

# GEF-8 PROJECT IDENTIFICATION FORM (PIF)

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## General Project Information

### Project Title

Enhancing transboundary fisheries management in the Lower Mekong Basin

### Region

Regional

### GEF Project ID

11304

### Country(ies)

Regional

Cambodia

Lao PDR

Viet Nam

### Type of Project

FSP

### GEF Agency(ies):

IUCN

### GEF Agency ID

### Executing Partner

Mekong River Commission

Ministry of Agriculture, Forest and Fisheries, Royal  
Cambodian Government

Lao PDR National Mekong Committee

Research Institute of Aquaculture, Government of Viet Nam

### Executing Partner Type

Others

Government

Government

Government

### GEF Focal Area (s)

Multi Focal Area

### Submission Date

4/20/2023

### Project Sector (CCM Only)

### Taxonomy

Focal Areas, International Waters, Fisheries, Transboundary Diagnostic Analysis and Strategic Action Plan Preparation, Freshwater, River Basin, Influencing models, Transform policy and regulatory environments, Stakeholders, Gender Equality, Gender Mainstreaming, Beneficiaries, Gender-sensitive indicators, Women groups, Sex-disaggregated indicators, Capacity, Knowledge and Research, Knowledge Generation, Learning

### Type of Trust Fund

GET

### Project Duration (Months)

60

### GEF Project Grant: (a)

10,709,176.00

### GEF Project Non-Grant: (b)

0.00

### Agency Fee(s) Grant: (c)

963,824.00

### Agency Fee(s) Non-Grant (d)

0.00

### Total GEF Financing: (a+b+c+d)

11,673,000.00

### Total Co-financing

77,600,000.00

### PPG Amount: (e)

### PPG Agency Fee(s): (f)

300,000.00

27,000.00

PPG total amount: (e+f)

Total GEF Resources: (a+b+c+d+e+f)

327,000.00

12,000,000.00

Project Tags

CBIT: No NGI: No SGP: No Innovation: No

## Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? (iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B “project description”. (max. 250 words, approximately 1/2 page)

The Lower Mekong Basin (LMB) is the world’s largest inland fishery and home to nearly 1,200 fish species, making it the third most biodiverse river system in the world after the Amazon and Congo. Fisheries resources, including fish and other aquatic animals (OAA) make a vital contribution to regional food security and nutrition, cash income and employment, and have strong cultural and religious significance. Fish ranging from 1.5 to 1.7 million tons and more than 400,000 tons of OAA, valued at an \$8 billion, are harvested annually from the LMB.

However, fish stocks are declining largely due to a lack of effective cross-sector coordination and the absence of harmonised fisheries management. This is particularly the case in Cambodia, Lao, and Viet Nam (CLV). These countries, which cover 67% of the area of the LMB (Thailand and Myanmar cover 33%), are responsible for 80% of the fish catch of the LMB and are the most dependent on LMB fisheries for economy and food security. Because CLV offer the greatest need and opportunity, they are the focus of the proposal.

The baseline scenario sees fish stocks declining further leading to the loss of globally recognised biodiversity and local food security. The proposed project aims to improve the management of cross-sector trade-offs and to harmonise national/regional fisheries management. Thereby, the project targets to stabilise fish stocks at 2020 levels. This will make substantial contributions to the safeguarding of food security of local communities in CLV as well as to the conservation of globally significant biodiversity.

The project’s goals are feasible as it can build on decades of fisheries-focused transboundary work led by the MRC. In 2017, the MRC published the Basin-wide Fisheries Management and Development Strategy 2018-2022 based on 20 years of fisheries data, and in 2020, the Basin Development Strategy for the Mekong River Basin 2021-2030 and MRC Strategic Plan 2021-2025. GEF funding will allow implementation of both strategies in CLV.

Key problems include poorly planned hydropower development, sand mining, upstream water retention, and climate change. Key barriers include limited investment in the protection and management of wild capture fisheries, insufficient attention paid to water-food-energy trade-offs, and weak transboundary cooperation on fisheries management. The project will address these barriers through dialogue between CLV and Thailand under the 1995 Mekong River Agreement, enhance the resilience of the fishing communities, and provide the foundation for evidence-based restoration of critical transboundary freshwater ecosystems (Outcome 1). Field work will implement scalable fisheries management improvements to move fisheries in CLV to a more sustainable footing (Outcome 2). The project will focus on harmonising fisheries governance and other relevant policies and plans to support transboundary fisheries

management in CLV (Outcome 3). The latter will be achieved through close partnerships with national fisheries departments.

While Thailand is in full support of the project and participated actively in the PIF preparation, a Letter of Endorsement could not be obtained in time for work program inclusion. It is expected that Thailand will join the project during the PPG phase (no additional GEF budget will be requested at endorsement).

## Indicative Project Overview

### Project Objective

Maintaining river integrity, fish stocks and biodiversity at 2020 levels to sustain livelihoods and food security

### Project Components

Component 1: Develop the knowledge base for the protection and restoration of regionally important fish habitats and migration routes

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
1,000,000.00	22,000,000.00

Outcome:

Outcome 1:

Improved evidence base for transboundary fisheries management published and approved by Cambodia, Lao PDR, and Vietnam (CLV)

Outcome Indicator (OI):

- Critical habitat maps endorsed by CLV
- Gendered assessment of community dependencies endorsed by CLV
- No. of low-head swimway designs approved for implementation

Nexus assessments endorsed by CLV

Output:

Output 1.1:

Mapping of critical habitats for key fish species and relation to protected areas, particularly wetlands

Output 1.2

Gendered assessment of community dependence on fisheries for livelihoods and food security

Output 1.3:

Review existing knowledge related to low-head swimways and minimum flows, and design solutions that enhance fish habitats and connectivity

Output 1.4:

Nexus assessments for identifying synergies and trade-offs between WEFE sectors at national and regional level, and policy recommendations for integrating fisheries in other sectors and for improving gender equality impacts

## Component 2: Scaling up transboundary fisheries management measures under human pressures and climate change

Component Type	Trust Fund
Investment	GET
GEF Project Financing (\$)	Co-financing (\$)
7,700,000.00	26,500,000.00

Outcome:

**Fisheries and aquatic resources in CLV more sustainable through promotion of transboundary management measures**

OI:

- MRC basin-wide fisheries management plan updated
- New fish conservation and protection areas (in hectare) established
- No. of community-based fisheries management and enforcement initiatives
- Area of landscape under new or improved conservation or protection plans
- Area of key fisheries habitat restored and reconnected to riverine habitat
- No. of initiatives to increase investments in fisheries value chains
- No. of newly established and operational financing mechanisms
- Percentage decline in average community dependency on fisheries as the primary livelihood

Output:

Output 2.1:

Transboundary fisheries management measures established or expanded, including: fish conservation and protection areas; seasonal and area closures, barrier removal and easement facilities, restoration, enhancement and reconnection of key fish habitats; fishing gear restrictions, catch restrictions, and establishment of community fisheries management units

Output 2.2:

Value of fisheries enhanced by community business formation and new and improved value chains, including gender disaggregated opportunities

Output 2.3:

Swimways and floodplains reconnected and/or restored and protected under national programmes, informed by the project

Output 2.4:

Sustainable financing mechanisms established, linked to sustainable fisheries management

Output 2.5:

Strategy to reduce community reliance on fisheries as a marginal livelihood, including gender-disaggregated options

Output 2.6:

Strengthen community-led fisheries management and enforcement initiatives, including incentives for app-based monitoring

### Component 3: Improve transboundary fisheries governance at local, national, and transboundary scales

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
800,000.00	22,450,000.00

Outcome:

**Outcome 3:**

Fisheries governance and other relevant policies and plans harmonised to support transboundary fisheries management in CLV and regional agreement on fish stock management submitted for approval by CLV

OI:

- No. of new investment plans established to enhance biodiversity and support sustainable fisheries and transboundary water management
- Agreement submitted for endorsement by relevant ministries in CLV

Output:

Output 3.1:

Local, national, and transboundary fisheries governance structures strengthened and transboundary cooperation improved

Output 3.2:

Fisheries, agricultural, and environmental policies and regulations harmonized across CLV

Output 3.3:

National investment plan and strategy for improving transboundary fisheries management developed in CLV

Output 3.4:

Regional consensus on transboundary swimways and conservation of critical aquatic species developed and submitted for endorsement at ministerial level in CLV

#### Component 4: Project mechanisms for stakeholder consultation, gender mainstreaming, knowledge dissemination, coordination

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
500,488.00	2,000,000.00

Outcome:

Outcome 4:

Implementation of project mechanisms for improved stakeholder consultation, gender mainstreaming, knowledge dissemination, coordination

Output:

Output 4.1:

Annual stocktaking and awareness raising meetings with relevant stakeholders (e.g., local, national and regional meetings)

Output 4.2: Periodic coordination and knowledge sharing events with other ongoing projects in CLV and in the wider Mekong region

Output 4.3:

Full participation in GEF IW LEARN activities, creation of a project website, and preparation of experience notes



## M&E

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
200,000.00	500,000.00

Outcome:

### Outcome:

Implementation of project mechanisms for the monitoring of project progress

Output:

### Output 1:

Project monitoring system established (incl. MTR and TE).

## Component Balances

Project Components	GEF Project Financing (\$)	Co-financing (\$)
Component 1: Develop the knowledge base for the protection and restoration of regionally important fish habitats and migration routes	1,000,000.00	22,000,000.00
Component 2: Scaling up transboundary fisheries management measures under human pressures and climate change	7,700,000.00	26,500,000.00
Component 3: Improve transboundary fisheries governance at local, national, and transboundary scales	800,000.00	22,450,000.00
Component 4: Project mechanisms for stakeholder consultation, gender mainstreaming, knowledge dissemination, coordination	500,488.00	2,000,000.00
M&E	200,000.00	500,000.00
<b>Subtotal</b>	<b>10,200,488.00</b>	<b>73,450,000.00</b>
Project Management Cost	508,688.00	4,150,000.00
<b>Total Project Cost (\$)</b>	<b>10,709,176.00</b>	<b>77,600,000.00</b>

Please provide justification



## PROJECT OUTLINE

### A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

#### *The global environmental problem and the context of the Lower Mekong Basin*

The LMB (Figure 1) is the world's largest inland fishery and home to nearly 1,200 fish species, making it the third most biodiverse river system in the world after the Amazon and Congo (and by far the most biodiverse relative to size). Among these are several globally threatened species that are on the IUCN Red List (<https://www.iucnredlist.org/>), including iconic megafauna such as the Mekong giant catfish (*Pangasianodon gigas*), Siamese giant carp (*Catlocarpio siamensis*) and giant Pangasius (*Pangasius sanitwongsei*), which are also of high economic and cultural importance.



**Figure 1: LMB main river corridors and potential transboundary impact areas**

The Mekong River's productivity is driven by a powerful flow pulse<sup>[11]</sup>. The LMB's flood pulse underpins the livelihoods of 70 million people, where 70% of communities are rural, and rice farming and fishing are primary occupations. The flood pulse is connected to extensive wetlands systems, which support high levels of fish stocks and

agriculture production. The LMB's wetlands provide clean water, store more carbon than any other terrestrial habitat, and sustain communities, species, and ecosystems resilience.

Fisheries resources, including fish and other aquatic animals (OAAs) such as molluscs, crustaceans and amphibians, make a vital contribution to regional food security and nutrition, cash income and employment, and have strong cultural and religious significance. Finfish yield within a range of 1.5 - 1.7 million tonnes and furthermore than 400,000 tonnes of OAA, valued at an \$8 billion by market value or \$3 billion by first sale value, are harvested annually from the LMB (Figure 2)<sup>[11]</sup>. Capture fish are mostly consumed within countries of origin in the form of fresh, fermented or dried products with minor imports/exports from adjacent basins or from overseas. Most of this yield is harvested from rainfed and flooded habitat, contributing 53% and 25% of the catch, respectively. About half of the fish catch is contributed by large migratory whitefish species that display a complex array of migration strategies (Figure 2), including from the sea to upper Lao PDR, but also between major tributaries and wetlands, all using the main river and large tributary channels as their primary pathways (swimways)<sup>[12]</sup>. These fisheries and aquatic resources are under heavy pressure from rapid economic development, especially agriculture, hydropower, industrial expansion and mining, and a growing human population<sup>1</sup>.

Aquaculture production grown rapidly in the Mekong River Basin. In 2010, total aquaculture production was estimated to be approximately 2.3 million tons. By 2015, production was 2.9 million tons and by 2020, 4.0 million tons. Production is dominated by fish which accounted for 75% of aquaculture output in 2020, with shrimp accounting for 20% and OAA 5%. Viet Nam dominates aquaculture output, producing approximately 3.4 million tons of fish, shrimp and OAA in 2020, or 84% of total LMB production, reflecting the importance of the aquaculture in the delta region. The aquaculture was estimated to be worth around \$8.2 billion in 2020, up from \$4.3 billion in 2010 and \$5.6 billion in 2015.

