

Report JTF Project



FACILITATING FISHERIES ACTIVITIES INFORMATION GATHERING THROUGH INTRODUCTION OF COMMUNITY-BASED RESOURCES MANAGEMENT/ CO-MANAGEMENT IN LAO PDR



SOUTHEAST ASIAN FISHERIES DEVELOPMENT CENTER

May 2020



Report

JTF Project

**Facilitating Fisheries Activities Information Gathering through Introduction of Community-Based
Resources Management/Co-management in Lao PDR**



Southeast Asian Fisheries Development Center

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Foreword

In Southeast Asia, inland fishery resources are particularly abundant compared to other regions in the world, and where many fishers rely on inland fisheries for their livelihoods. Nonetheless, inland fisheries are very difficult to manage because of insufficient information on their actual status and also due to the large number of part-time fishers involved in the fisheries, issues that are very common in Southeast Asian inland fisheries. Cognizant of the need to achieve sustainability in the development and management of inland fisheries for food security in Southeast Asia, the ASEAN and SEAFDEC member countries adopted in 2011 the Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020, which include Resolution No. 10: “*Strengthen knowledge/science-based development and management of fisheries through enhancing the national capacity in the collection and sharing of fisheries data and information,*” and Resolution No. 11: “*Enhance the awareness of the contribution that inland fisheries makes to food security and sustainable livelihoods, and include consideration of fisheries stakeholders when undertaking development projects that may impact inland fisheries.*” In responding to such provisions and with funding support from the Japanese Trust Fund, the SEAFDEC Training Department (SEAFDEC/TD) implemented since 2013 the Project “Facilitating Fisheries Activity Information Gathering through Introduction of Community-based Resources Management/Co-management” through series of capacity building activities in the ASEAN Member States (AMSs), more particularly in Lao PDR, with the main objective of developing the most viable approach for sustainably managing the fishery resources for the benefit of the small-scale inland fisheries in Southeast Asia.

As an offshoot therefore, the Sub-project “Facilitating Fisheries Activities Information Gathering through Introduction of Community-based Resources Management/Co-Management” was implemented in Lao PDR from 2017 to 2019, in order to promote sustainable resource management in inland fisheries. Case studies were then carried out in two pilot sites located in Nam Xouang Reservoir and Khammouane Province, which are farming and fishing areas that operate small-scale inland fisheries. The activities were focused not only on conserving and managing the inland fishery resources, but also in improving the livelihoods of small-scale inland fishers.

Described in this Report are the approaches, activities, and outputs of the Project in Lao PDR. From the results of the case studies in the two target inland fisheries sites, the approach necessary to effectively realize the sustainable management of inland fishery resources is also recommended. Specifically, the approach established through this Project centers on allowing the fishers themselves to be actively engaged in the fishery resources management activities. This was achieved by structuring the concerned fishers into fishers’ organizations. Discussed among the fishers during the meetings of the fishers’ organizations, are topics on fisheries management, fishery resource management methods and related activities, and the like, and where agreements should be reached before meetings are adjourned, to enable the concerned fishers to carry out their respective activities, duties and responsibilities in fisheries management. It is therefore the hope of SEAFDEC that once this Report is disseminated to the AMSs, it could be used as reference in the respective countries’ efforts of attaining sustainable management of their inland fishery resources.



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and
Chief of the SEAFDEC Training Department

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The SEAFDEC/Training Department (SEAFDEC/TD) in collaboration with the Department of Livestock and Fisheries (DLF) of Lao People's Democratic Republic (Lao PDR) had implemented the project on "Facilitating Fisheries Activities Information Gathering through Introduction of Community-Based Resources Management/Co-management" in Lao PDR, which supported by the Japanese Trust Fund (JTF). Besides, the project activities cooperated with SEAFDEC/Inland Fishery Resources Development and Management Department (SEAFDEC/IFRDMD). During this three-year, we would like to thank the SEAFDEC/IFRDMD for their full cooperation in the project implementation. Furthermore, we would like to express our appreciation to DLF especially Mr. Akhane Phomsouvanh, Ms. Dongdavanh Sibounthong, Ms. Phongsavanh Sengsomphou, Ms. Daovieng Yaibouathong, and their team for the support and cooperation, particularly working at the field site to make this project successful. Moreover, we would also like to thank the local fishery officers, fishers, and community members in Mai Nam Pakan Village and Nam Xouang Reservoir who had been actively working and cooperating with this project.

