Process Framework for Involuntary Restrictions

Establishing multi-community co-management of an aquatic biodiversity hotspot with *Probarbus* fishes and soft-shell turtles in the Mekong River at Keng Mai rapids, Lao PDR

Submitted To:

Critical Ecosystem Partnership Fund

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I. Project Background

FISHBIO's CEPF-funded project "Establishing multi-community co-management of an aquatic biodiversity hotspot with *Probarbus* fishes and soft-shell turtles in the Mekong River at Keng Mai rapids, Lao PDR " builds upon several years of work and planning by IUCN Lao PDR. The IUCN conducted Phases 1 and 2 of this CEPF-funded initiative, "Conserving Biodiversity and Sustaining Livelihoods along the Mekong River in Luang Phrabang, Xayabouri and Vientiane Provinces, Laos," which included an extensive survey of biodiversity and a full livelihoods assessment of all settlements along the Mekong mainstem between the cities of Luang Prabang and Vientiane.

The current project represents Phase 3 of this original initiative. IUCN lead the project planning efforts for Phase 3, for which FISHBIO was hired to consult on aquatic resource conservation, especially the creation of Fish Conservation Zones (FCZS) for two IUCN Redlist endangered species *Probarbus jullieni* and *Probarbus labeamajor*. These two large-bodied migratory fish are greatly threatened by overfishing, especially the targeting of egg-bearing females during the spawning season. The IUCN ecological survey identified Keng Mai as being a hotspot for biodiversity, including a spawning site for Probarbus fishes and a nesting site for the Asiatic softshell turtle (*Amyda cartilaginea)*, a CEPF priority reptile species. The rapids fall within the traditional resource use areas of four communities in Xayabouri and Vientiane Provinces: Ban Donsok, Ban Phalat, Ban Donmen, and Ban Houayla. Through workshops with the communities, plans for a single, large FCZ in the Kengmai Rapids area were developed with full support of community members, along with official regulations and enforcement plans. The goals of the current project are to secure government approval to officially establish the FCZ and train village enforcement teams to patrol the FCZ and enforce its regulations. The successful implementation of the FCZ should lead not only to an increase in *Probarbus* numbers, but also many other species of fish important for local food consumption. Income raised from fines and enforcement team salaries will allow communities to invest in more sustainable fishing activities as well as other livelihood alternatives.

FISHBIO participated in three field trips throughout the study area with IUCN in and was involved in all of the planning workshops for this project. The results of these workshops can be found in full from IUCN Lao PDR, and include a biodiversity assessment and a livelihoods assessment. This process framework will focus on summarizing how these participatory workshops ensured that communities gave free, prior, and informed consent for project activities.

II. Social and Threat Analyses

Prior to implementing activities to establish the Fish Conservation Zone, FISHBIO will conduct a social assessment in villages with a focus on aquatic resource use practices and potential effects of FCZ regulations. Interviews will be conducted with key community members, including fishers, village

elders, Women's groups, and villager leadership. These surveys will build on the findings of a previous IUCN livelihoods survey from 2012 in these villages, the findings of which are described below:

Ban Dongmen is a village in Xayabouri Province and consists of about 218 households (1,022 people), almost all of which engage in some form of fishing on a nightly basis. Both fish and birds are sold to local traders who travel to the village. The local traders then sell them to markets and restaurants in Kenthao District. Kengmai was identified as an important area for catching *Probarbus jullieni* and other fish species. Kengmai is also an important fish habitat; especially for spawning *Probarbus jullieni*. The major pressure on fish is overharvesting, caused in part due to increased demand and prices. In addition, electricity and a variety of fishing nets are used to collect fish. Fishing has increased in the past five years due to price increase. Income from fishing is 13,000,000 KIP per year per fisherman's household.

Ban Houyla is a village in Xayabouri Province of about 157 households (761 people). Important resources identified by by villagers were land for cash crops, land for rice, domestic animals, land for plantations and NTFPs. The most import wild foods mentioned were fish, birds, bamboo and reptile. Fishing is practiced at KhokHouaySangua and Pak So. Fishing is practiced on an average of three days a week, but the number of households participating was not known at the time of the survey. Fish stocks are threatened by overharvesting, villagers specifically identified electricity fishing as particularly damaging.

