wildlife protection and enforcement at Xe Pian National Park through increased awareness of migratory waterbird conservation amongst local communities. Awareness activities strengthened for at least five villages in the XPNP landscape	Awareness – raising activities for Xe Pian National Park landscape designed. Number of wetland and/or biodiversity awareness activities organized (target of two annually). Number of stakeholders engaged in the awareness – raising activities, targeting at least five villages in the Xe Pian National Park landscape	50,000	3 years	Pathoumphone District government Local community groups Conservation and academic organizations

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
Strengthen biodiversity and wetland monitoring, with a focus on waterbird species.	Better monitoring of biodiversity and wetland ecosystems in the Xe Pian National Park landscape through a locally - engaged biodiversity monitoring program and improved documentation of wetland biodiversity, including threatened species such as Masked Finfoot.	Biodiversity and wetland monitoring framework developed and supported by local stakeholders Number of monitoring activities, targeting at least five villages, conducted using the established biodiversity and wetland monitoring framework Number of local community groups, targeting at least five villages, established to support biodiversity monitoring established. Number of documentation reports on wetland biodiversity, including threatened species such as Masked Finfoot	50,000	3 years	MAF, MONRE Pathoumphone District government Local community groups Conservation and academic organizations Research institutions (e.g. NUOL)
<i>Component 3. Restore degraded wetland habitat in the XPNP Ramsar site</i>					
Undertake a comprehensive assessment on wetland restoration gaps in Xe Pian National Park	Xe Pian National Park landscape is better managed by understanding site restoration potential and identification of suitable land plots for wetland and forest restoration.	Survey and maps identifying key areas for wetland and forest restoration produced. Number of stakeholder groups engaged in the comprehensive assessment on wetland restoration gaps in Xe Pian National Park Number of consultations organized in the comprehensive	50,000	1 year	MAF, MONRE Champassak Provincial Government (PONRE) DAFO NLMA National Committee for Wetland Management and Ramsar Convention

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
		assessment and mapping of key areas for wetland and forest restoration.			Pathoumphone District government
Scale up the restoration of degraded wetlands and forest in XPNP	Degraded wetlands and forest in Xe Pian National Park landscape restored.	Restoration plots defined (up to 10 plots, for wetland and deciduous forest) Nurseries for vegetation (target of up to two nurseries for forest trees and wetland species) established. Restoration plot monitoring programmes established. Up to 100 ha of degraded forest restored with native tree species Up to 50 ha of degraded wetland (in XPNP) area restored with native tree species.	500,000	2-3 years	Conservation organizations Local community groups Research institutions (NUoL)
Strengthen the management of invasive species (e.g. <i>Mimosa pigra</i> , water hyacinth)	Xe Pian National Park landscape is better managed through invasive species management strategy/ plan and increased capacity and participation in the implementation of the invasive species management plan. Significant (xx% against baselines) reductions in the	Invasive species management strategy and plans developed, targeting at least 3 villages. Number of activities implemented on invasive species management strategies and plans Number of stakeholders involved in the management and removal of invasive species.	100,000	5 years	

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
	invasive species population.	Percentage reduction of the invasive species population Number of invasive species managed in (up to 50 ha) the XPNP landscape. Number of demonstration plots (up to three) for invasive species removal established. A training program on invasive species management developed for local community groups. Number of training workshops implemented, targeting the priority 3 villages Number of people trained on invasive species management. Number of community groups (at least 3) engaged in the implementation of the invasive species management program			
<i>Component 4. Strengthen the management of small-scale fisheries and other freshwater resources in XPNP Ramsar Site</i>					
Strengthen management of site fisheries in XPNP, with a focus on small-scale artisanal fishers.	Improved conditions of fishery and freshwater resources in XPNP Ramsar Site through increased local awareness of the	Scoping report on fish-breeding sanctuaries established and disseminated with local stakeholders.	500,000	5 years	MAF Department of Livestock and Fisheries (DLF) PAFO