Contents

	Page
Foreword	iii
Acknowledgements	iv
List of Acronyms	viii
List of Tables	ix
List of Figures	x
I. Introduction of the Project	1
II. Promote Co-management/Community-based Fisheries Management in Inland Fisheries: Khammouane Province, Lao PDR	2
Chapter 1. Introduction of the Project: Khammouane Province	2
1.1 Background of the Project	2
1.1.1 Analysis of fisheries problems in Khammouane Province	2
1.1.2 Results of the objective analysis	4
1.1.3 Development of objectives and activities	4
1.1.4 Project Design Matrix (PDM): Project objectives, outputs and activities	6
1.1.5 Work plan	7
1.1.6 Project site and project period	8
Chapter 2. Project Activities and Results	8
2.1 Organization of Fisheries Management Committee (FMC)	8
2.1.1 Organize one Fisheries Management Committee (FMC) in the target fishing village	8
1) Pre-organization meeting to establish the Fisheries Management Committee (FMC)	9
2) Consultation meeting and situation analysis	9
3) Election of Committee members	10
4) Drafting of regulations and fisheries conservation zone demarcation/mapping	11
5) Public Announcement of Fisheries Management Committee (FMC)	11
6) Construction of meeting place for FMC	12
2.1.2 Implementation of activities related to resource management by Fisheries Management Committee	13
2.1.2.1 Study tour	13
2.1.2.2 Implementation of surveillance activities	14
1) Organization of surveillance management team	14
2) Development of surveillance plan	14
3) Implementation of surveillance activities and results of the activities	15
2.1.2.3 Fish releasing activity in the Conservation area of Nam Pakan River	16
2.2 Surveys on Fish Catch and Distribution of Products to Grasp the Production Volume and Distribution Mechanism	16

2.2.1 Statistical survey	16
1) Objectives	16
2) Methods	16
3) Data Analysis	17
4) Data Format	17
5) Results	18
2.2.2 Market survey	20
1) Objectives	20
2) Methods	21
3) Data Format	21
4) Results	22
2.3 Support for the Activities of Fisheries Management Committee (FMC)	26
2.3.1 Introduction of fish processing techniques	26
1) Planning for fish processing techniques and selection of acceptable processing techniques for target species	26
2) Organization of fish processing group and conduct of training on fisheries processing techniques	26
3) Production of processed fish products	28
2.3.2 Introduction of aquaculture techniques	30
1) Introduction of aquaculture techniques and selection of the acceptable aquaculture target species and specific techniques	31
2) Organization of aquaculture groups and conduct of training on aquaculture techniques	31
3) Production from aquaculture trial	32
Chapter 3. Conclusion and Recommendations	34
3.1 Conclusion	34
3.2 Recommendations	36
III. Promote Co-management/Community-based Fisheries Management in Inland Fisheries: Nam Xouang Reservoir, Lao PDR	38
Chapter 1. Introduction of the Project: Nam Xouang (NX) Reservoir	38
1.1 Background of the Project	38
1.1.1 Analysis of fisheries problems in Nam Xouang Reservoir	38
1.1.2 Results of objective analysis	40
1.1.3 Development of objectives and activities	40
1.1.4 Project Design Matrix (PDM): Project Objective, Output, Activities	41
1.1.5 Work plan	42
1.1.6 Project site and project period	43

Chapter 2. Project Activities and Results	43
2.1 Establishment of Fisheries Management Committee (FMC)	43
2.1.1 Conduct of meeting for establishing FMC in Phone Hong District	44
2.1.2 Development of fisheries management rules and regulations for Nam Xouang Reservoir	49
2.2 Promotion of Fisheries Management Rules and Regulations	54
2.2.1 Conduct of training/meeting for information and dissemination of fisheries management rules and regulations for fishers and local government staff	54
2.2.2 Production of extension media materials such as posters and booklets	58
2.2.3 Implementation of practical surveillance activities at conservation zone	59
2.3 Strengthening of Fishery Resources Management	61
2.3.1 Baseline socioeconomic survey in NX Reservoir	61
2.3.2 Evaluate the fishery resources (CPUE, stock assessment)	67
2.3.3 Demarcation and mapping fish conservation zone	73
2.3.4 Fish restocking program	79
2.4 Improvement of Fish Processing and Value-adding Techniques	81
2.4.1 Development of plans to improve of fishery processing techniques in Nam Xouang Reservoir	83
2.4.2 Organization of fishery processing group and conduct training on fish processing technology	84
2.4.3 Production of processed fishery products (production volume and sales results)	85
2.4.4 Following up on the fish processing activity	87
Chapter 3. Conclusion and Recommendations	88
3.1 Conclusion	88
3.2 Recommendations	90
List of Appendixes	
1. Approval of FMC establishment and the rules and regulations for fisheries management in Mai Nam Pakan Village, Khammouane Province	92
2. Election for committee positions in Phone Hong District	104
3. The positions and duties of the FMC members	107
4. The Rules and Regulations for Phone Hong District	109
5. The Rules and Regulations for Naxaythong District	112
6. Questionnaire for fisheries and socio-economic data in fishery villages, Nam Xouang Reservoir, after three years of Project implementation	116
References	122
List of Contributors	123