Ban Phalat is a village in Vientiane Province of about 174 households (900 people). Fish are mainly harvested along the stretch of Mekong river between BeungKhuang and Kengmai. About 25 households are involved in fishing, which is practiced during the day and night, especially between the months of November and February. Fish, including *Probarbus jullieni*, rank as the most important resource (apart from agricultural land and domestic animals) due to the high importance of fish to local diets and major contribution to local incomes. Villagers stated that the population of fish, including *Probarbus jullieni*, decreased across all species due to the use of chemicals and habitat destruction associated with gold mining. Additional pressure on *Probarbus jullieni* is caused by access to fishing areas by residents of other villages such as Ban Donmen.

There was mention of some past efforts for resource management in Ban Phalat, including those for *Probarbus jullieni*. Specifics of the project were not available, but it appeared to have been a government-led project. The project was not successful due to unrestricted access to the fishing area by people from outside the village. In addition, the project was said to have not increased income for the fishermen's families and therefore lacked a strong interest and commitment from the community. Future conservation options regarding fish, including management of fishing at Kengmai, were mentioned. People are interested in fish management projects if they can improve income.

Details about Ban Donsok were not included in the IUCN livelihoods survey. FISHBIO Laos will take special care to fill this information gap during the current project.

All four participating communities expressed very similar viewpoints on future conservation and management plans for *Probarbus*, and all agreed upon an FCZ-based strategy. Respondents from all communities identified electro-fishing and the use of explosives as major threats to fish populations. Participants claimed that these techniques were rarely used by locals, and were usually employed by groups of commercial fisherman from larger towns who would sell the fish in markets. The workshops revealed that while residents were uniformly aware that these techniques were against national law, most villages did not have village-specific regulations against them.

Another challenge to enforcement was a lack of coordination between the village-level and district-level governments and law enforcement groups. No official steps have been put in place in any of the villages to try to facilitate greater enforcement. Villagers reported that due to the lack of local-level written regulations or signage about the laws, it was nearly impossible to enforce them on outside fisher groups. Despite frequent violations of the national ban on electro-fishing and explosives, few accounts of successful application of fines were given.

Villagers reported harvesting most *Probarbus* with the use of gill nets, which are pulled across the deep pools during the winter spawning season and the summer migration. According to participants, *P. jullieni* migrated south around June and July, while *P. labeamajor* was usually caught in August and October. Gill nets that target *Probarbus* have a 20-cm mesh size and can reach up to 100 m in length. By placing these nets across spawning grounds and deep pools, a large number of breeding-aged fish are being caught before successfully spawning. Many other species are often caught in these nets, and the nets' prevalence is likely a major contributor to major fisheries declines.

III. Plans for Participatory Implementation

In the spring of 2013, several communities were identified by the IUCN as potential sites/partners for Phase 3 projects using information gathered during Phase 1 & 2 fieldwork. FISHBIO was hired to consult on aquatic resource conservation, especially the establishment of FCZs. Areas identified as having biodiversity resources in need of better management were cross-referenced with a list of all communities that had stated a need and interest in sustainable development projects during Phases 1 & 2. This ensured that only communities with an expressed desire for outside support were approached.

The communities of Ban Donsok, Ban Phalat, Ban Donmen, and Ban Houayla were selected for planning workshops on *Probarbus* conservation. The biodiversity survey during Phase 1 identified the Kengmai Rapids area as a spawning area for *Probarbus.* All four villages practice fishing in and around the Kengmai Rapids area. Community members in each of these villages have already shown a strong and unanimous commitment to improve management of their natural resources during preliminary workshops with FISHBIO and IUCN in the spring of 2013.