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
	sustainable management of fisheries, better regulated and enforced fishing activities, and planned restocking of commercially important catfish, knifefish and carp species.	Licensing framework for fisherfolks established and in place. Fishery monitoring framework established for at least five villages. Number of meetings and workshops to engage local stakeholders (target of at least five villages) at XPNP for participatory processes in fisheries management. Number of local stakeholder groups engaged in the development of fishery licensing and monitoring frameworks, and scoping report. Awareness and education programmes on fisheries established. Number of awareness-raising and capacity-building activities implemented. Number of local stakeholders engaged in awareness- raising and capacity- building activities.			Champassak provincial government, including provincial department of fisheries. Pathoumphone district governments Fishing operators and community groups from all villages in XPNP.

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
		Number of patrol activities using SMART approach against illegal fishing implemented, strengthened, and scaled up significantly against baselines. Number of local stakeholders engaged in patrol activities. Number of community- led agreements on sustainable fishing practices created. Number of community-led agreements on sustainable fishing practices supported with improved storage and processing capability.			
Strengthen the capacity and resilience of small-scale fishers and households harvesting aquatic resources in XPNP.	XPNP is better managed through local fishing cooperatives and communities' development, stronger access to livelihood opportunities, improved access to micro-finance for small scale fishing communities based around sustainable practices, improved engagement of women in the	Number of local fishing cooperatives and communities developed (target of at least three new fishing cooperatives established; existing cooperatives strengthened in five villages) At least 100 small-scale fishing operators and fishers engaged across five villages.	500,000	5 years	MAF DLF PAFO Champassak provincial government. Pathoumphone district governments

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
	workforce, and new infrastructure for storage and processing of fish-based products	Small loan (microcredit) scheme in place for small-scale fishers. Number of fisherfolk benefiting from the small loan (microcredit) scheme. Capacity-building program developed for local fishing communities (with a representative % of women) in cooperatives Number of capacity-building activities implemented. Number of target stakeholders trained. Number of new storage facilities for fish and fish-based products installed in at least five villages.			Fishing operators and community groups from all villages in XPNP. Community groups Conservation organizations
<i>Component 5. Upscaling tourism infrastructure and strengthening nature-based tourism in Bueng Kiat Ngong Ramsar Site and Xe Pian National Park</i>					
Improve and expand tourism infrastructure at XPNP, including signages and viewing structures	Impact of habitat degradation caused by tourism activities in the landscape reduced through planned ecotourism and increased opportunities for visitors to observe waterbirds and experience wetland habitats with improved	Provincial and district level tourism plans and strategies updated, in coordination with LNTA and provincial agencies and relevant tourism stakeholders such as tourism operators. Number of facilities established/ upgraded (target of at least five viewing structures)	500,000	2 years	MAF LNTA DAFO Champpassak Provincial Government (PONRE) Pathoumphon District government

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
	ecotourism infrastructure.	repaired or installed for tourist access), in line with the tourism infrastructure plan and ecotourism strategy Number of stakeholder groups engaged in the upgrading of tourism infrastructure and local planning Number of people benefiting from the upgraded tourism infrastructure			Conservation organizations Local community groups Research institutions (NUoL) Tourism operators in Champassak, Savannakhet and Vientiane
Strengthen the capacity of local communities and businesses for nature-based tourism.	Impact of habitat degradation caused by tourism activities in the landscape reduced through increased local capacity of small-scale tourism operators for nature-based tourism, stronger benefit sharing from nature-based tourism for local communities, including for protected area management, and microfinancing. Ecotourism livelihood opportunities at XPNP expanded.	Ecotourism strategy and business plans and packages with a focus on wetlands, waterbirds and agriculture (agri-tourism) developed with tourism operators. Number of business plans tested with tourism operators (including international bird and wildlife tour companies) Framework for benefits-sharing from nature-based tourism enhanced for households and tourism operators. Number of stakeholder groups engaged in the	200,000	3 years	