List of Acronyms

JTF	Japanese Trust Fund
SEAFDEC	Southeast Asian Fisheries Development Center
TD	Training Department
IFRDMD	Inland Fishery Resources Development and Management Department
Lao PDR	Lao People's Democratic Republic
DLF	Department of Livestock and Fisheries
DAFO	Department of Agriculture and Forestry Office
PAFO	Provincial Agriculture and Forestry Office
FMC	Fisheries Management Committee
NX	Nam Xouang
NT	Naxaythong
PH	Phone Hong
CPUE	Catch Per Unit Effort
MSY	Maximum Sustainable Yield
MCS	Monitoring, Control, and Surveillance
PCM	Project Cycle Management
PDM	Project Design Matrix

List of Tables

1. Name of fish species caught from Nam Pakan River
2. Top 10 most caught fish species
3. Number of data and data collection period
4. Fish species sold in the market
5. List of fish processing equipment
6. Sale of fish processing product
7. Summary of results of two aquaculture trials
8. Result of election for committee positions in Phone Hong District
9. Positions and duties of the FMC members
10. Draft of fisheries rules and regulations
11. Rules and regulations for fisheries management in PH and NT Districts
12. Number of households and data collected from Naxaythong and Phone Hong Districts
13. General information
14. Occupation of respondents from PH and NT Districts
15. Fishing experience of respondents from two (2) Districts
16. Number of fishing gear type and main types of fishing gear
17. Fishing season (high season) and type of fishing gear used in PH and NT Districts
18. Catch and production based on gill net size
19. Estimated fish production of Phone Hong and Naxaythong Districts in five years
20. Growth and population parameters of four fish species in Nam Xouang Reservoir
21. Position of buoys and water depths at the conservation zones in PH and NT Districts

List of Figures

- 1-2. Local meeting at the pilot site in Mai Nam Pakan Village, Khammouan Province, Lao PDR
- 3-6. Local meeting to establish the Fisheries Management Committee
- 7-9. Meeting for Public Announcement of the Fisheries Management Committee
- 10-12. Construction of meeting place for the FMC
- 13-16. Study tour for FMC to learn more about fisheries management system and fish processing business ventures
- 17-18. Equipment provided for the surveillance activity
- 19-20. Fish releasing activity
21. Changes in fish catch for one year
22. Percentage of fish sold in market and for self-consumption
23. Percentage of catch by fish species
24. Changes in catch by fish species for two year
25. Percentage of sales quantity by fish species
26. Changes in the quantity of fresh fish sold in the market for 18 months
27. Changes in the market price of fresh fish for 18 months
28. Changes in the market price of fresh fish by fish species for 18 months
- 29-40. Introduction of fish processing techniques and fish processed products on sale
- 41-46. Introduction of aquaculture techniques
47. The project site: Nam Xouang Reservoir in Lao PDR
48. The procedure for FMC organization in NX Reservoir
49. Meeting to elect member of FMC at PH District and setting up of their responsibilities
50. Meeting for drafting the regulations with FMC and fishers at PH District
- 51-54. Meeting/workshop to develop the rules and regulations for the whole NX Reservoir
- 55-56. Training for local government staff at NT District
- 57-62. Meeting of the communities at NT District (above) and PH District (below)
- 63-65. Hand fan containing the summary of rules and regulations in Nam Xouang Reservoir
- 66-67. Posters indicating the rules and regulations in NX Reservoir for NT District (left) and PH District (right)
- 68-76. Study trip at Ban Keng Sadok, Ban Sor, and Done Xay Villages
- 77-79. Installation and opening ceremony of the four (4) big signboards at Phone Hong District
- 80-82. Installation of the four (4) big signboards at Naxaythong District
- 83-85. Meeting of the communities at PH District
- 86-88. Meeting of the communities at NT District
89. Map of Nam Xouang Reservoir
90. Household net income
91. Other sources of income
92. Sale of fish in NX District
93. Sampling site
94. Catch composition of fish caught in Naxaythong District (A) and Phone Hong District (B)