Aquaculture offers quite different economic outcomes and distribution of equity to local communities. It generally requires capital investment, land (or open water) tenure and access to relatively considerable financial resources because of the high cost of feed and seed. It can also be high risk, where crops can be lost and along with them returns on investment (both financial and labour). This mostly excludes rural people and fishers, who remain dependent on the capture fisheries for their livelihoods and food. Consequently, social inequalities may be exacerbated by policies that seek to replace capture fisheries by aquaculture. Small-scale, family based, aquaculture certainly has an important role and is important for local food security in some areas. But the bulk of aquaculture production from the LMB is exported, contributing nothing to food-security, although generating significant economic benefits. Aquaculture can also come with significant environmental impacts, particularly with intensive aquaculture including pollution, land-use change, and other impacts. There are also significant differences regarding nutrition security where aquaculture products are typically larger specimens that are filleted or peeled and not eaten whole, in addition to creating waste. Much of the production from the capture fisheries is eaten whole, with limited waste, and is more nutrient rich.

Balanced, equitable and sustainable development of the fisheries sector must take all social groups into account. MRC study show that women are an integral and important part of the fisheries' workforce, and the contribution they make is significant. The role of men and women in fisheries related activities are relatively separated with men engage in physically demanding work and women focus on light work. For example, when men go fishing, women often accompany to take fish out of the nets or go fishing in shallow water, repairing fishing equipment, in charge of fish marketing and processing of fish left over unsold or borrowing loan or managing money for family.

Recognizing the important of women in fisheries sector, the network for the Promotion of Gender in Fisheries development in the Mekong Basin (NGF) was established in 1999 including representatives in each of the four riparian countries. The network aimed to raise and promote women's issues in fisheries through training, capacity development

and dissemination of information. Given the NGF was no longer active, the experiences could be drawn from to establish the future intervention for gender issues in fisheries sector in CLV.

Six root causes can be identified of fish stock decline. These conclusions draw on decades of work by the MRC and its partners (see Annex H for a list of projects and lessons learned). While the focus of the project is CLV, many of the dialogues and basin-wide analyses will include Thailand as all four countries are MRC member countries (MCs). Moreover, the need for international funding is much greater in CLV than in Thailand.

Those most relevant projects and outputs are:

- Guidelines for Transboundary fisheries management in the LMB
- Status and Trends of Wetlands in the LMB including update of datasets and maps
- Sustainable Hydropower Development Strategy
- Implementation of the Proactive Regional Planning to Develop an Adaptive Basin Plan
- Guidelines for restoration and protection of key fish habitats
- Guidelines for fish friendly irrigation schemes
- Support of the development of a policy paper on investment and measures to optimize fisheries production under changed river conditions
- Uptake of regional policy recommendations for investment and measures to optimize fisheries production under changed river conditions at national level

Since these are all MRC documents endorsed by the four member countries. Since the MRC is an Executing Agency, they will automatically form part of both project design and implementation. In terms of non-MRC-led projects, the most relevant is the AFD GCF freshwater wetlands-based adaption, which will support wetlands-based value chains, including processed fish. IUCN is leading the proposal preparation and will ensure tight integration with this project.

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[1]Mekong River Commission. (2023). *Fisheries Yield Assessment by Habitat Type at The Landscape Scale in The Lower Mekong River Basin 2020*. Mekong River Commission Secretariat, Vientiane, Lao PDR

[2]Vu, A., Baumgartner, L., Limburg, K., Doran, G., Mallen-Cooper, M., Gillanders, B., Thiem, J., Howitt, J., Kewish, C., Reinhardt, J., & Cowx, I.G. (2022) Life history strategies of Mekong pangasiid catfishes revealed by otolith microchemistry. *Fisheries Research* 249, 106239.

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[1]Adamson P.T, Rutherford I.D., Peel M.C., and Conlan I.A. (2009). *The Hydrology of the Mekong River*. In Campbell I.C. (ed.) *The Mekong: Biophysical Environment of an International River Basin*, Academic Press, pp 53-76.

[2]Mekong River Commission. (2023). *Fisheries Yield Assessment by Habitat Type at The Landscape Scale in The Lower Mekong River Basin 2020*. Mekong River Commission Secretariat, Vientiane, Lao PDR

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[3]Vu, A., Baumgartner, L., Limburg, K., Doran, G., Mallen-Cooper, M., Gillanders, B., Thiem, J., Howitt, J., Kewish, C., Reinhardt, J., & Cowx, I.G. (2022) Life history strategies of Mekong pangasiid catfishes revealed by otolith microchemistry. *Fisheries Research* 249, 106239.

## ***ROOT CAUSES***

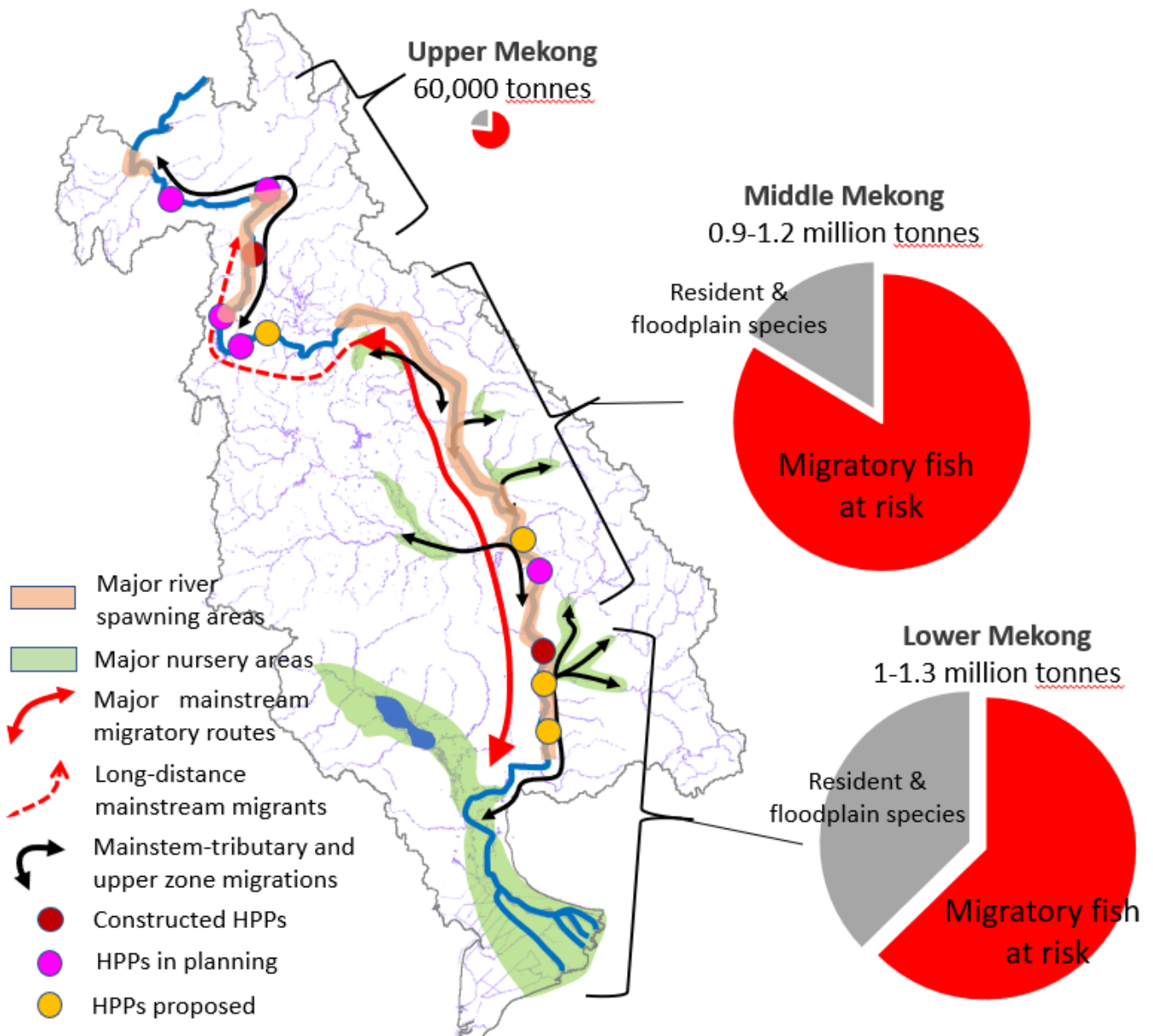
### **#1: Hydropower development and hydrological fragmentation**

Hydropower development has had major considerable transboundary impacts on the river ecosystem and aquatic biota. See Figure 2. In Lao PDR alone, 48 dams exist in the Mekong, including two mainstream dams, Xayaburi and the Don Sahong. Another 52 dams are under construction and others have been proposed, including five other mainstream dams at Pak Beng, Luang Prabang, Pak Lay and Sanakham, and Phou Ngoy. This is against the backdrop of studies<sup>[1]</sup> showing that the economic competitiveness of hydropower is rapidly eroding as costs of alternative energies have declined substantially, which puts photovoltaic and wind production now at a par with hydropower.

The fact that Thailand is not formally part of the project does not limit the scope for improved hydropower planning and investment because of the largest Thai-owned dams have been built in Lao PDR and therefore covered by the project's CLV focus, and because Thailand as an MRC MC will automatically participate in basin-wide strategic planning processes.

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[1]MRC (2021) The Social Impact Monitoring and Vulnerability Assessment (SIMVA) 2018.  
<https://www.mrcmekong.org/resource/qx5ynt>



**Figure 2: Migratory pathways in the LMB and fish production at risk from mainstream hydropower**

MRC Scenarios based modelling predict that about 30-60% of the annual catch in the Mekong, mostly migratory fishes, are at risk from built (Xayaburi and Don Sahong) and proposed dams on the Mekong mainstream<sup>[1]</sup> (Figure 2). Record of fish catch in the LMB has shown a systematic decline over the last five years. The August edition of the MRC's *Catch & Culture* newsletter reports a one-third decline in the estimated value of the LMB fish catch between 2015 and 2020. This decline covers all guilds and is driven primarily by a shorter and more erratic food season, the result of upstream water retention, irrigation infrastructure that reduces lateral water flow across the floodplain, and prolonged El Nino-Southern Oscillation-related droughts <sup>[2][3]</sup>.

This profound food-energy trade-off is caused by the barrier effect of dams, dramatic alterations of the daily and seasonal hydrological cycles, and sediment trapping. Fish ladders are being constructed to allow fish to bypass barriers, but Australian supported research on the Xayaburi dam shows no evidence that fish passages work effectively.<sup>[3]</sup>

Most fish species have larval and juvenile life stages that drift downstream (sometimes hundreds of km) to nursery and feeding areas to complete their life cycle. These life stages cannot swim, and downstream drift requires a minimum water velocity (> 0.3 m/s) to remain suspended in the water column. Reservoirs or impoundments reduce velocity drastically, which causes fish eggs, larvae, and juveniles to sink and die. Further, most adult fish and many smaller fishes that are moving downstream pass through the turbines and suffer fatal internal damages due to the pressure changes and due to strike and shear. Considering the entire upstream-downstream migration life cycles of many of the Mekong fish species, most experts predict that all migratory fish that are critical for food security will be extirpated if all Mekong mainstream dams are built.

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[1]MRC (2017) MRC Council Study. Study on the Sustainable Management and Development of the Mekong River, including Impacts of Mainstream Hydropower Projects. See also: Baird, I.G. and Hogan, Z.S., 2023. Hydropower Dam Development and Fish Biodiversity in the Mekong River Basin: A Review. *Water*, 15(7), p.1352.

[2]MRC (2023) Fish Abundance and Diversity Monitoring Report 2018-2022 (forthcoming)

[3]O'Connor, Justin, Robin Hale, Martin Mallen-Cooper, Steven J. Cooke, and Ivor Stuart. 2022. "Developing Performance Standards in Fish Passage: Integrating Ecology, Engineering and Socio-Economics." *Ecological Engineering* 182 (September): 106732. <https://doi.org/10.1016/j.ecoleng.2022.106732>.

## #2: Unsustainable exploitation of the fish and fisheries

Driven by population growth, greater access (roads and boats), and the availability of low-cost fishing gear (e.g., nylon gill nets), capture fisheries have grown rapidly over the last 30 years in Viet Nam and Cambodia, but started later in Lao PDR. The key challenges facing the fisheries sector include:

- Declining fish catch rates, sizes and changes to species composition in the main fishing grounds, including deep pools.
  - Rural people fishing in deep pools (typically established as sanctuaries) in the Mekong mainstream and major tributaries all year round, in particular in the dry season when fish aggregate in these pools.
  - Increasing (excessive) fishing effort to meet market demand and fishing for trade.
  - Illegal fishing activities, such as electrofishing, poisoning and explosives, practised in key habitats in remote areas.
  - River geomorphology and functioning have been altered due to development projects (navigation, sand mining, hydropower) and climate change.
  - Weak or ineffective enforcement of fisheries laws leading to declining fish catch and yield.
  - Limited public funding for capture fisheries (as opposed to aquaculture), specifically limited funds to support local communities to implement fisheries management plans.



### #3: Land use change and wetlands degradation

The third pressure is linked to the loss of wetlands. Wetlands loss has a profound impact on fisheries as they provide essential habitat for fish feeding, spawning and nursery grounds. However, urbanisation and other types of construction have caused a radical loss of wetlands or disconnection from the mainstream. Deforestation has contributed to this process, including resulting in spiking in local erosion processes causing siltation of wetlands. However, the most damaging change is the drive for irrigated agriculture, especially for floodplain rice. This has disconnected these critical habitats for fish production and been associated with declines in stocks and catches<sup>[44]</sup>.