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
		strategy and framework development for nature-based tourism Number of households benefitting from ecotourism as a source of local livelihood (target of at least 100 households in at least five villages in XPNP) Training programme and curricula for ecotourism development established in at least XX villages. Number of stakeholders trained on ecotourism-related modules. Small loan facility for nature-based tourism operators established. Number of people benefitting from the established small loan facility.			
<i>Component 6. Piloting sustainable and organic rice farming (on Jasmine rice, or other native Laotian rice varieties)</i>					
Pilot sustainable and regenerative rice-farming in selected villages and subdistricts, in the landscape	Impact of rice-farming industry to the landscape reduced through biodiversity-friendly rice farming standards, increased local capacity on organic and	Standards for biodiversity-friendly rice farming developed and endorsed by local communities representing at least five villages.	300,000	3 years	MAF DOA DOI DALaM

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
outside of XPNP	biodiversity-friendly rice farming, and successful trialing of pilot plots of sustainable, regenerative rice with selected communities in XPNP.	Number of stakeholder consultation meetings and workshops conducted to engage local stakeholders for participatory processes. Number of local stakeholders engaged in the standard development for biodiversity-friendly rice farming. Capacity building (and training) programme for organic and biodiversity-friendly rice farming (including use of rice seeds, land preparation, and use of agro-chemicals) developed. Number of training activities implemented Number of target local stakeholders trained on biodiversity-friendly rice farming. Number of successful rice-planting trials and experiments (on fertilizer use, soil management) in selected plots. Number of target local stakeholders engaged			Champassak provincial government Pathoumphon District government, and relevant district governments Conservation organizations (including bird and community-focused NGOs) Agricultural banks

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
		in biodiversity-friendly rice farming.			
Improve management of agro-chemical waste in the rice paddies.	Reduced inflow of agro-chemicals into the wetlands. Increase in biodiversity in rice fields against baseline metrics.	Agro-chemical management and disposal protocols established and strengthened for at least five villages. Number of local stakeholders engaged in agro-chemical management Metrics established, in consultation with local stakeholders Monitoring data shows reduced inflow of agro-chemicals into XPNP wetlands against baselines.	500,000	3 years	
Component 7. Scope for alternative forms of financing to protect Xe Pian National Park					
Explore the development of alternative financing mechanisms for the site (including carbon financing)	Xe Pian National Park is better managed with potential sustained financing opportunities for its conservation and management.	Scoping report on carbon- and nature-based financing opportunities for XPNP (focusing on peatland) developed and presented to local government stakeholders. Number of stakeholder consultation meetings and workshops to engage local stakeholders for participatory processes.	100,000	1 year	MAF, MONRE Consultancy companies ADB
Total investment for 3-5 years			14,750,000		

7.2. Potential Financing

The estimated project cost is USD 14,750,000 over 3-5 years. This project budget supports local assessments and scoping studies, development of plans on site management, zonation, invasive species management, tourism, and co-management framework, capacity-building activities on sustainable fishing practices, ecotourism, biodiversity monitoring, invasive species control, biodiversity-friendly rice farming, and patrolling, sustainable fishing pilots, biodiversity-friendly rice farming pilots, microfinancing, and upgrading of tourism infrastructure.

The Lao People's Democratic Republic endorsed to participate in the Global Flyway Grant Mechanism (GFGM) for Civil Society Organizations. The GFGM², through the Global Environment Facility, aims to enable civil society-led conservation, restoration, and sustainable management of globally significant wetland sites on the East – Asian Australasian Flyway, targeting high priority sites identified under the EAAF Regional Flyway Initiative. This granting mechanism aims to contribute to restoring and/or conserving about 9 million hectares of wetlands in six countries, including Lao PDR, and directly benefit 330,000 people (60% women). The Project Preparation Grant (PPG) Phase for the GFGM commences and full proposal submission is in June 2027. Once operational, this GFGM can provide grant funding opportunities for CSOs working on wetland conservation.