95. Length-weight relationship of four species: (a) *Oxyeleotris marmorata*, (b) *Pristolepis fasciatus*, (c) *Osteochilus lini*, and (d) *Labiobarbus leptocheilus*
- 96-97. Survey of areas for buoys installation at PH District
- 98-99. Survey to determine the location for buoys installation at NT District
- 100-103. Installation of buoys and sign boards at PH District
- 104-107. Installation of buoys and sign boards at NT District
108. Position of buoys, conservation zone signboards and seasonal closed area signboards at PH District
109. Position of buoys, conservation zone signboards and seasonal closed area signboards at NT District
- 110-112. Following up on the buoys installation and demonstrating the right way to tie the rope
- 113-127. Training course on general fish hatchery and the mobile hatchery system
- 128-130. Fish breeding and hatching practiced by fishers at Phone Hong District
- 131-133. Fish breeding and hatching practiced by fishers at Naxaythong District
134. Fish processing scheme for the women's group in NX Reservoir
- 135-137. Fish processing training at Vang Vieng
- 138-140. Fish processed products (fermented sour fish wrapped with banana leaf, fermented ground fish, fermented sour fish)
- 141-142. Fish processed products (fermented fish dip, and dried fish)
- 143-146. Practical workshop for fish processing at PH District
- 147-152. Practical workshop for fish processing at NT District
- 153-155. Meeting with the women's fish processing groups of PH and NT Districts

I. Introduction of the Project

Co-management/Community-based fisheries management approach principally involves the inclusion of local fishing communities in managing the fishery resources. As part of a participatory management system, this approach also ensures that the local fishing communities and other primary stakeholders are empowered to be able to implement the management measures. In Lao PDR, the Department of Livestock and Fisheries (DLF) has been tasked to promote to its fisheries officials, fisheries communities, and institutions, for them to serve as leaders or core persons to work with fishers and farmers, especially in transferring of knowledge and results of activities on sustainable fisheries development and co-management in inland fisheries.

Since 2013, SEAFDEC/TD has implemented the Project “Facilitating Fisheries Activity Information Gathering through Introduction of Community-based Resources Management/Co-management,” and conducted TOT (Training of Trainers) on “Facilitating Fisheries Information Gathering through Introduction of Community-based Fisheries Management” for Provincial Fisheries Officers in the northern, central and southern parts of Lao PDR, where the Project has been asked to expand the Co-management and Community-based Fisheries Management approach to other areas in Lao PDR. Thus, with the specific objective of strengthening the sustainable fisheries management through co-management and community-based fisheries management, two Project activities were carried out in two (2) pilot project sites in Lao PDR: 1) Khammouane Province and 2) Nam Xouang Reservoir. With the collaboration of the DLF, significant achievements had been attained from the activities carried out in the project sites. These include the establishment of the Fisheries Management Committee (FMC), demarcation of the conservation zone, strengthening of rules and regulations, capacity building, promotion of mobile fish hatchery, improvement of fisheries data collection systems, as well as generation of alternative livelihoods for fishers’ and women’s groups, such as in aquaculture and fish processing.

The first project site is located in Khammouane Province, which is in the middle part of Lao PDR, west to the town of Nakhon Phanom Province of Thailand. The pilot site selected is Mai Nam Pakan Village in Hinboun District of Khammouane Province. Located along the Nam Pakan River which directly discharges into the Mekong River and serves as important habitat for aquatic animals and plants, Mai Nam Pakan Village was established in 1992. The other project site is Nam Xoung Reservoir located in the central part of northern Lao PDR. The project area of Nam Xouang Reservoir is divided into two parts: the upper part of Nam Xouang Reservoir covering Phone Hong District in Vientiane Province, and the lower part of Nam Xouang Reservoir which includes five (5) villages of Naxaythong District, Vientiane Prefecture, namely: Sriwilai, Phothai, Phosri, Thum, and Phothong. For these areas, the Fisheries Management Committee (FMC) had already been set up with support from the Mekong River Commission (MRC). The project therefore placed more focus on the upper part of Nam Xouang Reservoir because this area still had limited experience in conducting community-based resources management/co-management, and where fishers seem to have inadequate knowledge on fisheries laws and regulations.