### #4: Aggregate extraction

A hidden pressure is the large-scale extraction of aggregates (sand and gravel) from the river channel for construction. This problem is being exacerbated by sediment trapping by dams, especially in the Chinese portion of the Mekong (Lancang). Prior to dams being constructed on the Lancang, annual suspended sediment loads were estimated to be 60-100 Mt/yr. Since 2008, these loads decreased to 10-20 Mt/yr,<sup>[1]</sup> meaning that much less sediment was delivered to the river's lower reaches. Compounded by large-scale river sand mining, this has caused channel incision, riverbank collapse, and increased saltwater intrusion, all of which reduce the availability of habitats that are critical for the recruitment of fish populations in CLV.

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[1] Mekong River Commission. (2022). Joint Environmental Monitoring Programme at two Mekong Mainstream dams: The Don Sahong and Xayaburi hydropower projects. Vientiane: MRC Secretariat. <https://doi.org/10.52107/mrc.aqrs7o>

### #5: Lack of integrated transboundary fisheries resources management

When other pressures on the river, including mining, pollution, deforestation and urban development, are taken into account, the prospect for sustaining the massive contributions of fisheries to food security and livelihoods in CLV is of concern. Transboundary cooperation on water management exists (see baseline) but has not yet led to management frameworks for sustainable fisheries. While some core goals are shared between riparian countries (e.g., food security, biodiversity), economic growth has been prioritised often to the exclusion of social and environmental considerations.

### # 6: Limited climate change adaptation initiatives

A recent MRC assessment<sup>11</sup> indicates that climate change will increase the vulnerability of freshwater ecosystems due to changes in precipitation, more frequent severe weather events, and prolonged droughts. A wide range of possible changes in climate is projected to occur in CLV by 2060 including: (1) average annually basin-wide temperature increase could be as low as 0.3 C or as high as 3.3 C; (2) rainfall could vary from -23% to +23% in the dry season and -18% to +16% in the wet season depending on location; and (3) annual river flow could change by between -59% and +27%, and dry-season minimum 1-day flow by between -65% and +35% at Chiang Saen under climate change-only scenarios. Basin development will interact with climate change, in some cases exacerbating the change and, in some cases, mitigating it. In terms of observed changes in climate, the region has suffered three prolonged droughts over the last seven years (2016, 2020, 2021) that have shortened the wet season and contributed to the significant observed reduction in fish catch in the Tonle Sap between 2020 and 2015. The 2020 and 2021 droughts were exacerbated by Lancang wet season water retention, according to analysis by the Mekong Dam Monitor, which maps expected vs. observed discharge considering changes in precipitation, evaporation, and water retention.

Another climate change projection developed by DeRISK SE Asia<sup>[1]</sup> focus on climate risk in the smallholder agriculture sector in Cambodia, Lao PDR, and Viet Nam. Relevant country average measures of climate change are summarized in Table 2 using the SSP 585 scenario and comparing with historical observation:

**Table 2: Climate projections for Cambodia, Lao PDR and Viet Nam**

Cambodia	Unit	Observed		Projected	
		1980-1999	1999-2019	2040-2069	2070-2099
Maximum daily temperature	Degrees	30	30	34 (31-37)	35 (32-39)
Days >35 degrees	Days	0	0	30 (0-60)	40 (0-81)
Heatwave frequency	Events	1	2	9 (6-13)	12 (9-16)
Heatwave maximum length	Days	7	6	31 (8-54)	61 (15-107)
Days >10 mm rainfall	Days	70	69	80 (51-110)	83 (55-111)
Days >20 mm rainfall	Days	19	20	40 (11-70)	41 (12-71)
<b>Lao PDR</b>					
Maximum daily temperature	Degrees	29	29	35 (31-39)	37 (33-41)
Days >35 degrees	Days	0	0	31 (1-61)	41 (3-79)
Heatwave frequency	Events	0	1	6 (2-10)	9 (5-14)
Heatwave maximum length	Days	2	2	22 (6-39)	34 (10-58)
Days >10 mm rainfall	Days	69	66	72 (53-91)	75 (54-96)
Days >20 mm rainfall	Days	23	22	33 (10-57)	35 (11-60)
<b>Viet Nam</b>					
Maximum daily temperature	Degrees	29	29	33 (30-36)	34 (31-38)
Days >35 degrees	Days	0	0	16 (0-33)	24 (0-49)
Heatwave frequency	Events	0	1	6 (3-9)	9 (6-12)
Heatwave maximum length	Days	2	3	19 (3-36)	45 (6-84)
Days >10 mm rainfall	Days	63	61	71 (51-91)	75 (55-95)
Days >20 mm rainfall	Days	21	20	33 (12-55)	36 (15-57)

Similar trends are evident in all three countries: (1) higher peak temperatures and more days with peak temperatures >35 degrees; (2) longer and more frequent droughts and heatwaves; and (3) more variable rainfall and more intense rainfall events. These stressors will further diminish the ability of the river to function, resulting in a loss of ecosystem integrity and fish production. Changes in extremes, including floods and droughts, are projected to disrupt fish recruitment and production, and exacerbate the decline in fisheries in the region. So far, only limited adaptation initiatives have targeted the fisheries sector while broader economic development strategies have further catalyzed the decline of fish stocks and fish biodiversity.

<sup>[1]</sup> <https://deriskseasia.org/index.html>

<sup>[2]</sup> National Adaptation Plan of Bangladesh (2023-2050)

<sup>[3]</sup> Caesar, J., Janes, T. (2018). Regional Climate Change over South Asia.

[1]Mekong River Commission. (2022). Joint Environmental Monitoring Programme at two Mekong Mainstream dams: The Don Sahong and Xayaburi hydropower projects. Vientiane: MRC Secretariat. <https://doi.org/10.52107/mrc.aqrs7o>

[2]<https://www.mrcmekong.org/assets/Uploads/Summary-of-basin-wide-impact-assessments.pdf>

## ***BARRIERS***

### **#1: Weak institutional capacity**

Transboundary management in CLV is generally weak and is threatened by rising demand for water, adverse effects of hydrological variability/climate change and degradation of the ecosystem from various sources. There are many legal instruments for water and environment management, but these have not been harmonised at the basin level. Moreover, the institutional framework is challenged by limited technical capacity, particularly ecological and socio-economic analysis skills. Civil society is only marginally involved in fisheries management. Guidelines and standards have been developed for planning and water management purposes, but these have not been integrated into legally binding protocols. National fisheries laws exist but enforcement is often very weak.

### **#2: Limited knowledge of proven transboundary fisheries management measures**

CLV have limited experience with transboundary fisheries management, which requires testing solutions and context-specific design. These solutions are likely to include the establishment of fish conservation and protection areas, seasonal and area closures, barrier removal and easement facilities, restoration, enhancement and reconnection of key fish habitats, fishing gear restrictions, catch restrictions, and establishment of fisheries co-management.

### **#3: Insufficient public investment in capture fisheries management**

The MRC has developed basin and fisheries management plans. While these highlight the key threats to ecosystem functioning and the aquatic resources that are dependent on them, there has been limited investment in conservation of aquatic biodiversity, and protection and management of wild capture fisheries. Nearly all public investment in fisheries goes into aquaculture, while smallholder fishers are largely neglected. There is a clear need to fully integrate fisheries and OAAs into the wider basin planning processes and ensure their contribution to food security and livelihoods is sustained and where practical enhanced.

### **#4: Development strategies prioritising short-term economic growth**

The social and economic benefits of capture fisheries have been consistently undervalued, due in part to lack of reliable data on fish catch and nutrition, resulting in little attention to water-food-energy trade-offs. Conversely, the economic benefits of dams, irrigation systems, and other capital-intensive projects are easy to quantify and can be quickly realized. This has arguably resulted in an overinvestment in energy and agricultural projects that often conflict with countries' commitments to biodiversity, environment and sustainable development goals.

### **#5: Weaknesses in harmonisation of a regulatory framework**

The 1995 Mekong River Agreement (MRA) provides the legal basis for managing aquatic resources across the LMB, but there are weaknesses from a transboundary perspective. There is an urgent need to harmonize regulatory frameworks. Each country has legislation and regulations to manage fisheries, but these are not translated into specific agreements on fisheries between countries. This compromises the ability to manage the highly migratory, and most valuable, fisheries components that are reliant on multiple aquatic habitats in different regions across the basin to sustain the stocks and precludes an upstream-downstream thinking approach to management of these resources.

## #6: Key stakeholders have limited experience with transboundary fisheries management

Key stakeholders in CLV have limited experience with transboundary fisheries management. The establishment of learning networks will help counter deteriorating fisheries in CLV and neighbouring basins. Particularly effective will be knowledge exchange with other basins (e.g., through IW LEARN). Facilitating a process that allows the MRC to share experiences with stakeholders in neighbouring basins will highlight the importance of fisheries management and accelerate scaling up solutions regionally. Key government stakeholders include departments of fisheries and ministries focused on managing the environments and on rural development. Key non-state stakeholders include international NGOs, notably WWF and CI, and local NGOs such as FACT and CEPA, working on community fisheries, particularly in the Tonle Sap and Stung Treng. These NGOs provide direct support to about 100 community fisheries in Cambodia and Lao PDR. In Cambodia, community fisheries committees are elected bodies with legal status. Of the 150 community fisheries committees in the Tonle Sap, only about 10% are operational. But this proportion is growing, and successful models are emerging of combining improved fisheries management, often around a fish conservation area, and sustainable financing using trust funds or saving and loan schemes. There is an opportunity to scale up these models across CLV.

### *BASELINE SCENARIO*

CLV fisheries are threatened by an array of pressures (root causes), including dams, land use change, climate change, and sand mining. These pressures interact to degrade fisheries and undermine the livelihoods of tens of millions of people. There is an urgent need to better reconcile the concepts of preservation and conservation of biodiversity, maintenance of food security and supporting livelihoods (ecology, society, economics) against economic development in the LMB. Failure to think holistically about these complex issues will most certainly lead to further declines in ecosystem goods and services, including biodiversity, and have severe negative ramifications on rural communities in the short term and society in general in the foreseeable future.

Regional coordination of basin planning falls under the mandate of the MRC. Established by the MRA in 1995, the MRC facilitates dialogue between Cambodia, Lao PDR, Thailand, and Viet Nam, the four Member Countries (MCs) to ensure effective coordination of basin planning and sustainable development. In 2020, the MRC published the Mekong Basin-Wide Fisheries Management and Development Strategy and BFMS<sup>[7]<sup>5</sup></sup> (see Annex J). These are the result of more than a decade of research and negotiations among the MCs facilitated by the MRC. These documents are comparable to, and in many ways more comprehensive than a GEF IW TDA-SAP. Although some of the actions listed in Annex J are being carried out as part of the MRC routine program, funding for most actions has yet to be secured.

## Understanding the impact of water development structures on fisheries and aquatic resources

Fisheries is a core focus of the MRC, and a series of projects has focused on assessing and monitoring the status and trends in fisheries and on the impacts of hydropower and other water infrastructures on fisheries (Table 1). These are long-term programs. Shorter-term projects have been conducted on the effectiveness of fish passage solutions at large dams and irrigation structures, including monitoring fish passages at the Xayaburi and Don Sahong dams in collaboration with an ACIAR-funded project led by Charles Sturt University in Australia.

## Development of ecological and environmental management and monitoring strategies

Since 1995, the MRC has supported capture fisheries monitoring programs to help CLV monitor the status and trends of capture fisheries. These employ three categories of monitoring: fish abundance and diversity monitoring; fish larvae drift monitoring; and bag-net (*dai*) fishery monitoring in the Tonle Sap. To complement these programs, in 2017-2022 the MRC initiated the Joint Environment Monitoring (JEM) program to monitor impacts of the Xayaburi, Don Sahong HPP. Lessons learned from JEM have been integrated into the redesign of MRC Core River Monitoring Network including five environmental disciplines: hydrology, sediments, water quality, ecological health and fisheries to provide information about the direct impacts of dam operations on overall environment including fisheries and to provide insights into how the LMB is responding at a basin scale to hydropower and other development activities.

## **IWRM Platform for the LMB**

In 2017, after a 5-year participatory process, the BFMS was approved by the MRC Council, which led to the formulation and finalisation of: (1) the Project Based Action Plan (2021-2025) for the implementation of the BFMS, and (2) the Strategy for Basin-wide Environmental Management (SBEM), which was finalised at the end of 2019. In addition, since 2013 the technical guidelines for fish friendly irrigation schemes in the LMB have been drafted, nationally and regionally consulted, and are now being piloted in the MCs before the finalisation for further applications at the national level.

MRC's Basin Development Strategy (BDS) (2021-2030)<sup>[1]</sup> and Strategic Plan (2021-2025) identified two strategic activities: "transboundary fisheries resources" and "environmental assets management and governance". Both have been defined as strategic priorities of the BFMS and SBEM. Based on this Action Plan, the MRC is implementing two projects for the management of transboundary fisheries resources in the LMB: (1) development of guidelines for transboundary fisheries management in the LMB; and (2) formulation of technical guidelines for the restoration of key fish habitats (connectivity) with regional/transboundary importance in the LMB.

Both guidelines are to be finalised by the MRC Regional Expert Group on Environmental Management for further piloting and application in the MCs. However, funding for the jointly agreed action program has yet to be secured.