During Phase 3 planning, IUCN and FISHBIO staff developed a series of participatory workshops to ensure that project needs and goals came from the community itself. IUCN ensured that these

workshops included members of all segments of the community, including representatives from village leadership, Women's Union, Youth Union, local law enforcement, and primary resource users (which in the case of this project are fishers). After needs and goals were expressed with consensus, IUCN and FISHBIO introduced the concepts of FCZs and resource management committees. Workshop attendees were free to express their opinions at anytime and did so often.

In these workshops community members were asked a series of questions and asked to answer and present their ideas in three or four groups. By dividing participants into groups, it was ensured that responses would be their own and not simply an agreement with village leadership. In all of the FCZ workshops, answers to these questions were detailed, informed, and consistent, showing that these communities have a clear understanding about threats and solutions to conserving their fish resources.

During all workshops, participants showed both a keen awareness of the seriousness of fish declines and motivation to reverse the trends. Only once this desire for action was expressed did IUCN staff present the concept of Fish Conservation Zones (FCZs), which are small conservation areas with specific regulations to be enforced by the local community with the help of district level government and FISHBIO. FCZs have been successfully implemented in Southern Laos and around the world. By limiting fishing activity in the FCZ, the intention is that *Probarbus* numbers will increase and smaller, more readily caught species will also be given a protected area to reproduce, which could produce am increase in their numbers as well. Fishers working outside the boundaries of the FCZ will benefit as fish from a wide range of species begin to swim out of their protected habitat.

After these workshops, FISHBIO biologists and IUCN staff went into the field with fishermen from the village to survey the area agreed upon as the FCZ location. The boundaries of this site were discussed and agreed upon with resource users. With the comments and suggestions made by community members, IUCN and FISHBIO staff drafted FCZ regulations. In July 2013 another series of workshops was held, where communities were given time to review the proposed documents and discuss any changes. The only major change to these documents was that the communities wished for the FCZ restrictions to be in place year round rather than during just the Probarbus spawning period. An English translation of these FCZ regulations can be found in Appendix I.

Upon receiving CEPF funds, FISHBIO staff will return to the partner villages for the official signing of FCZ regulations. Before this is done, a workshop will be held with the community (in which it will be ensured that representatives are present from all ethnicities, village leadership, the Lao Women's Union, and primary resource users). During this workshop, the entirety of the FCZ regulations will be reviewed. These regulations were designed in partnership with the communities in July 2013, following planning workshops in the spring of 2013. It will be ensured that all participants fully understand the regulations, and participants will be given time to address any changes they may want. The enforcement of the FCZs will also be participatory in nature, as the enforcement teams will be selected by each community and will consist primarily of fishermen and village security members.

IV. Identification of Vulnerable Groups and Groups Eligible for Assistance.

During meetings with the community, FISHBIO staff will assess which groups or individuals are primary aquatic resources users (fishers). Interviews will help identify what proportion of the community engages in fishing as a primary livelihood, compared to those who fish opportunistically. Primary resources users and will be invited to participate in project activities, and so will be directly involved in the monitoring and evaluation of the community FCZ. Groups that would be considered ineligible for assistance include those engaging in illegal, destructive fishing practices, such as fishing with dynamite, electric gear, or poison. The FCZ also prohibits fishing with traditional gear (such lines, nets, and traps) within their boundaries to protect fish populations, which could impact groups or individuals who historically used these methods at the FCZ site.

V. Measures to Ensure Mitigation or Avoidance of Potential Adverse Impacts.

The enforcement teams working during the *Probarbus* spawning season will be made up primarily of fishermen. These team members will receive three months' salary for their participation, and will be able to fish in areas outside of the protected spawning area. The FCZ is relatively small in size compared to the larger fishing grounds, and the vast majority of each village's fishing areas will remain open year round. While the first year will likely see a decrease in the number of *Probarbus* caught, it is not likely that the overall catch will decline significantly. Furthermore, FCZs have been shown to increase fish populations inside and outside their boundaries, and are often established to address declining fish catches, with the hope that partial restrictions to resource use inside FCZs will lead to increased fish catches outside FCZs, and bring more food security and secondary income for community members. If adverse social impacts from the FCZ are identified during the project, these results will be presented to the communities to decide whether they want to lessen or modify the restrictions of the FCZ as part of the adaptive management process. This could involve moving the boundaries of the FCZ, permitting occasional harvest in the FCZ during specified time periods, reducing the restrictions on types of banned fishing gear, or lessening the fines incurred for violating FCZ regulations (see Appendix for example FCZ regulations).