II. Promote Co-management/Community-based Fisheries Management in Inland Fisheries: Khammouane Province, Lao PDR

Chapter 1. Introduction of the Project: Khammouane Province

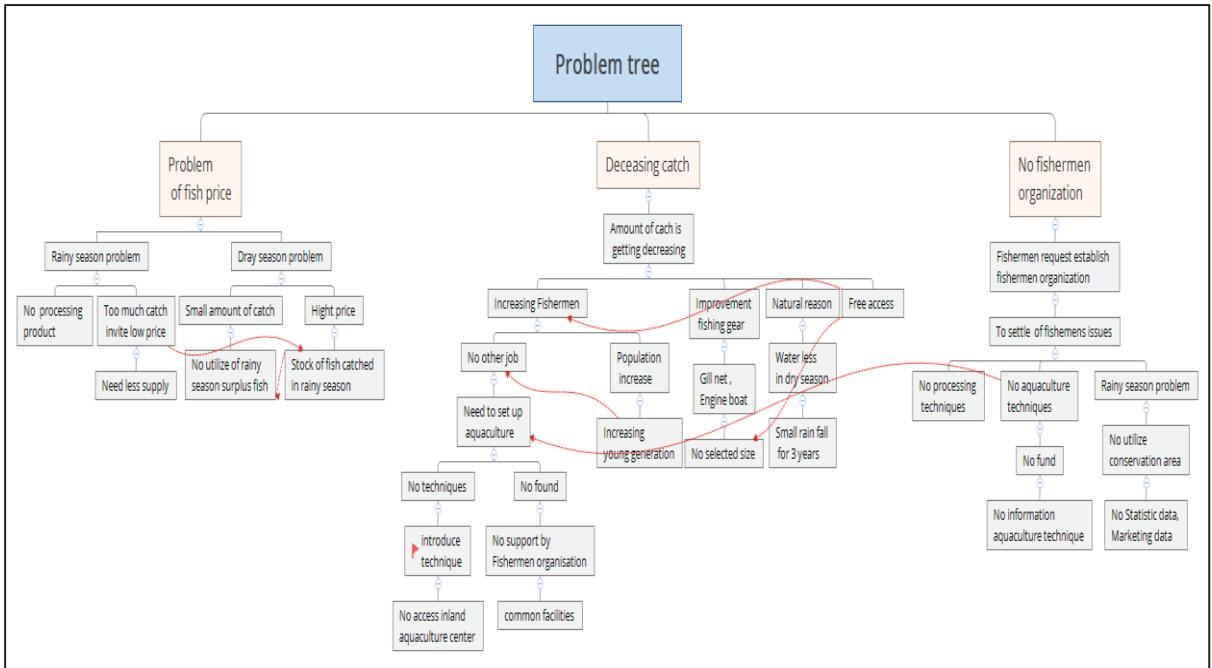
1.1 Background of the Project

The Project Design Matrix (PDM) was developed before the start of the Project to determine the objectives, outputs and activities. For the preparation of the PDM, a field survey was conducted to clarify the current status and problems of inland fisheries at the target site, which is Mai Nam Pakan Village in Khammouane Province. Based on the data obtained from the field survey, an analysis was conducted using the Problem Tree method to clarify the current state of the target site. The objectives to be achieved in the Project were analyzed using the Objective Tree.

Results of the analysis using the "Problem Tree" and "Objective Tree" produced the PDM indicating the final goals, outputs, and activities of the Project. In this way, The Project was designed using the PCM (Project Cycle Management) method.

1.1.1 Analysis of fisheries problems in Khammouane Province

In order to design the objectives and activities of the project, interviews with fishers at the Mai Nam Pakan Village in Khammouane Province were carried out to collect and analyze the information pertaining to fisheries problems in the village. Results of the interviews are summarized as follows:



1) Results of the problem analysis in Khammouane Province

➤ Catch decreased

- Catch has decreased compared to 5 years ago, and the causes of the decrease are:

- ① Number of fishers is increasing, and one of the reasons for the increase in number of fishers is the absence of fishery licensing system so that anyone can start fishing in the area anytime
- ② Population is increasing, in particular, the population of the younger generation is increasing
- ③ Not much alternative jobs other than capture fishing in the area
- ④ Absence of aquaculture or fishery processing business ventures other than capture fisheries, and there is no technology or funding to start an aquaculture or fish processing activity
- ⑤ Increased fishing effort due to the introduction of improved gillnet fishing gear and fishing boats with engines
- ⑥ In the dry season, the amount of water flowing into the reservoir is insufficient