At the national level many small-scale projects are underway. Most of these activities focus on the management and monitoring of fish stocks, fish catch, and fish gear. CLV have legislation in place to protect fish stocks, e.g., by limiting fishing times, fishing gear, and fishing grounds. However, basin-level drivers are largely trumped by local or national interests.

The BDS expects that fisheries will continue to support food security and livelihoods of dependent people. To achieve this outcome, three outputs are proposed: (1) basin capture fisheries regulatory frameworks improved; (2) risks to capture fish productivity and biodiversity minimised; and (3) adaptation measures implemented in response to changes in fish populations and catch composition. The economic value obtained from the fisheries sector will be substantially higher in 2030 than it is today. Investment and associated management measures in regional fisheries strategies and plans will need to be implemented to achieve this expected outcome.

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[1]MRC (2019) State of the Basin Report 2018. Mekong River Commission, Vientiane, 274 pp.

## **Enhancement and restoration of fisheries and aquatic resources**

Different approaches have been tested to reduce pressure on the fisheries, notably the use of gear restrictions and closed areas and seasons, although there have been difficulties enforcing these regulations. Some of these measures are orientated around cultural norms that have been in place for centuries but only act at a very local level. More recently, fish conservation zones have been introduced to protect key fish habitats. Habitat restoration measures to reconnect important floodplain habitats are in their infancy<sup>[1]</sup>. Finally, large scale stocking of species of economic importance is prominent in CLV to support fisheries and are recognised by national fish stocking days<sup>[2]</sup>.

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[1] Baird, I.G. (2006) Strength in diversity: fish sanctuaries and deep-water pools in Lao PDR. *Fisheries Management and Ecology* 12, 1-8.

[2] Cowx, I.G., Funge-Smith, S. & Lymer, D. (2015) Responsible stocking and enhancement of inland waters in Asia. FAO Regional Office for Asia and the Pacific, Bangkok. RAP Publication 2015/11, 142 pp.

## **Project Justification**

Although the MRC has made progress in improving fisheries management, the range of root causes and barriers is likely to cause a further loss of fish stocks in CLV if agreed transboundary actions (see Annex J) remain unfunded. Compared to 2015, we expect fish stocks to decline by 40% by 2030. The actions proposed here will reverse this trend and stabilise fish stocks at 2020 levels.

[1] MRC (2017) MRC Council Study. Study on the Sustainable Management and Development of the Mekong River, including Impacts of Mainstream Hydropower Projects. See also: Baird, I.G. and Hogan, Z.S., 2023. Hydropower Dam Development and Fish Biodiversity in the Mekong River Basin: A Review. *Water*, 15(7), p.1352.

[2] MRC (2023) Fish Abundance and Diversity Monitoring Report 2018-2022 (forthcoming)

[3] O'Connor, Justin, Robin Hale, Martin Mallen-Cooper, Steven J. Cooke, and Ivor Stuart. 2022. "Developing Performance Standards in Fish Passage: Integrating Ecology, Engineering and Socio-Economics." *Ecological Engineering* 182 (September): 106732. <https://doi.org/10.1016/j.ecoleng.2022.106732>.

[4] Vu A.V., Hortle K.G., Nguyen D.N. (2021) Factors driving long term declines in inland fishery yields in the Mekong delta, *Water*, 2021, 13(8), 1005; <https://doi.org/10.3390/w13081005>

[5] Mekong River Commission. (2022). Joint Environmental Monitoring Programme at two Mekong Mainstream dams: The Don Sahong and Xayaburi hydropower projects. Vientiane: MRC Secretariat. <https://doi.org/10.52107/mrc.aqrs7o>

[6] <https://www.mrcmekong.org/assets/Uploads/Summary-of-basin-wide-impact-assessments.pdf>

[7] MRC (2017) Mekong Basin-Wide Fisheries Management and Development Strategy 2018-2022 <https://www.mrcmekong.org/assets/Publications/BFMS-Feb20-v-Final.pdf>

[8] MRC (2019). State of the Basin Report 2018. Mekong River Commission, Vientiane, 274 pp.

[9] Baird, I.G. (2006). Strength in diversity: fish sanctuaries and deep-water pools in Lao PDR. *Fisheries Management and Ecology* 12, 1-8.

[10] Cowx, I.G., Funge-Smith, S. & Lymer, D. (2015). Responsible stocking and enhancement of inland waters in Asia. FAO Regional Office for Asia and the Pacific, Bangkok. RAP Publication 2015/11, 142 pp.

## **B. PROJECT DESCRIPTION**

### **Project description**

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF’s policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

## Project Description

This project builds on the MRC’s success in developing a transboundary action plan for sustainable fisheries management and the project approach has been designed by the MRC’s member countries. **Proposed project activities are drawn from the MRC BFMS Strategic Priorities for Fisheries Management (see Annex J). Activities are color-coded based on whether GEF covers all, some, or none of the costs.** Building on the decade-long fish-focused initiative will ensure the resilience of project outcomes as it will be supported by CLV. While many fisheries related activities are funded by Thailand (see baseline projects in Annex I), there is still a chronic shortage of funding for fisheries management in CLV. GEF funding will allow implementation of the jointly agreed action plan (see Annex J) to establish a new era in transboundary fisheries management in CLV. Solutions to the root causes are hampered by barriers, including knowledge-gaps, particularly on the impacts of water resource development projects on transboundary fisheries. Building on decades of MRC-led research and engagement (see Annex H), this project will address these barriers through dialogue and engagement, enhance the resilience of the fishing communities, and strengthen research capacity and knowledge base. Through a multi-disciplinary approach, the project will provide new understanding of mechanisms, processes and linkages between environmental degradation, climate change, fisheries and livelihoods. IUCN will be the GEF Implementing Agency of this project while the MRC and relevant government line agencies of CLV will be the Executing Agencies.

It is proposed protecting and improving fish habitats in CLV that are most important for regional fish stock management. Specific intervention sites will be identified during preparation of the full proposal. But based on our current understanding of the life cycles of both floodplain (“grey”) and migratory (“white”) fish, these will include: (1) the floodplains of the Tonle Sap (Cambodia), Mekong Delta (Viet Nam and Cambodia), and Savannakhet and Champassak Provinces in southern Lao PDR; and (2) the stretch of the Mekong from Kratie to the Lao border (important for its deep pools where fish congregate during the dry season), and the Mekong’s major free-flowing tributaries (Sekong, Bassac).

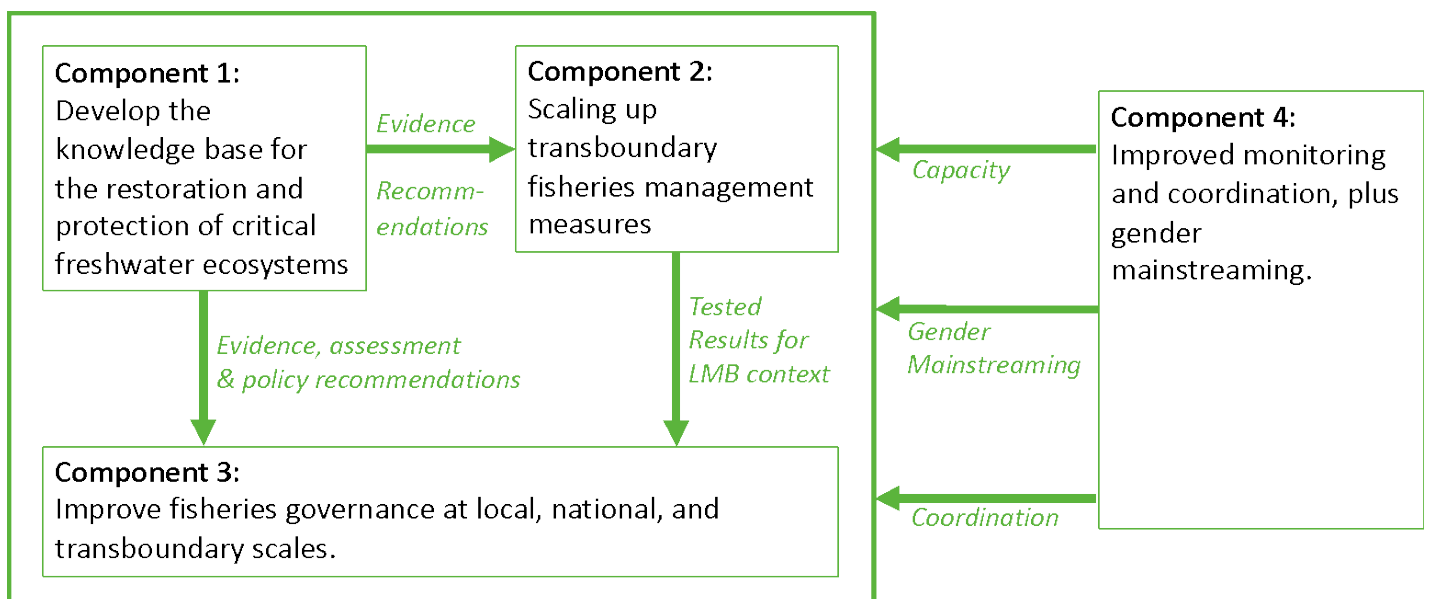


Figure 3: Intervention logic

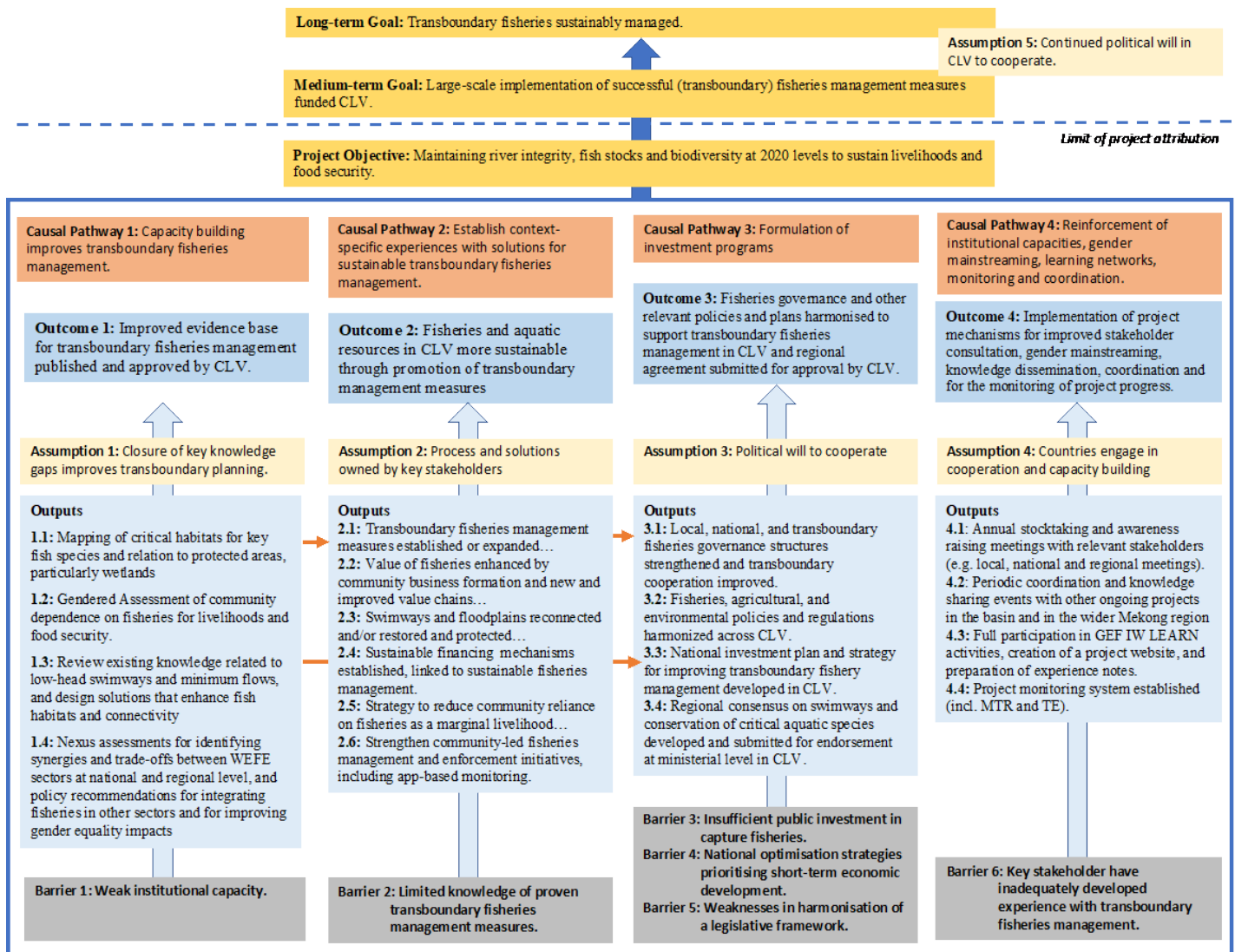


Figure 4: Theory of change

The project's aim is to maintain river integrity, fish stocks and biodiversity at 2020 levels to sustain livelihoods and food security in CLV. It will achieve this goal through four pathways. First, by building capacities to improve transboundary fisheries management, by identifying key habitats for transboundary fisheries and assessing gender equality in fisheries, fish connectivity, and WEF Nexus trade-offs. Key stakeholders for this pathway will be the national departments responsible for fisheries management. The project will also engage with stakeholders from sectors relevant for the WEF Nexus to discuss trade-offs and synergies and strengthen capacities for improved Nexus management. Along a second pathway context-specific experiences with solutions for sustainable transboundary fisheries management will be established. This pathway will establish experiences in the region with effective solutions for sustainable transboundary fisheries management. Key stakeholders for this pathway will include national fisheries departments as well as communities on the ground as well as relevant NGOs. The third pathway will formulate investment programs to improve fisheries governance and fisheries in CLV. Fisheries departments will be key stakeholders in combination with other line ministries (e.g., agriculture, land use planning). The fourth pathway will reinforce institutional capacities, gender mainstreaming, learning networks, monitoring and coordination. This project will deliver durable outcomes as interventions across all four pathways will be tailored to be resilient to a wide range of future scenarios, including climate change and infrastructure investments. The project will need to engage with a wide range of stakeholders, including groups leading initiatives relevant for fisheries in CLV at the local, national and regional level. The global outreach will be facilitated through IW:LEARN.



