



# CONCEPT NOTE

Fish from Conservation Zone  
for Nutrition Security



# FISH FROM CONSERVATION ZONE FOR NUTRITION SECURITY

## 1. Goal:

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To promote sustainable increases fish populations in local streams, especially on fish species and quantity of fish caught outside FCZ areas that preserve for fishery for nutrition security of rural populations (will directly be obstructed on stunting and underweight children).

## 2. Introduction:

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Small-scale fisheries are very important in the northern part of Lao PDR, where rural people heavily depend upon the rivers' fish stocks for their livelihoods. However, from many previous years, there was fish increasing pressure from human exploitation, because of number of rural population increased and therefore they have to do such overfishing for household consumption and for selling to make money with the



use of explosives, poisons and electrofishing, they also do fishing during the reproduction season, water pollution from agricultural pesticides and mining, and habitat disturbance, are all decreasing fish populations and threatening some species with extinction. Therefore, Fish conservation zones have traditionally been established by local villagers and still limited in some regions as a village common asset with community-based management or even considered as sacred places.

The development of FCZs is not only good for aquatic's biodiversity conservation, but also for improving villagers' nutrition for many rural people, and for maintaining of riverbank or riparian's agro-biodiversity, ecology and natural water source forest area that definitely providing them with additional income and fixed occupation opportunities which is also could be linked to the eco-tourism industrial service

## 3. Background:

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TABI provided supports into the development and establishment of more than 300 fish conservation zones (FCZ) or fish sanctuaries zones, that called "Wang Sa Nguane" in Lao language, throughout Luang Prabang, Houaphanh and Xiengkhouang provinces since 2011 up to recent time.

According to TABI data gained from FCZ case study conducted in Ban Phiengmone of Nonghet District of Xiengkhouang Province, May 2019, particular FCZ includes approximately 1.4 km of Nam Houay established 3 areas that definitely prohibit fish collection within the zone and for 2 areas that preserve for fishery with restrictions that the most destructive fishing gear cannot used, such as electric shock,



explosives and poisons. It was indicated that about 20% increase of fish capture and estimated that about 300% increase in fish consumption since 2014 (1.5 Kg per family per week) for community of about 100 households, suggesting an increase in fish consumption of 7,800 kg per year (equivalent to a little bit higher than 80% of total fish harvested 9,667 kg), therefore it was significantly reduced household expenditures on buying fish meat, reduced family conflict over food decisions, improved ability to successfully host guests at home as well as at the community level, and funding to the community and household for development efforts via fish sales (average unit price was 40,000 Kips/kg. Some indigenous fish costs three times more than fish from aquaculture).

Similarly information and data from other FCZ case studies conducted for example: (i) in Ban Hamtai of Samneua District of Houaphanh provinces, July 2019, along Nam Ham River, there were 3 prohibited FCZs and 5 preserved FCZs in river length 550 meters that produced a total fish harvested at 6,660 kg/year including 3,060 kg for 74 household consumption; and ((ii) in Ban Phonesaath of Hiem District of Houaphanh provinces, along Nam Hang River, there were 2 prohibited FCZs and 2 preserved FCZs in river length 859 meters that produced a total fish harvested at 35,110 kg/year including 18,260 kg for 91 household consumption.



The success of FCZs has normally been achieved by villagers themselves, who have adopted regulations including banning the utilization of some certain fishing gears and methods, banning or limiting fishing in key deep-water areas, which are refuges or habitats for fish during the dry season, protecting of fingerlings and juvenile fishes during the egg laying season and also protecting ecosystem and managing natural in riparian areas. However, the most productive FCZs are the ones located near or within a village and some can even serve as a tourist attraction spot, because these are easier to protect and local people are proud of FCZ ownership.



Taking into account the very rich fish diversity of the rivers and streams in northern part of Lao PDR, there is in principle a great potential to develop and fully operate FCZs throughout.

#### **4. Listing of key Activities:**

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- Establish and train FCZ committee under the village government committee to take lead for co-management, surveillance and security of FCZ according to operational guideline and regulation agreed and shared between communities and stakeholders;
- Provide orientation and training to community members on local network co-responsibilities and obligations for conducting sustainable co-management and curb of FCZ, and has a jurisdiction which typically corresponds to the village FCZ and its riparian areas;
- Enforce strict fish catch restrictions in FCZ area, mainly to prohibit to all illegal fishing methods and use of dangerous fishing gears. Also, to enforce implementation of “Fishery Law” that pointed out and related on “Protection of aquatic habitats and ecosystem”;
- Encourage consumption of local fish meat, because it contains essential ingredients that play a critical role in cerebral development, immune system support and general health. Thus, the unique combination of high-quality protein and important micronutrients in fish meat plays a significant role in combating the triple burden of hunger, micronutrient deficiency and non-communicable diseases;

##### **Additional important activities:**

- Establish a tourist attraction mechanism and network within community, restaurant, private sector and tourism authority for maintaining and developing of eco-tourism activity;
- Promote farmers to get benefit from natural vegetable and growing organic crop varieties along river bank for quadruple utilizations: (i) for household consumption, (ii) for selling to make household income, (iii) for feeding fish in FCZ and (iv) for domesticate livestock (pig and poultry) and such animal wastes are recycled back to river to feed fish in FCZ to achieve high fish quantity production;
- Promote to conserve adjacent natural forests and to protect water sources areas that prevent soil erosion into river, resilient to climate change, enhance biodiversity, and support human well-being across watersheds.

#### **5. Expected Opportunity Results or Outputs:**

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- Sustainable FCZ sanctuaries established, managed and protected on xx rivers;

- FCZ committee developed and full responsible administered;
- Fishing regulations developed, agreed to and implemented;
- Sustainable increase in fish populations in river by co-management interventions;
- Equitable increase in fish consumption by community members (all ethnic and gender);
- Reductions in resources spent on animal protein in diets by consuming fish caught from rivers.

**Additional important results:**

- Increase in the number of partnerships between all concerning actors;
- Natural forests and watersheds are protecting and providing clean water to rivers' FCZs.
- Many ABD species, out of fish, e.g. native plant and insect populations are sustainably managed and provide additional nutrition to local communities and feeding their animal;
- Organic crops cultivation along river bank do not have pesticide contamination and no chemical pollution running into rivers.

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Note: More detail can be provided if the organization/investor is interesting and Proposal Documentation can be developed for further consideration (if required).