➤ Problems on fish prices

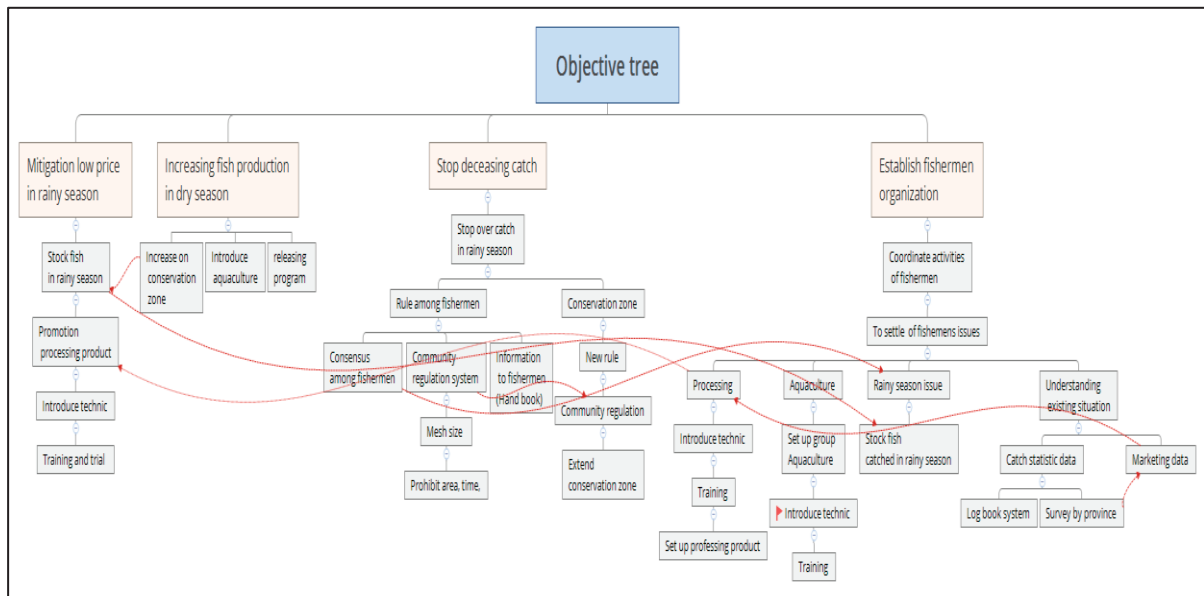
- ① During the rainy season, as the quantity of catch increases, the unit price of fish decreases
- ② No fishery processing technology that adds value to the fish caught
- ③ During the dry season, small fish are often caught, although the fish price is high
- ④ As fish caught in the rainy season cannot be preserved, fish caught in the rainy season could not be sold during the dry season

➤ Problems on unorganized fisher organizations

- ① There is no fishermen's organization (FMC: Fisheries Management Committee) in the area
- ② Fishers are unable to solve local fisheries problems by themselves
- ③ Since there is no fishermen's organization, it is not possible to set up conservation areas to protect the fishery resources and surveillance activities to monitor illegal fishing
- ④ No data and information on local catch or distribution of fishery products
- ⑤ Fish processing techniques cannot be introduced
- ⑥ Aquaculture technology cannot be introduced

1.1.2 Results of the objective analysis

Based on the results of the problem analysis, the project objectives and activities were developed.



1.1.3 Development of objectives and activities

➤ Preventing the decrease in catch

- ① Set up protected areas to prohibit fishing operations and protect juvenile fishes
- ② Make new fisheries regulations to regulate fishing operations and have fishers comply with the fishing regulations.
 - Establish fishing regulations (e.g. on fishing season, fishing zones, fishing gear restrictions (mesh size restrictions))
- ③ Form a consensus among fishers to ensure that local fishers observe the fishing rules

➤ Preventing the decline in fish prices

- ① Preserve fish caught in the rainy season
 - Produce fishery processed products
 - Introduce fishery processing techniques
- ② Increase catch quantity in dry season
 - Introduce aquaculture techniques
 - Establish fishing conservation areas
 - Promote fish propagation activities

- Establishment of fishers' organizations and implementation of fishery management activities
 - ① Establish a fishers' organization (FMC: Fishery Management Committee)
 - ② Enact fishing regulations
 - Establish fishing conservation areas, establish no-fishing zones and no-fishing seasons, and limit fishing
 - Implement fishery surveillance activities by fishers themselves
 - ③ Collect data through conduct of local catch and market surveys
 - ④ Produce processed fishery products under a fishery organization
 - ⑤ Start an aquaculture business under a fishery organization

1.1.4 Project Design Matrix (PDM): Project objectives, outputs and activities

Promote Co-management/Community-based Fisheries Management Project in Inland Fisheries: Khammouane Province, Lao PDR