The Theory of Change (Figure 4) shows how project components, outcomes, and outputs (described in more detail further below) target critical barriers to maintain river integrity, fish stocks and biodiversity at 2020 levels to sustain livelihoods and food security. The core logic is to establish a comprehensive evidence base and demonstrate solutions to guide substantial investments and institutional commitments in CLV into transboundary fisheries management. The first component will establish relevant evidence for decision makers and planners to design and introduce effective transboundary fisheries management. Reviewing and synthesising evidence will empower targeted agencies with the critical systems understanding, which overcomes Barrier 1 (weak capacity). Component 2 will build on the evidence of Component 1 and will pilot a range of fisheries management measures, which will overcome Barrier 2 (Limited knowledge of proven measures). This pathway will involve not just implementing solutions for improved transboundary fisheries management but also facilitate the compounding process, so stakeholders own the solutions as well as the outcomes. Evidence provided by Component 1 and the experiences from Component 2 will provide the foundation for Component 3 to overcome Barriers 3-5 (see Figure 4), including to facilitate and direct new public investment in fisheries management, the shift of national strategies from short term optimisation to long term sustainable fisheries management, and the harmonisation of legislative frameworks in CLV. This component will rely on the willingness of key stakeholders to engage and to cooperate (Assumption 3). Considering the longstanding role of the MRC, it provides the perfect agency to establish evidence-based transboundary fisheries management in CLV.

## **COMPONENT 1: DEVELOP THE KNOWLEDGE BASE FOR THE RESTORATION AND PROTECTION OF CRITICAL FRESHWATER ECOSYSTEMS**

The reshaping of freshwater ecosystems for agriculture, irrigation and water management, hydropower, extractive industries, transport and human settlements has contributed to the decline of freshwater fisheries globally, and none so more than in tropical river systems such as the Mekong. Freshwater ecosystems are being degraded at an accelerating rate, partly because the links between ecosystem health and ecosystem goods and services are hidden or ignored in planning and investment decisions. To overcome this barrier requires data to justify greater public investment in protecting and restoring freshwater ecosystems. Component 1 will help fill this gap. The outcome is to establish an improved evidence base for transboundary fisheries management, published by the MRC and approved by all MCs.

*Outcome 1.1: Improved evidence base for transboundary fisheries management published and approved by LMB countries*

**Output 1.1: Mapping of critical habitats for key fish species and relation to protected areas, particularly wetlands**

Despite considerable work on migratory pathways and critical habitats for fisheries in CLV since the 1990s, much of this information is fragmented and not used systematically in planning processes. To overcome this constraint, the latest data on the distribution and abundance of key fish species (from MRC Core River Monitoring Network, USAID Wonders of the Mekong, IFREDI) will be mapped and transboundary linkages determined. These data will be used to prioritise new protected areas, and/or guide restoration of key fish habitats. The analysis will consider their entire suite of ecological needs, not just their distribution ranges, to maximise the effectiveness of fisheries conservation measures. Particular attention will be paid to: (1) identifying projects that will restore key habitats or systems that have not been degraded to a point where there is no

possibility for recovery or re-establishing a functional ecosystem; and (2) promoting freshwater protected areas that are still largely intact and where aquatic resource use can be effectively managed.

#### **Output 1.2: Gendered assessment of community dependence on fisheries for livelihoods and food security**

Fundamental to finding solutions for sustainable fisheries is understanding of livelihood dynamics. This assessment will be conducted through a gender lens that will allow for a gendered understanding of dependency on fisheries. This will lay the foundation for understanding how gender equality will be affected by the various drivers affecting fisheries. A robust understanding of fisheries from a social-ecological perspective will strengthen the basis for designing solutions for the improved conservation of critical habitats and more sustainable fisheries.

#### **Output 1.3: Review existing knowledge related to low-head swimways and minimum flows, and design solutions that enhance fish habitats and connectivity**

Considerable work has taken place to understand the impact of hydrological and hydro-geomorphological changes on fisheries in CLV. However, this information needs to be compiled to understand the cumulative impacts on transboundary fisheries, to identify knowledge gaps on mitigation or restoration measures and management of the transboundary ecosystems. This output will collate the latest data on low-head fish pass facilities in tropical rivers, design of environmental flows for fish and fisheries in floodplains, options to manage sediment transport around barriers, and fish-friendly options for irrigated agriculture, including reconnecting fragmented floodplains.

Reconnecting freshwater habitats and restoring natural flows will need to be accompanied by the designation of other effective area-based conservation measures (OECMs), habitat improvements and refugia that benefit from the restored hydrology and opening of fish migratory pathways. The information will be used to update the MRC's *Technical guidance for protection and restoration of key fish habitats with regional importance* to support local management of transboundary fisheries, including design and implementation of local transboundary management plans/agreements, establishment of fish conservation areas and seasonal closures, coupled with sustainable financing and mechanisms to support improving value chains to maximise the benefits from the guidance. It is not just the fisheries that will improve but wildlife that depends on robust fish stocks, such as the Critically Endangered Irrawaddy dolphin.

Building on methodologies currently being tested by USAID Wonders of the Mekong, eDNA will be used to genetically detect and identify fish and other freshwater wildlife that could influence conservation efforts. eDNA allows for biomonitoring without requiring collection of the living organism, creating the ability to study organisms that are invasive, elusive, or endangered without introducing anthropogenic stress on the organism. Access to this genetic information makes a critical contribution to the understanding of population size, species distribution, and population dynamics for poorly documented fish species.

#### **Output 1.4: Nexus assessments for identifying synergies and trade-offs between WEF sectors at national and regional level, and policy recommendations for integrating fisheries in other sectors and for improving gender equality impacts**

Hydropower, agricultural intensification, and urban and industrial development pose major threats to fisheries, especially at the transboundary level. While electrification is closely correlated with economic growth and human development, there are mounting risks that countries lock themselves into a path dependency that is increasingly costly and poses unnecessary risks to fisheries and food security.

The project will assist MRC and MCs address the potential cross-sector trade-offs (Nexus impacts) of water infrastructure on fisheries. The project will use Strategic Impact Assessments for water resources-fisheries for food and biodiversity planning processes and develop plans to guide energy and economic development planning in a manner that minimises and mitigates the impacts on the ecological character, functions and biodiversity of the concerned river-floodplain systems. Priority actions to protect and restore critical transboundary fish habitats and migratory pathways will be highlighted and agreed on at the regional level to underpin on-the-ground actions to achieve measures (Output 2.3).

Mitigating the impacts of large dams, using, e.g., fish passages, is problematic and should fall under the remit of the developer. This project will focus on the altered flow regimes and sediment reduction issues, disconnection of migratory pathways and degradation of critical habitats, particularly from a transboundary perspective. Such measures may include offsets where the benefits are not achieved by the local impacted communities but accrue to the greater regional fisheries sustainability.

## **COMPONENT 2: SCALING UP TRANSBOUNDARY FISHERIES MANAGEMENT MEASURES**

The MRC BDS 2021-2030 is a whole basin strategy engaging all relevant sectors and actors, to guide improvements in the environmental, social, and economic states of the LMB, including fisheries management and development. This strategy will underpin specific measures adopted under this project with a focus on CLV to protect and improve fisheries management and sustainability as well as other aquatic biodiversity, but with specific focus on:

- **Developing a transboundary action plan to protect remaining environmental assets, migratory fish pathways and to better manage fisheries.**
- **Address lack of information on wetland and riverine habits; establish regular monitoring and data collection to address knowledge gaps and conservation activities for wetlands and other environmental assets including fisheries.**
- **Harmonise transboundary fisheries management measures, including cooperation and research; promote regional cooperation on research and development in the domain of transboundary issues.**

The main outcome of this component is substantial improvement in the status and management of transboundary fisheries resources in CLV.

*Outcome 2.1: Fisheries and aquatic resources in CLV more sustainable through promotion of transboundary management measures*

**Output 2.1: Transboundary fisheries management measures established or expanded, including fish conservation and protection areas; seasonal and area closures, barrier removal and easement facilities, restoration, enhancement and reconnection of key fish habitats; fishing gear restrictions, catch restrictions, and establishment of community fisheries management units**

The transboundary impacts of infrastructural development on fish and fisheries, which were documented in the MRC Council and Viet Nam Delta Studies will be reviewed to include tributaries and wetlands and identify key issues and constraints to transboundary fisheries management. We will identify, protect, and where appropriate restore key fish habitats and connectivity to enhance transboundary fisheries in CLV. This will be achieved by:

- Establishing the status and trends for key fish species, mapping migratory pathways for the main target species of the fisheries and undertake threat analysis to these species and the possibilities to mitigate threats.
- Identification and management or protection of aquatic habitats important for fish stocks.
- Improving or restoring the connectivity between upstream (spawning) and downstream (feeding and refuge) habitats.
- Advise on hydrological patterns, including their role in the creation of seasonal floodplain habitats, triggers for migration, and distribution of fish larvae and juveniles; fish life cycle studies (i.e., identify spawning grounds and map migration routes of key species).
- Develop technical guidance for the application of fish passage designs for transboundary migratory fish species, particularly designs for fish passage facilities to reconnect the floodplain habitats, including rice fields, to the main river system.

The outcome of this action will be to upgrade the transboundary fisheries guidelines produced by the MRC and:

- Build capacity on the transboundary approach and related topics such as monitoring, joint management of shared stocks between CLV.
- Document, disseminate and exchange the lessons learned from transboundary fisheries management implementation at regional level.
- Identify and strengthen existing cross-border mechanisms for transboundary fisheries management.
- Harmonise transboundary fisheries-management measures, including cooperation and research.

These outputs will be disseminated through Component 4 to facilitate further dialogue at the national and regional levels through the MRC and appropriate national processes.

**Output 2.2: Value of fisheries enhanced by community business formation and new and improved value chains, including gender disaggregated opportunities**

Much of the research effort of the last 20 years has focused on valuing the LMB fisheries in the expectation that improved data will lead to improved policy outcomes. But the severity of the threats to fisheries requires a shift in focus to recognise the likely outcomes of current development trajectories, and to formulate practical policy responses. To meet this challenge, a food systems lens will be used as a framework to understand the interconnections between the environmental and social dimensions of how fisheries generate food outcomes, and between fish production, processing, trade and consumption. The project will evaluate the socio-economic benefits along the full value chain and assess the feasibility of community business opportunities. The food systems lens allows for the identification of policies and business opportunities to protect the livelihoods of poorer people, even in the face of declining yields. These might include social enterprise initiatives, and improved market chains and processing technologies.

### **Output 2.3: Swimways and floodplains reconnected and/or restored and protected under national programmes**

The outputs from systematic reviews of available information and planning processes (Outputs 1.1, 1.2, and 3.2) will be used to prioritise and formulate key actions to reconnect migratory pathways and protect and restore critical habitats. **Interventions could include establishing protected or conservation areas, rehabilitating degraded wetlands, improving agricultural practices in catchments, constructing fishways on smaller barriers in tributary rivers or reconnecting irrigated areas within floodplains.** Regional efforts to protect or restore key ecosystems and reconnect swimways will need to be embedded in regional energy planning. There will be a need to prioritise significant critical habitats within the framework of existing transboundary fisheries management projects in Bokeo-Chiang Rai, Champasak-Stung Treng and Prey Veng-Dong Thap.

In effect, there will be a shift away from solely protecting iconic, often commercially important, long-distance migratory fish, toward enhancement of fisheries of greater importance for subsistence and semi-commercial fisheries. This does not mean that the conservation of the incredible biodiversity supported by the Mekong is not enhanced. Rather, it is a co-benefit from the actions proposed. Non-fish aquatic biodiversity and dependent species will benefit from healthier wetlands and floodplains.

The approach to ensure a long-term, sustainable outcome is to: (1) demonstrate the success of restoration and conservation projects to engineers, developers and government bodies; and (2) ensure that developers, engineers and government bodies are included in all discussions and output preparation as part of this project. To ensure CLV ownership, it is essential that this approach is seen as an open forum where all ideas and suggestions are encouraged. Local communities, researchers, resource managers, national agencies, and development partners, and other stakeholders will be regularly consulted (Component 4).

### **Output 2.4: Sustainable financing mechanisms established linked to supporting sustainable fisheries management**

Each year the project will summarise the economic and social values brought to riparian communities from fisheries, as well as the options that could be used to exploit the economic benefits of alternative livelihoods that suit their livelihood portfolios. Special emphasis will be placed on identifying options to maximise the welfare value of fish at the community level as well as institutional pathways to help convert the opportunities into policies and action.