VI. Mechanism to monitor safeguard issues.

FISHBIO and project partner staff will use project workshops and community interviews throughout project implementation to monitor whether CEPF safeguards are being met. The project will include check-ins with communities throughout the course of the project, and FISHBIO staff will also implement the grievance mechanisms outlined below to monitor any adverse impacts of FCZ establishment.

This project, as demonstrated above, has been conducted in a fully participatory manner and therefore all restrictions were voluntarily agreed upon by the communities. The creation of FCZ zones will restrict the fishing activities of community members and outsiders as well. Fishing inside a community's waters without permission is illegal in Lao PDR, and therefore impacts on illegal fishing is not covered in this framework. The FCZ areas are quite small in size, and legal fishing will in no way be limited in other areas of the community's fishing areas. Community members reported that no permits to outsiders were currently being sold, and therefore community coffers will not suffer from FCZ restrictions.

It is not expected that the closing of these areas will have substantial adverse impact, and what little they do have is likely to only occur during the first year. While total available fishing area will decline slightly, these areas are will create safe habitat where juvenile fish can safely reach maturity, and mature fish can spawn. In a survey conducted in project villages in the spring of 2014, two-thirds of respondents reported a decrease in both number and size of fish caught over the last five years. If regulations are respected, areas outside of the FCZs could see increased fish numbers and increased fish sizes, which would bring more food security and secondary income for community members.

VII. Grievance Mechanism

FISHBIO staff will provide opportunities for community members to express complaints during all project workshops, and will inform the community about their rights to complain and to stop participation in the project at any time if they are not satisfied. All grievances aired will be addressed with the community as they are brought to attention. Community members may also choose to complain through existing channels for conflict resolution, such as through village heads and committees. FISHBIO staff will check in with these key village residents throughout the project to see if new complaints or grievances have arisen. A mid-project assessment will also be distributed in the village, which will allow villagers to provide feedback on the effects of the FCZ, and any grievances will be addressed.

Additionally, informational posters will be placed in each village's community building that will explain FISHBIO's desire to address all grievances, and that villagers should contact project staff at any time. Contact information for IUCN Lao PDR will be provided in addition to FISHBIO contacts, so if community members do not feel that FISHBIO is not responding appropriately to their grievances, they can speak directly to the funder (in this case, first to IUCN Lao, due to language issues). IUCN Lao PDR can then forward this information on to IUCN Asia Regional Office. FISHBIO will have the responsibility to ensure any grievances are dealt with promptly, and will work with project partners to achieve this. Upon receipt of a grievance, we will hold meetings with local communities or individuals to discuss the issues and develop agreeable solutions to be implemented by the project. FISHBIO will keep the IUCN-Regional Implementation Team informed about any grievances that arise, and to develop the solutions that will be implemented by the project.

Appendix I. Example Regulation Sheet.

The Lao People's Democratic Republic

Peace Independence Democracy Unity and Prosperity

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XXXXX District No: …….

XXXXX village Ban XXXX, Dated: DD/MM/YYYY

Regulations on The establishment and management of Fish Conservation zone in XXXXX, XXXXXX District, XXXXXXX Province.

I. Objective, location and size of conservation area

1. Objectives

1. To ensure successful spawning of *Probarbus jullieni* and *Probarbus labeamajor* as well as other species of aquatic life.
2. To end destructive fishing techniques such as electro-fishing and the use of explosive.
3. To improve the spawning success of multiple fish species.