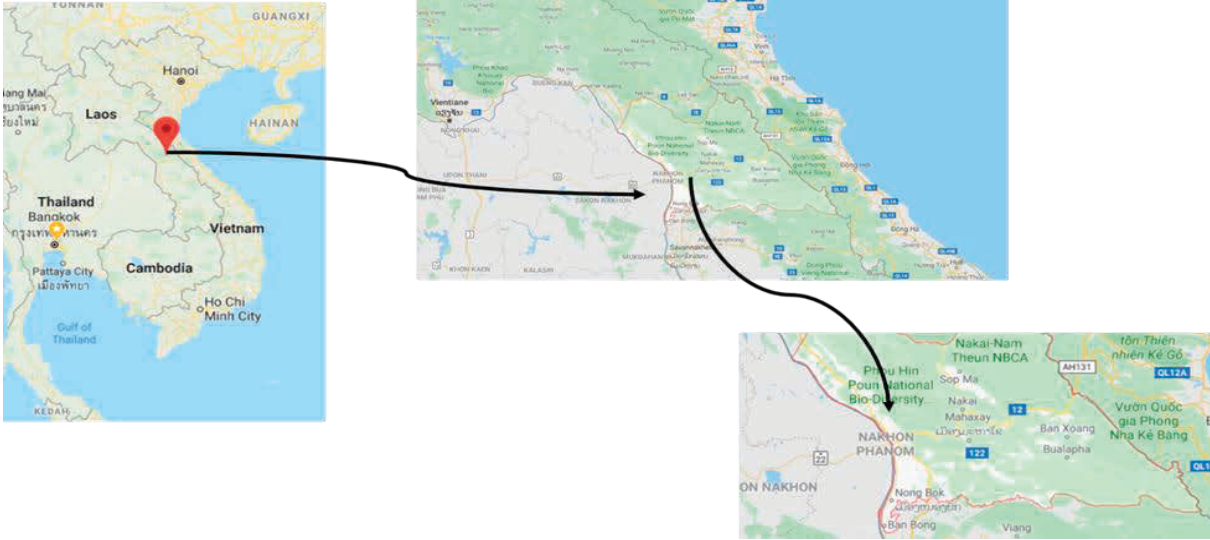
Project objective	Indicator
To promote sustainable utilization of fishery resources in the Nam Pakan River	
Out put	
<p>1. A Fisheries Management Committee will be organized and the measures for the effective utilization of fishery resources will be considered</p> <p>2. Fish catches and the situation of distribution of fishery products will be grasped through fishery statistics and distribution analysis</p> <p>3. The measures for sustainable utilization of fishery resources will be taken through the activities of the Fisheries Management Committee</p>	<p>Fisheries Management Committee was organized. (*Fisheries committee is defined by Fishery Law of Lao PDR)</p> <p>Survey report was created</p> <p>The measure for sustainable utilization of fishery resources were developed through the activities of the Fisheries Management Committee</p>
Activities	
<p>1. Organization of a Fisheries Management Committee</p> <p>(1) Organize the Fisheries Management Committee (FMC) in the target fishing village</p> <p>(2) Implementation of activities related to resource management by Fisheries Management Committee</p>	<p>Fisheries Management Committee was organized, and its regulations were stipulated</p> <p>The management system will be established</p>
<p>2. Implementation of surveys on fish catches & the distribution of the products in order to grasp the production volume and the distribution mechanism</p> <p>(1) Statistical survey</p> <p>(2) Marketing survey</p>	<p>Survey report was created</p> <p>Statistical survey was conducted</p> <p>Marketing survey was conducted</p>
<p>3. Support for the activities of Fisheries Management Committee</p> <p>(1) Introduction of the fish processing techniques</p> <p>1) Planning for introduction fish processing techniques (Selection of the acceptable processing target species, specific techniques)</p> <p>2) Organization of fish processing group and conduct training to acquire fishery processing techniques</p> <p>3) Production of processed food products (production volume and sales results)</p> <p>(2) Introduction of aquaculture techniques</p> <p>1) Planning for introduction aquaculture techniques (Selection of the acceptable aquaculture target species, specific techniques)</p> <p>2) Organization of aquaculture group and conduct training on aquaculture techniques</p> <p>3) Production of aquaculture (production volume and sales results)</p>	<p>Products which accepted in the market were proposed</p> <p>Fish processing group organized, and training course conducted</p> <p>Fish processing group operated their business (produce & sell)</p> <p>Fish species and techniques were proposed</p> <p>Fishers were attended the training course on aquaculture techniques</p> <p>Aquaculture group operated their business (produce & sell)</p>