This output will be used to establish sustainable financing options to ensure the benefits from the fisheries can be sustained in the long term. Options include rolling credit and mini trusts funds for those that engage and contribute to the successful implementation and maintenance of protection and enhancement measures.

### **Output 2.5: Strategy to reduce community reliance on fisheries as a marginal livelihood, including gender-differentiated options**

As fishing communities depend on fisheries for their livelihoods, there is a need to explore options for livelihood diversification, such as aquaculture, agriculture and eco-tourism, to supplement the food and income of the local people that may be affected by water resource infrastructural development, but also from restrictions to fishing allied with the need to establish fish conservation areas and Other Effective Area-based Conservation Measures (OECMs). Policy and business alternatives to reduce the reliance on fisheries as a livelihood, linked to Output 2.2, will be explored, especially for highly dependent communities. Identifying new business opportunities,

perhaps linked to the water and conservation sectors, food production sectors and non-technical service sectors, will be critical to reducing the growing pressure on fisheries and aquatic resources. This will give opportunities for fishing communities to diversify their livelihoods.

#### **Output 2.6: Strengthen community-led fisheries management and enforcement initiatives, including incentives for app-based monitoring**

Substantial investment will be required in the form of time and human and institutional resource inputs, but also clear understanding of the responsibilities of government and the local people. Both parties can play crucial roles in:

- **Contributing the implementation and management of intervention measures.**
- **Contributing to fundamental research into the outcomes of the intervention measures implemented during the project.**
- **Monitoring the ecosystem changes over time and the effects on fisheries resources.**
- **Avoiding further damage to the key habitats by limiting development activities in the areas.**
- **Diminishing the impacts of development activity on the ecosystem by retaining some of the natural diversity (physical and biological aspects) by limiting degrading activities in transboundary areas.**
- **Restoring habitats to re-establish the ecosystem structure and functions that existed prior to the initiation of development activities.**
- **Strengthening enforcement against illegal fishing through community-led initiative or co-management for patrol/surveillance activities.**
- **Improving gender equality in community-led fisheries.**

To achieve this engagement will require:

- **Development of a sustainable and low-cost network for the monitoring of fish resources, through coordinated fisher community logbook schemes, and household and market surveys. Options of app-based remote monitoring will be trailed and audited against existing monitoring schemes. These will be coupled with remote sensing, satellite and GIS based technologies that will provide an overview of system change daily.**
- **Education and awareness campaigns on fisheries laws for the sustainable use of fisheries resources and biodiversity conservation, including awareness of laws and regulations on fishing activities.**

This component will address transboundary governance at the national and regional levels. Barriers include un-harmonized policy and regulatory frameworks; gaps in knowledge about the transboundary status of migratory fish stocks, making it difficult to establish sustainable levels of exploitation or establishing protection measures; loss of biodiversity; improper exploitation and un-gazetted breeding/nursery grounds; inadequate knowledge about the measures to improve critical fish habitat and reconnect migratory fish pathways. This component aims to harmonise fisheries governance and other relevant policies and plans in CLV to support sustainable fisheries in the basin. Component 3 targets the development of a regional agreement that will be submitted for approval to relevant ministries. The agreement will be focused on improving fisheries governance and other relevant policies

and plans harmonised to support transboundary fisheries management and on fish stock management submitted for approval by CLV. Women not only play an important role in fish marketing, but also in fisheries management through their participation in co-management structures. Thus, gender-related interventions related to resource use by women and men (and children) will receive particular emphasis under the project.

*Outcome 3: Fisheries governance and other relevant policies and plans harmonised to support transboundary fisheries management in CLV and regional agreement submitted for approval by CLV*

**Output 3.1: Local, national, and transboundary fisheries governance structures strengthened and transboundary cooperation improved**

The effective fisheries management requires policy coherence across a range of ministries and departments, and across tiers of government from national to local. The challenge is greater where fisheries are transboundary and where governance is weak. Although actions at the local level can address local bottlenecks, there is a need for action across CLV if there is going to be significant impact. This requires a longer-term vision and coordination that the MRC will lead. At an early stage of the project, the existing fisheries management structures, their strengths and weaknesses and legal frameworks will be reviewed. Gender equality will also be considered during this review. This information will be consolidated through a SWOT analysis and options for strengthening the governance structure at all levels identified. Emphasis will be put on gender-equal co-management arrangements in line with the MRC emphasis to promote local devolution of management and enforcement activities.

**Output 3.2: Fisheries, agricultural and environmental policies and regulations harmonised in CLV**

The project will help establish and enforce harmonised policy and legal and regulatory frameworks for transboundary fisheries management. Transparent processes and systematic approaches to planning and decision making involving all relevant sectors can help to ensure the integration of ecosystem conservation and wise use of aquatic resources embedded into energy policies and plans; and this can facilitate the participation of policy makers, water and biodiversity (especially fisheries) managers, and other stakeholders in these processes.

**Output 3.3: National investment plan and strategy for improving transboundary fishery management developed in CLV**

It is well recognised that strengthening and harmonisation of local and regional governance structures are critical to ensure sustainable management of the fisheries resources, but this must be coupled with political buy-in and government investment. An ecosystem services framework will be developed to value the contribution of different natural, renewable resources (water, fisheries, aquatic animals, etc.) to livelihoods and food security and matched against the costs and benefits from infrastructural development opportunities. This will highlight the importance of these natural resources to GDP, achieving the SDGs and Aichi Biodiversity Targets, and underpinning an investment plan to support the protection and enhancement of critical transboundary fisheries resources.

**Output 3.4: Consensus on swimways and conservation of critical aquatic species developed and submitted for endorsement at ministerial level in CLV**

The outputs of Component 2 will be used to formulate an action plan for the conservation, protection and restoration of critical fisheries habitats, including migratory pathways (swimways) that ensures the sustainability

of fish resources at both the national and transboundary scales. The agreement will be translated into a regional agreement to enhance cooperation on transboundary fish conservation in alignment with the Convention on Migratory Species (CMS). As part of this agreement, strong cooperation will need to be developed between riparian countries and management efforts co-developed with fisher communities, based on identified priority needs and user rights.

#### **COMPONENT 4: PROJECT MECHANISMS FOR STAKEHOLDER CONSULTATION, GENDER MAINSTREAMING, KNOWLEDGE DISSEMINATION, COORDINATION**

This component will establish effective stakeholder consultation, gender mainstreaming, knowledge dissemination, coordination with other initiatives.

*Outcome 4: Implementation of project mechanisms for improved stakeholder consultation, gender mainstreaming, knowledge dissemination, coordination*

##### **Output 4.1: Annual stocktaking and awareness raising meetings with relevant stakeholders**

To ensure firm commitment and progress from the project partners, government agencies and stakeholders, regular meetings will be conducted throughout the project. It is proposed that a roadmap of external consultations (e.g. development partners, research agencies) is established during the Inception Phase. This roadmap will outline *when* the local, national and regional consultations will take place in relation to the key project milestones, *what* the purpose of each consultation process will be, *how* that will be measured, and *by what means* the outcomes will be fed back to the stakeholders.

It is recognised the goal of these consultations will differ between internal and external stakeholders so it will be important to map the stakeholder engagement at an early stage to ensure involvement in successful delivery of the transboundary management measures.

Specific capacity building activities will be aimed at: (1) strengthening the participation and empowerment of poor communities, women and marginalised groups; (2) improving the efficiency and resilience of institutions; and (3) enhancing the design, coordination and implementation of policy and practice based on systems approaches.

The progress of the project will be monitored and evaluated in line with its objectives and expected outputs in accordance with GEF M&E procedures that include annual stocking meetings that will take place at the regional level to monitor progress against milestones.

##### **Output 4.2: Periodic coordination and knowledge sharing events with other ongoing projects in CLV and in the wider Mekong region**



The project will establish dialogue with other initiatives and development projects to both harmonise the efforts but explore synergistic outcomes. Meetings will be gender-balanced and organised to plan for strategic interactions and share experiences and successes and maximise cross programme outcomes. These actions will be coordinated by the MRC through their annual regional stakeholder fora.

Additional seminars and workshops will be conducted to facilitate further upscaling beyond the LMB area into the Greater Mekong Sub-region (GMS). This will improve fisheries management also in some other important transboundary rivers, including the Ayeyarwady, Salween, Chao Phraya, and Red Rivers. This process will also improve the connection between the MRC and fisheries management agencies from neighbouring basins. All seminars and workshops will be gender balanced.

As part of this initiative, the project will fund gender equality tailored sensitization programmes in sustainable fishing practices and fish processing techniques for local beneficiaries/communities. This engagement, both for staff of the relevant ministries in the LMB countries and fisher-folk (particularly women), will focus on developing responsible fishing practices and improved fish processing and preservation techniques, health standards, and the reduction of post-catch losses.

#### **Output 4.3: Full participation in GEF IW LEARN activities, creation of a project website, and preparation of experience notes**

Transboundary learning mechanisms, knowledge management, communication and awareness building activities will be established at the community and national levels through a series of online and facilitated actions. Experiences will be shared through a dedicated website, annual conferences dedicated to transboundary awareness and management in CLV and other GMS river systems, regional meetings, IW LEARN, technical papers, videos, technical and consultative forums, IUCN, MRC and other relevant forums. A significant budget will be allocated to knowledge management and drawing of lessons. The strategic establishment of a policy relevant evidence based will support activities under Component 1. Regarding communication-focused activities, the project will implement outreach/awareness campaigns to promote transboundary fisheries management and cross sectoral conflict resolution to improve the resilience of fisheries in CLV. At least 1% of the GEF grant will be dedicated to IW LEARN related activities.

The overall objective of the project is to strengthen management of transboundary fisheries, protect and restore critical habitats for fish and enhance the livelihoods for local fishing communities in CLV. The project builds on the MRC guidelines and pilot projects for transboundary fisheries and enhancement of critical habitats for transboundary fisheries. CLV fisheries are critical for food security and livelihoods but are being impacted by water resource development schemes with transboundary implications. This demands a regional approach to their sustainable management, utilisation and development. Important elements of the fisheries system to maintain, protect and restore include migratory pathways throughout the basin and critical habitats for refuge or breeding and feeding habitats. This project adopts an integrated water resource management approach that addresses not only challenges at the local/national levels but also transboundary issues. Without this project, these transboundary issues would not be systematically and comprehensively addressed in the foreseeable future.

In this regard the following transboundary aspects will benefit from the GEF intervention:

- Key knowledge gaps on fisheries and water resource development impacts filled.

- Transboundary fisheries management measures established or expanded, including fish conservation and protection areas.
- Updated and harmonised policy, legal and regulatory frameworks, and innovative financing mechanisms established and jointly adopted by CLV.
- Regional agreement on the protection of transboundary fisheries and watershed resources is made and enforced.
- Protected areas around critical fisheries habitat such as spawning areas are established and officially agreed by designated governments.
- Improved fisheries management systems are put into operation; reliable and updated information systems are shared and used by stakeholders.
- Strengthened community-led fisheries research and development.
- Action plan promoting gender equity in the areas of management, governance, and policy development in place.

The need to build capacity and increase knowledge and commitment at the transboundary level is entirely an additional cost imposed by the nature of fisheries in CLV, and this is consistent with the GEF principles and strategic objectives.

#### *Incremental reasoning*

The proposed project will avoid a baseline scenario, in which fish stocks (and food security of local communities and biodiversity) will continue to decline due to a lack of cross-sector coordination and uncoordinated national fisheries management efforts CLV. GEF funding will build on a decade of MRC-led efforts to develop a CLV-wide transboundary fisheries management strategy and close critical funding gaps to implement actions endorsed by CLV. Stabilising fish stocks at 2020 levels as targeted by this project will generate several benefits for CLV, ranging from food security improvements that safeguard the resilience of the most vulnerable population segments (as declining fish stocks typically convert into sharply increasing fish prices) to biodiversity conservation improvements. Particularly Component 2 will test solutions on the ground to pilot scalable fisheries management improvements, which will allow for quantifying the incremental benefits as part of the project's monitoring program.

The incremental benefits of this project will accrue to transboundary waters in CLV. But there will be lessons learned that are relevant to all large rivers in south and southeast Asia, especially regarding the impacts of water resource development projects on ecosystem goods and services and the livelihoods of vulnerable people. The greatest incremental benefits will be the conservation and sustainable management of transboundary fisheries and utilisation of water resources integrated with other sectors.

#### *Knowledge Management*

Under Component 1, the project will fill knowledge gaps identified by the MRC and CLV, while Component 3 will facilitate the policy dialogue on transboundary fisheries in CLV to develop a refined transboundary fisheries strategy. The project will develop knowledge products (manuals, toolkits, technical guidelines) from lessons learned during the informative and project development phases, as well as protocols on appropriate design of fish passage design, floodplain restoration, transboundary fisheries management, establishment and local

management of protected areas and fisheries conservation zones. These products will be transferable to the GMS and tropical rivers in general.

**The project is in line with the UN Decade on Ecosystem Restoration and regional strategies and action plans and includes activities to substantially enhance capacity and awareness across all agencies and stakeholders relevant for (transboundary) fisheries management and related water management in CLV and other parts of the GMS.**

The project will align with the GEF's and IUCN's Policies on Gender Equality, and the GEF Gender Implementation Strategy. The project is also in line with SDG 5 on Gender Equality, and the empowerment of women and girls, and it will therefore put efforts to improve the participation of women in decision-making, particularly in groundwater management and irrigation, and in the design and implementation of effective transboundary institutions.