7.3. Proposed Institutional Arrangements

The proposed project is expected to be implemented over a period of at least five (5) years, with the main project components focusing on improving site-based management of XPNP (including the establishment of community conserved areas), scaling up of local tourism initiatives, biodiversity monitoring, sustainable fisheries and biodiversity-friendly rice agriculture. The Ministry of Agriculture and Forestry and several of its subordinate agencies is expected to be the lead implementing agency in Lao PDR.

7.4. Project Beneficiaries

Approximately 27,000 people from nine ethnic groups inhabit 58 villages around Xe Pian (Scotson 2012). On its own, the XPNP Ramsar Site supports a population of around 11,500 people distributed across eight villages (IUCN 2012). The main economic activities across the area are flood-plain agriculture (rice) and pastoralism (cattle, water buffalo), additionally elephants are kept in the wetlands.

Local communities here are predominantly Lao Loum, with a small proportion of other groups (e.g. Khmers). This proposed project is expected to undertake activities to promote gender inclusion and participation in livelihood activities, through capacity building activities for local households.

² Global Environment Facility. (n.d.). *Empowering conservation action on the East Asian Australasian Flyway (EAAF) through Establishment of a Global Flyways Grant Mechanism (GFGM) for Civil Society Organizations*. Retrieved July 2026 <https://www.thegef.org/projects-operations/projects/12290>

7.5. Anticipated Implementation Risks

Environment: Nature-based tourism has been identified as a key project concept theme. The proposed interventions include upgrading infrastructure that would improve tourism experience in XPNP landscape. Building these infrastructures, however, would induce noise that may disturb the wildlife in the area. Moreover, increasing tourism activities bring other human-induced impact, such as waste pollution. Planning with the stakeholders is critical before any infrastructure development and tourism management.

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Annex 1. Supplementary information on flood mitigation services

To further validate the identification of the top ecosystem services by means of stakeholder consultation, an expectedly essential or non-substitutable regulating service across all RFI sites, namely coastal protection and flood mitigation (i.e., storm and flood hazard regulation), was assessed based on a combination of globally available datasets supplemented by web-based tool Co\$tingNature (Mulligan, 2022). Estimates for flood mitigation were spatially inferred in QGIS from a selection of metrics expressing different biophysical values modelled online by the Water World component of this tool. Equivalent data to assess monetary values similarly to coastal protection were not available for the RFI region.

The key metrics selected for biophysical values (Table A1) were the average green storage capacity, which is the volume of water stored by each square kilometer of wetland itself as well as its soil and vegetation, and the direct influence of this storage capacity on beneficiaries found downstream of the wetland, both as the average number of people and the average built-up area that are uniquely benefitting from the resulting flood mitigation (and not from other green storage found upstream).

Table A1. Contribution of the wetland habitats to flood mitigation in Xe Pian National Park based on site-level (biophysical) values inferred from Mulligan (2022) and expressed as ranges to represent the resulting uncertainty.

Influence of the wetland on flood mitigation (metrics)	Benefit/Beneficiaries
Average green storage capacity per sq. km of wetland in million cubic meters (Gigalitres/km ²)	736 – 746
Average population uniquely benefitting from influential green storage upstream per sq. km of wetland (n/km ²)	182– 186
Average built-up area uniquely benefitting from influential green storage upstream per sq. km of wetland (ha/km ²)	6.91 – 7.03

Table A2. Biophysical benefits from and beneficiaries of RFI inland wetland sites (expressed as ranges to represent the resulting uncertainty) and at the national level.

Site name	Green storage capacity (Gigalitres/km ²)	Downstream population (n /km ²)	Downstream built-up area (ha /km ²)
Xe Pian National Park	741 (±5)	184 (±2)	6.97 (±0.06)
Lao PDR RFI average	741 (±5)	184 (±2)	6.97 (±0.06)
Lao PDR national average	511	123	4.30