2. Location and size of the conservation area

A. **Location**

II. Regulation, management and wise use of the conservation area

A. The regulations regarding Fish Conservation Zones.

1. During the *Probarbus sp.* Spawning period (usually January to March but if fish come early or late the ban will be put in place when ever *Probarbus* are observed spawning) all fishing gear will be forbidden from use within the FCZ.
2. Electro-fishing and the use of explosives or poison is forbidden year round.
3. Electronic fish attractants are banned

B. Penalties for violators

- If any individuals or a group of people violate regulation **No 1**, they will be penalized as follows:

1st offence: A fine of XXX,000 kip/person, seizure of evidence, mandatory education on FCZ regulations and benefits of FCZ and an official warning will be recorded.

2nd offence: A fine of X,XXX,000 kip/person, seizure of evidence and record of a final warning.

3rd offence: Seizure of evidence, detention of offenders and recommendation to send violator to the district authorities for further action regarding the case based on the regulations. This would mean a fine of more than X,XXX,000 or jail time depending on the case.

- If any individuals or a group of people violate regulation **No 2**, they will be penalized as follows:

1st offence: A fine of XXX,000 kip/person, seizure of evidence, mandatory education for the violators as to the laws regarding the use of explosives and electro-fishing techniques and their negative effects and an official final warning will be recorded

2nd offence: A fine of X,XXX,000 kip/person, seize the evidence, detain the offenders and make a case report to send to the district authorities to take further action regarding the case based on the regulations

- If any individuals or a group of people violate regulation **No 2**, they will be penalized as follows:

1st offence: A fine of XXX,000 kip/person, seizure of evidence, mandatory education on

FCZ regulations and benefits of FCZ and an official warning will be recorded.

2nd offence: A fine of X,XXX,000 kip/person, seizure of evidence and record of a final warning.

III. Awards/Policy for the working group

1. Provide for the village coffers XX %
2. Enforcement group XX%
3. Any individuals who report the wrong doers: XX%
4. Management committee (who work in the field): XX %
5. In cases where there is other income generated from the conservation areas, the income should be used for village development

IV. Responsible committee for the management of conservation areas

1. Village head	President
2. Vice Village head	Vice President
3. 2 members of FCZ enforcement group	Committee
4. Village women's union	Committee
5. Village youth union	Committee

V. Rights and responsibilities of the committee for Fish Conservation Zone management

A. Village head

- Will act as first liaison between local fishermen, enforcement group, field officer, district and provincial level government. They will be in charge of disseminating any new information from these agencies and organizations to village residents.
- Will select along the members of the FCZ enforcement group.
- Will act as first envoy should any disputes over FCZ boundaries should arise with neighboring villages.
- Will collect all fines after reviewing evidence gathered by the enforcement group. While this decision should be made after discussion with the rest of the committee it is the final authority of the village head as to who receives fines.
- Will contact district officials in cases regarding repeat offenders or offenders who are unable to be caught.

B. Village's youth and women' unions

- Will provide information for the young people in the village, making sure that youth understand the regulations as well as the reasons behind them, to ensure future generations are ready to take on the management of the FCZ.

C. FCZ Enforcement group

- Regularly guard the areas by organizing a schedule and recording the work-shifts.
- Will receive training and equipment from Field Officer, IUCN staff, and provincial and district level officials.
- Have the right to seize fishing equipment including but not limited to gill nets, electro-fishing devices(including attractants), fish poison, and explosives from offenders to be used as evidence
- Will keep detailed notes on any offences encountered, photograph any offenders or evidence of possible offences. This data is to be regularly shared with the district level officials and Field Officer.

- If an offense is deemed to large or too dangerous for the local enforcement group, district level law enforcement will be brought in to assist with enforcement.

VI. Final Provisions

The regulations on the management and wise use of aquatic animal resources of Ban XXXXX are made up with consent and agreement of all authorities and villagers in the villages and other authorities in the XXXXX district. They shall be effective from the date this regulation is announced.

XXXXX official

Stamped and signed

XXXXXX Village head

Stamped and signed

Certified and witness by:

XXXXXXX district head

Head of Livestock and Fisheries Office, XXXXXX district