The project will develop a Gender Action Plan (GAP) during the PPG phase to ensure that gender considerations are being considered during project formulation through a gender-responsive approach, and through specific activities directed to strengthen women's participation in decision-making.

During early project implementation, gender actions will be consolidated into a Mekong Fisheries focused Gender Strategy, that will include, among others, the following interventions:

- Capacity development to national stakeholders on transboundary fisheries management.
- Creation of a system with Gender Focal points at national and regional levels to share information related to gender issues in fisheries management and fisheries dependent livelihoods.
- Conduct gender analysis in CLV to have an overall assessment of women's roles.
- Design specific activities targeted to women to ensure they benefit from the project and to improve their participation in decision-making.
- Setting up a gender responsive M&E system, with gender sensitive indicators.

#### **Project monitoring system established (including MTR and TE)**

**The transboundary context of CLV requires substantial experience in water and hydro-diplomacy and well-established networks, which the MRC provides. Building on this foundation an M&E system will be established that builds on existing networks for transboundary fisheries and water management.**

## Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

IUCN will not play an execution role on this project

A list of baseline projects with the operational time frame 2025-2030 is provided in Annex 1. All projects listed will be executed by either IUCN or MRC or CLV fisheries departments. Further details on cooperation with baseline projects to avoid duplication and increase synergies will be provided during PPG. Initial assessment of cooperation is project in Annex J.

## Core Indicators

### Indicator 1 Terrestrial protected areas created or under improved management

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
10000	0	0	0

### Indicator 1.1 Terrestrial Protected Areas Newly created

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0	0	0	0

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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### Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
10000	0	0	0

Name of the Protected Area	WDP A ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Siphandone Ramsar Site	N/A	Others	10,000.00						

### Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
347785	0	0	0

**Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
347,785.00			

**Indicator 4.2 Area of landscapes under third-party certification incorporating biodiversity considerations**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

**Type/Name of Third Party Certification**

**Indicator 4.3 Area of landscapes under sustainable land management in production systems**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

**Indicator 4.4 Area of High Conservation Value or other forest loss avoided**

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

**Indicator 4.5 Terrestrial OECMs supported**

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

**Documents (Document(s) that justifies the HCVF)**

Title

**Indicator 7 Shared water ecosystems under new or improved cooperative management**

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Shared water Ecosystem	Mekong			
Count	1	0	0	0

**Indicator 7.1 Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation (scale of 1 to 4; see Guidance)**

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Mekong	4			

**Indicator 7.2 Level of Regional Legal Agreements and Regional management institution(s) (RMI) to support its implementation (scale of 1 to 4; see Guidance)**

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Mekong	4			

**Indicator 7.3 Level of National/Local reforms and active participation of Inter-Ministeral Committees (IMC; scale 1 to 4; See Guidance)**

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Mekong	4			

**Indicator 7.4 Level of engagement in IWLEARN through participation and delivery of key products(scale 1 to 4; see Guidance)**

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Mekong	1			

**Indicator 8 Globally over-exploited fisheries moved to more sustainable levels**

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
500,000.00			

**Fishery Details**

The indicator for fisheries moved to more sustainable levels come from MRC Fisheries Yield Assessment 2020. The indicator was the total annual yield from rainfed habitat type which cover 70% of about 18 million hectares of 4 major habitat types, Major flood zone, Rainfed, Water bodies and Brackish-estuarine zones, in the CLV. This fishery is impacted due to intensive rice field practice in the MCs in the last 2 decades. Component 2 targets designing low head swimming way is expected to improve this fishery substantially.

**Indicator 11 People benefiting from GEF-financed investments**

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
<b>Female</b>	10,000			
<b>Male</b>	10,000			
<b>Total</b>	<b>20,000</b>	<b>0</b>	<b>0</b>	<b>0</b>

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

The indicator for terrestrial protected areas (10,000 hectares) covers the proposed Siphandone Ramsar Site in southern Lao PDR. This area was determined based on a climate vulnerability assessment conducted in 2011 by a team from IUCN and the National University of Laos

(<http://www.icem.com.au/documents/biodiversity/wetlands%20wshop/5.%20Siphandone%20initial%20findings%20-%20Lao%20Team.pdf>) and Google Earth.

The indicator for landscapes under improved practices comes from analysis of CIFOR Global Wetlands Database V.3 (<https://www2.cifor.org/global-wetlands/>). The data were clipped to the LMB boundary in CLV, projected, and area summarized

for each of the database's 10 wetland types. Each wetland type was factored based on proximity to the Mekong mainstream, major tributaries, and major wetlands. Mangroves and open water classes were excluded. The total area under improved management was estimated at almost 350,000 hectares or about 5% of the total wetland area in LMB excluding open water and mangroves.

Count	Hectares	Factor	Result		
Open water	409,129	632,588	0%	-	
Mangroves	435	673	0%	-	
Swamps	340,903	527,098	5%	26,355	
Fens	19,570	30,259	10%	3,026	
Riverine & lacustrine		1,204	1,862	100%	1,862
Floodouts	346,155	535,218	10%	53,522	
Floodplains	779,736	1,205,613	10%	120,561	
General marshes	1,842,726	2,849,189	5%	142,459	
Marshes in arid climate		6,825	10,553	0%	-
Marshes in wet meadows		655,873	1,014,099	0%	-
Hectares	4,402,556	6,807,150	347,785		

Small scale, artisanal fisheries in the LMBCLV moved to more sustainable levels. This indicator come from the MRC Fisheries Yield Assessment 2020. The indicator was the total annual yield from rainfed habitats in the CLV type which that cover 6570% of about 10.5 18 million hectares of 4 four major habitat types, : mMajor flood zone, rRainfed, wWater bodies and bBrackish-estuarine zones in CLV, in the LMB. This fishery is impacted due to intensive rice field practice production in the MCs in the last 2 decades.

## Risks to Project Preparation and Implementation

Summarize risks that might affect the project preparation and implementation phases and what are the mitigation strategies the project preparation process will undertake to address these (e.g. what alternatives may be considered during project preparation- such as in terms of consultations, role and choice of counterparts, delivery mechanisms, locations in country, flexible design elements, etc.). Identify any of the risks listed below that would call in question the viability of the project during its implementation. Please describe any possible mitigation measures needed. (The risks associated with project design and Theory of Change should be described in the "Project description" section above). The risk rating should reflect the overall risk to project outcomes considering the country setting and ambition of the project. The rating scale is: High, Substantial, Moderate, Low.

Risk Categories	Rating	Comments
Climate	Moderate	ate change can pose a risk to fisheries in CLV in multiple ways. Increasing climate variability can alter river hydrology, affecting fish migration, reproduction, and habitat availability. Heat waves can increase fish mortality. The project considers these

		<p>changing risks by considering a range of possible future climate change scenarios during the design of on-the-ground solutions in Component 2 and in planning processes of Component 1. The goal is to establish on-the-ground solutions and CLV wide policy changes that are resilient to projected climate change. The differing adaptive capacities between the four countries will also be considered when devising strategies to manage fisheries under increasing climate risks. Consequently, risks of climate change to communities will be mitigated by solutions introduced by the project. Concurrently, risks of climate change to the project are predicted to be moderate to low. An in-depth climate risk assessment will be conducted during the PPG phase. Basin development will interact with climate change, in some cases exacerbating the change and, in some cases, mitigating it. In terms of observed changes in climate, the region has suffered three prolonged droughts over the last seven years (2016, 2020, 2021) that have shortened the wet season and contributed to the significant observed reduction in fish catch in the Tonle Sap between 2020 and 2015. The 2020 and 2021 droughts were exacerbated by Lancang wet season water retention, according to analysis by the Mekong Dam Monitor, which maps expected vs. observed discharge considering changes in precipitation, evaporation, and water retention.</p>
Environment and Social	Moderate	Environmental and social risks that could potentially affect project design and project implementation include - Changing or restricting



		<p>fishing practices can have direct impacts on the livelihoods of local fishing communities who rely on the river for income and sustenance. The project will aim to minimize negative impacts on these communities through alternative livelihood programs. - Many communities in CLV have deep cultural and traditional ties to fishing. Any changes in fishing practices will be sensitive to these cultural aspects. Consequently, the project will involve local communities in decision-making. - Improved fisheries management may lead to increased enforcement efforts to combat illegal fishing. This can result in conflicts between authorities and local fishers if not managed carefully. - Even with improved management, there is a risk of overfishing and the depletion of fish stocks if regulations are not effectively enforced. The project will aim to mitigate this risk by coordinating enforcement through the national agencies and at the basin level. Overall, environmental and social risks in CLV can be considered moderate as rated by the preliminary ESMS.</p>
Political and Governance	Moderate	<p>Addressing limited coordination and trade-offs across various sectors within and across countries is crucial for the successful implementation of this project. Governance-related risks can arise due to conflicting interests, overlapping responsibilities, and inadequate mechanisms for cooperation. The project will adopt a step-by-step progressive approach to building mutual trust based on joint fact finding and consultative processes. It will build on, and support compliance with the MRA</p>

		and strengthen fisheries focused coordination between CLV. This will also involve the improved cross-sector coordination through a better management and planning of interconnections between water, fisheries, agriculture, energy, and other sectors . Conflict risk is low as CLV fully support the MRC-led fisheries management strategy.
Macro-economic	Low	CLV have experienced substantial economic growth over the past 20 years. The only macroeconomic risk worth mentioning is high debt level in Lao PDR.
Strategies and Policies	High	A major risk is linked to the policy and strategy incoherence across sectors and goals in CLV. The project will mitigate this risk by - Engage with stakeholders from all relevant sectors. - Conduct a comprehensive assessment of existing policies and regulations across sectors to identify gaps, conflicts, and opportunities for alignment. - Build on the MRC BFMS. - Follow MRC’s dispute resolution protocols. Another cause linking to this major risk is lack of adequate data and information in support of policy, strategies coordination across sectors. This risk will be mitigated by information, knowledge generated from Component 1. The MRC already plays an important role in supporting national and regional capture fisheries data. Further institutional arrangements for the data and information transferred across sector and embedded into national system will be explored during the PPG phase to improve coordination between MRC/National Mekong Committees and the national

		<p>departments of fisheries in CLV, who have the mandate to establish cross-sector coordination processes at the national level. To mitigate these risks further, the project will also facilitate knowledge sharing and provide guidance based on lessons learned and other similar experiences. It is expected that countries will move at different paces. When necessary, informal discussion forums (e.g., regional workshops) at the same time formal processes (e.g., setting up an advisory group) are being set up, to avoid time lags.</p>
<p>Technical design of project or program</p>	<p>Low</p>	<p>The technical aspects of the project design are based on many years of work by the MRC. Lessons learnt include - a quantitative understanding of how rapidly fish stocks are declining; - a profound understanding of the relative influence of different drivers (e.g. hydropower being substantially more relevant than illegal fishing); - the increasing understanding of how ineffective fish passages are; - the detailed understanding of different habitats and the relevance of connectivity on fish stocks; The MRC and its partners have established a solid evidence base, which minimises risks related to the technical design of the project.</p>
<p>Institutional capacity for implementation and sustainability</p>	<p>Low</p>	<p>The MRC has a good track record in working on transboundary fisheries and has developed substantial institutional capacity. This will also make the outcomes of this project sustainable as the MRC will facilitate a process to implement improved fisheries measures into national fisheries programs.</p>

<p>Fiduciary: Financial Management and Procurement</p>	<p>Low</p>	<p>Project management by the MRC and oversight by IUCN will ensure adequate financial planning, budgeting, accounting, and reporting to mitigate risks of overspending, fund misallocation, or financial instability. Project governance will include a range of internal controls, such as segregation of duties and oversight mechanisms. Financial transactions will be reported transparently. Procurement related risks will be mitigated by applying IUCN's and MRC's strict procurement rules, which will ensure competitive bidding for activities that need to be outsourced, and sound contract management to mitigate conflict risks. IUCN is experienced in implementing and overseeing large regional projects such as this one. The MRC is also experienced in managing large budgets.</p>
<p>Stakeholder Engagement</p>	<p>Moderate</p>	<p>The project design will continue to involve local stakeholders and subnational and local entities. This will ensure that all relevant stakeholders are engaged and have their knowledge, ideas and needs considered during the design of activities. The risk will be addressed throughout project implementation through systematic communication with local communities and other stakeholders, and through their involvement in the Annual Stocktaking Meetings. The project builds on an extensive consultation process implemented by the MRC over the past four years, which led to the BFMS. However, the project needs to be brought to the local level to assess that it will have a positive impact on households and be responsive to their needs. In the PPG phase or early implementation, once</p>

		intervention locations have been decided, the project will follow the FPIC methodology to inform fishing communities about the aims of the project and obtain their approval to participate.
Other		
Financial Risks for NGI projects		
Overall Risk Rating	Moderate	

### C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

The project is fully consistent with GEF-8 programming directions, particularly objective 1 of International Waters Focal Area: *Accelerate joint action to support Blue Economic Development* and its two strategic actions: (1) Sustaining healthy blue ecosystems; and (2) Advancing sustainable fisheries management. The project will also support GEF IW’s objective 3 to protect and rehabilitate aquatic ecosystems with multiple ecosystem services. This will involve the improved coordination of water, food and energy focused investments to ensure the reversal of declining fish stocks.

The project is also fully aligned with the GEF’s biodiversity focal area. The goal of the GEF-8 (2022-2026) biodiversity focal area strategy is globally significant biodiversity conserved, sustainably used, and restored. To achieve this goal, GEF-8 investments will focus on three main objectives: Improve conservation, sustainable use, and restoration of natural ecosystems. The proposed project will focus on the conservation of habitat critical for fisheries in CLV to bring the decline in aquatic biodiversity to a halt and establish solutions for sustainable fisheries.

The project will also make contributions to achieving a range of targets defined by the Kunming-Montreal GBF, including:

- Improved integrated spatial planning and/or effective management processes addressing land use change (Target 1).
- Effective restoration of freshwater systems (Target 2).
- Effective conservation, improved connectivity, and equitably governance of protected areas (Target 3).

The project is aligned with the MRA’s Article 7, which obliges MCs: “To make every effort to avoid, minimise and mitigate harmful effects that might occur to the environment, especially the water quantity and quality, the aquatic (ecosystem) conditions, and ecological balance of the river system, from the development and use of the Mekong River Basin water resources or discharge of wastes and return flows.”

The project is in line with the strategic priorities and actions of the MRC BFMS 2018-2022<sup>[16]</sup> (see Box 1):

1. Monitoring of key indicators of (a) fish diversity, abundance and ecology, (b) socioeconomics, livelihoods, (c) food security and nutrition, and (d) gender, to observe and document changes and impacts in capture fisheries sector and other sectors;
2. Management-related priorities, where the BFMS promotes proactive regional engagement (conservation of key habitats, fisheries enhancement, fisheries co-management and transboundary fisheries management); and
3. Priorities related to development (fisheries and fish-friendly irrigation and agriculture), aquaculture, water development and adaptation of fisheries to climate change.

This action programme and the underpinning transboundary fisheries management strategy are the result of more than a decade of research and negotiations amongst the riparian countries and facilitated by the MRC. The proposed project will support the MRC's fisheries action programme and lead to new investment for sustainable fisheries endorsed by CLV.

The project is also in line with national fisheries development programmes, that are targeting stock enhancement, habitat restoration, establishment of protected areas and fish conservation zones, promotion of aquaculture and building climate resilient fisheries.

The Department of Livestock and Fisheries (DLF) under the Ministry of Agriculture and Forestry (MAF) is the competent authority for fisheries and aquaculture management at national level in Lao PDR. The agency is responsible for the protection, promotion, and sustainable production as well as use and management of aquatic resources. It carries out regulatory and enforcement functions, proposes and implements policies and strategies, provides extension services, as well as collects and disseminates information related to livestock and fisheries in the country. Lao PDR enacted its first comprehensive Fisheries Law in 2009. The law prohibits certain destructive practices in fisheries and aquaculture such as use of poison, explosives, weapons, electrical devices, bright lights, and noise-making devices. The law also bans; the use of any fishing gear which unduly obstructs the passage of aquatic fauna; harvesting fish from natural bodies of water either by blocking a stream, a marsh, a channel or by digging a pond or by draining a permanent natural pond; and fishing during spawning season. In addition, the law calls for strict adherence to limitations in relation to conservation zones and prohibited spawning areas designated by FMCs. Another key document affecting fisheries management in Lao PDR is the National Biodiversity Strategy and Action Plan 2016-2025. The primary document for studying the status of biodiversity management in Lao PDR is the 4th National Report to the CBD of 2010, otherwise known as 4NR.

Fisheries management in Cambodia is divided between central and local governments. At the central level, the Department of Fisheries of the Ministry of Agriculture, Forestry and Fisheries (MAFF) oversees developing research and drafting laws and policies on fisheries (and aquaculture). The department is also vested with inspecting powers. At local level, fisheries are managed by the Provincial-Urban Fishery Authorities, which have the necessary powers to ensure compliance with the law, in the area under their jurisdiction. The Fisheries Management and Administration Law (1987) is the core foundation for capture fisheries.

In Viet Nam the main legislative foundation for fisheries management is defined by the Fisheries Law of 2003. The Ministry of Natural Resources and Environment (MONRE) and the Ministry of Agriculture and Rural Development (MARD) serve as the competent national authorities responsible for all related matters.

All three countries committed to sustainably manage fish stocks.

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[1]MRC (2017) Mekong Basin-Wide Fisheries Management and Development Strategy 2018-2022  
<https://www.mrcmekong.org/assets/Publications/BFMS-Feb20-v-Final.pdf>

## D. POLICY REQUIREMENTS

### **Gender Equality and Women's Empowerment:**

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

### **Stakeholder Engagement**

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

### **Were the following stakeholders consulted during project identification phase:**

Indigenous Peoples and Local Communities:

Civil Society Organizations: Yes

Private Sector: Yes

### **Provide a brief summary and list of names and dates of consultations**

As part of the PIF formulation, several regional consultations have taken place involving all four MCs.

These consultations provided the main inputs for developing this PIF and identifying the main political concerns as well as identifying the political scope for transboundary processes towards improved transboundary fisheries management in CLV. Consultations with private sector entities are planned for the PPG phase.

Private sector, especially hydropower, plays a prominent role in the LMB. Some companies, notably CK Power, the Thai company that owns and operates Xayaburi, have invested heavily in fish passage construction and monitoring. The results of this work, supported by Charles Sturt University, will show to what extent fish passage facilities are a viable solution to fish stock conservation in large tropical rivers. The Nam Theun 2 Power Company, which owns and operates

Nam Theun 2, plans to invest in floating solar to increase dry season energy production when reservoir levels are lowest and hydropower production is restricted. The project will expand these relationships to include other companies and bring scientists and practitioners together and maximise regional learning on hydropower development and specifically how to minimise impacts on fisheries.

In parts of CLV, fishing cooperatives have been established to give fishers a greater share of the fish catch value. In the Tonle Sap, these have been linked with mini trust funds that provide core funding to ensure effective management of fish conservation areas. The project will seek to replicate these models.

In the PIF phase, there were two regional and four national consultation meetings, involving relevant stakeholders and MRC fisheries line agencies, that were organised to provide technical expertise to the PIF document. It is important to note that the project idea and concept note had been discussed with MCs and relevant stakeholders or line agencies in 2021-2022. The table below is a summary of the engagement and consultation process for the PIF documents only. List of participants for the consultation meeting are provided in Annex L.

Date	Description	Purposes	Outcome
Dec 15, 2022	Regional Consultation Meeting in Nonthaburi Province, Thailand (65 participants)	First introduction of PIF document to MRC Expert Group for Environment Management (EGEM)	The PIF document was initially endorsed with the request to further consult with MCs and national experts
Jan 11, 2023	Lao PDR Consultation Meeting in Thalat, Vientiane Province (24 participants)	The PIF document was consulted and received comments from Lao PDR NMC, fisheries line agencies including DOF, LAReC	Comments to further improve the PIF
Jan 13, 2023	Cambodia Consultation Meeting in Kampong Cham Province (17 participants)	The PIF document was consulted and received comments from Cambodia NMC, fisheries line agencies including FiA, Tonle Sap Authority, IFRedi	Comments to further improve the PIF
Feb 1, 2023	Thailand Consultation Meeting in Bangkok (20 participants)	The PIF document was consulted and received comments from Thailand National Mekong Committee, fisheries line agencies including DOF, office of natural water resources	Comments to further improve the PIF
Feb 7, 2023	Viet Nam Consultation Meeting (22 participants)	The PIF document was consulted and sought for comments from Viet Nam NMC, fisheries line agencies including DOF, RiA2	Comments to further improve the PIF
Feb 28, 2023	Regional Consultation Meeting to finalise the PIF (30 participants)	The <b>UPDATED PIF</b> document was presented to MRC EGEM for finalisation	The updated PIF was endorsed for reporting to MRC-JC and for further submission to GEF portal

During the PPG phase, additional consultations will take place with national and regional level stakeholders, from the government but also from the private sector, the academia, CSOs and NGOs, etc. The project will ensure gender balanced participation in all the consultations.



(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

## Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

## Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

## Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
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Medium/Moderate

## E. OTHER REQUIREMENTS

### Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

## ANNEX A: FINANCING TABLES

### GEF Financing Table

#### Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant(\$)	Agency Fee(\$)	Total GEF Financing (\$)
IUCN	GET	Cambodia	Land Degradation	LD STAR Allocation: LD-1	Grant	446,216.00	40,159.00	486,375.00
IUCN	GET	Lao PDR	Biodiversity	BD STAR Allocation: BD-1	Grant	446,216.00	40,159.00	486,375.00

IUCN	GET	Viet Nam	Biodiversity	BD STAR Allocation: BD-1	Grant	446,216.00	40,159.00	486,375.00
IUCN	GET	Regional	International Waters	International Waters: IW-3	Grant	9,370,528.00	843,347.00	10,213,875.00
<b>Total GEF Resources (\$)</b>						<b>10,709,176.00</b>	<b>963,824.00</b>	<b>11,673,000.00</b>

### Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount (\$)

300000

PPG Agency Fee (\$)

27000

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non- Grant	PPG(\$)	Agency Fee(\$)	Total PPG Funding(\$)
IUCN	GET	Cambodia	Land Degradation	LD STAR Allocation: LD-1	Grant	12,500.00	1,125.00	13,625.00
IUCN	GET	Lao PDR	Biodiversity	BD STAR Allocation: BD-1	Grant	12,500.00	1,125.00	13,625.00
IUCN	GET	Viet Nam	Biodiversity	BD STAR Allocation: BD-1	Grant	12,500.00	1,125.00	13,625.00
IUCN	GET	Regional	International Waters	International Waters: IW-3	Grant	262,500.00	23,625.00	286,125.00
<b>Total PPG Amount (\$)</b>						<b>300,000.00</b>	<b>27,000.00</b>	<b>327,000.00</b>

Please provide justification

### Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total(\$)
IUCN	GET	Cambodia	Land Degradation	LD STAR Allocation	500,000.00

IUCN	GET	Lao PDR	Biodiversity	BD STAR Allocation	500,000.00
IUCN	GET	Viet Nam	Biodiversity	BD STAR Allocation	500,000.00
<b>Total GEF Resources</b>					<b>1,500,000.00</b>

### Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing(\$)	Co-financing(\$)
BD-1-2	GET	892,432.00	7133333
LD-1	GET	446,216.00	3566667
IW-3	GET	9,370,528.00	66900000
<b>Total Project Cost</b>		<b>10,709,176.00</b>	<b>77,600,000.00</b>

### Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
GEF Agency	IUCN	In-kind	Recurrent expenditures	3000000
Recipient Country Government	Royal Cambodian Government	In-kind	Recurrent expenditures	15000000
Recipient Country Government	Government of Viet Nam	In-kind	Recurrent expenditures	12000000
Others	Mekong River Commission	In-kind	Recurrent expenditures	9600000
Donor Agency	Mutiple Donors	In-kind	Recurrent expenditures	22000000
Recipient Country Government	Government of Lao PDR	In-kind	Recurrent expenditures	6000000
Donor Agency	Other donors including KFW's grant programme	In-kind	Recurrent expenditures	10000000
<b>Total Co-financing</b>				<b>77,600,000.00</b>

Describe how any "Investment Mobilized" was identified

Not Applicable

## ANNEX B: ENDORSEMENTS

### GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Sebastien Delahaye	10/20/2023	Jake Brunner		jake.brunner@iucn.org

### Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date (MM/DD/YYYY)
Ms Phakkavanh Phissamay	GEF Operational Focal Point	Ministry of Natural Resources and Environment, Lao PDR	2/16/2023
Mr. Tin Ponlok	GEF Operational Focal Point	Ministry of Environment	5/15/2023
Ms Phakkavanh Phissamay	GEF Operational Focal Point	Ministry of Natural Resources and Environment, Lao PDR	9/29/2023
Mr. Tin Ponlok	GEF Operational Focal Point	Ministry of Environment, Royal Cambodian Government	9/27/2023
Mr Thuan Duc Nguyen	GEF Operational Focal Point	Ministry of Natural Resources and Environment, Government of Viet Nam	9/26/2023
Ms Phakkavanh Phissamay	GEF Operational Focal Point	Ministry of Natural Resources and Environment, Lao PDR	11/10/2023
Mr Thuan Duc Nguyen	GEF Operational Focal Point	Ministry of Natural Resources and Environment, Government of Viet Nam	11/17/2023

## ANNEX C: PROJECT LOCATION

Please provide geo-referenced information and map where the project interventions will take place



**ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING**

**(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.**

Title

GEF ID 11304\_esms preliminary screening

**ANNEX E: RIO MARKERS**

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
No Contribution 0	Significant Objective 1	Principal Objective 2	Significant Objective 1

ANNEX F: TAXONOMY WORKSHEET

Level-1	Level-2	Level-3	Level-4
Influencing Models	Transform policy and regulatory environment	(multiple selection)	(multiple selection)
Stakeholders	Stakeholder engagement	(multiple selection)	(multiple selection)
Capacity, Knowledge and Research	Knowledge Generation and Exchange	(multiple selection)	(multiple selection)
Gender Equality	Gender mainstreaming	(multiple selection)	(multiple selection)
Focal Area/Theme	International waters	(multiple selection)	(multiple selection)