1.1.5 Work plan

Work plan	2017												2018												2019											
	1	2	3	4	5	6	7	8	9	#	#	#	1	2	3	4	5	6	7	8	9	#	#	#	1	2	3	4	5	6	7	8	9	#	#	#
1. Organization of a Fisheries Management Committee																																				
(1) Organize one Fisheries Management Committee in the target fishing villege																																				
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(1) Statistical survey																																				
(2) Marketing survey																																				
3. Support for the activities of Fisheries Management Committee																																				
(1) Measures for the fish catches in rainy season/dry season																																				
(a) Effective utilization of prohibited fishing areas and conservation areas																																				
(b) Measures for the over-supply in rainy season																																				
(2) Introduction of the food processing techniques																																				
(a) Selection of the acceptable products to the market																																				
(b) Provision of information on food processing																																				
(c) Implementation of training courses on food processing techniques																																				
(3) Introduction of aquaculture techniques																																				
(a) Provision of information on aquaculture techniques																																				
(b) Implementation of training courses on aquaculture techniques																																				

1.1.6 Project site and project period

Project site: Mai Nam Pakan Village in Khammouane Province, Lao PDR
Project period: January 2017 -December 2019

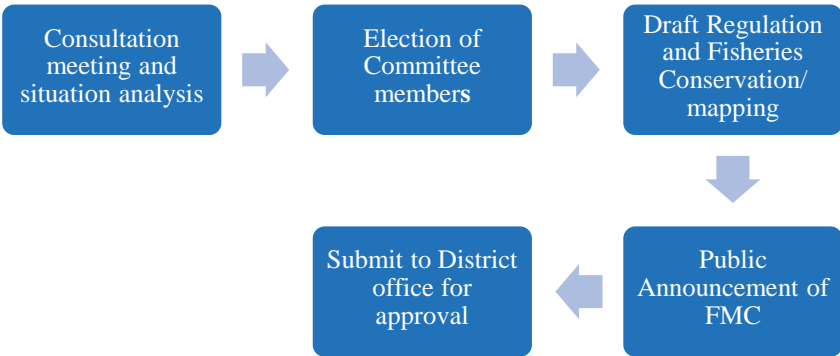


Chapter 2. Project Activities and Results

2.1 Organization of Fisheries Management Committee (FMC)

2.1.1 Organize one Fisheries Management Committee (FMC) in the target fishing village

Referring to the Fisheries Law of LAO PDR, Fisheries Management Committee (FMC) serves as local fisheries management organization at the community level with corresponding roles and responsibilities established for specific water bodies such as rivers, reservoirs, community ponds, and wetlands. The FMC shall include the participation of fishers, to ensure that effective management of the fishery resources is promoted through the involvement of government authorities (Phounsavath, 2015). There are several steps to establish the Fisheries Management Committee (FMC).



Khammouane Province is located in the middle part of Lao PDR which is west to the border town of Nakhon Phanom Province of Thailand. The pilot site is Mai Nam Pakan Village which is situated in Hinboun District of Khammouan Province, and was established in 1992. There are ninety-three (93) families with population of 435 people, of whom 234 are females and the local people generate income by mainly engaging in capture

fisheries and agriculture. The Village is a new settlement where the community earns minimum income while alternative livelihoods are limited, and is located along the Nam Pakan River which directly discharges into the Mekong River and serves as important habitats for aquatic animals and plants. The community members utilize the fishery resources as their sources of food and for generating income from fishing operations, which should be subjected to fishery resources management by the community members themselves. However, there are no fishers' organizations established in this village to manage the fishery resources and effectively operate the community activities. Therefore, this Project promoted the establishment of the fisheries management committee (FMC) as the fisheries organization for Mai Nam Pakan Village.

1) Pre-organization meeting to establish the Fisheries Management Committee (FMC)

The meeting on 29 March 2017 at Mai Nam Pakan Village, which was attended by 70 villagers, was intended to provide knowledge on Fisheries Management Committee (FMC) to the local communities for better understanding of the benefits of the FMC establishment, and the roles and responsibilities of the FMC. The fisheries officers from the Department of Livestock and Fisheries of Lao PDR provided the information on the Fisheries Law of Lao PDR, especially on the definition of fisheries and the fishery conservation areas, and introduced the concept of co-management/community-based fisheries management as well as the results of a case study on Community-based Fisheries Management in Lao PDR that showed the process of establishing conservation areas including the rules and regulations of the conservation area. The fisheries officers emphasized that the Fisheries Management Committee is a local organization, established to cooperate between central/local government agencies and local fishers in managing the fishery resources with clear roles and functions of parties concerned in co-management. After sharing the information, the officers asked the villagers of their opinion about the establishment of the FMC, and most of them agreed to establish FMC with the main role of managing the conservation area.



Fig. 1-2 Local meeting at the pilot site in Mai Nam Pakan Village, Khammouan Province, Lao PDR

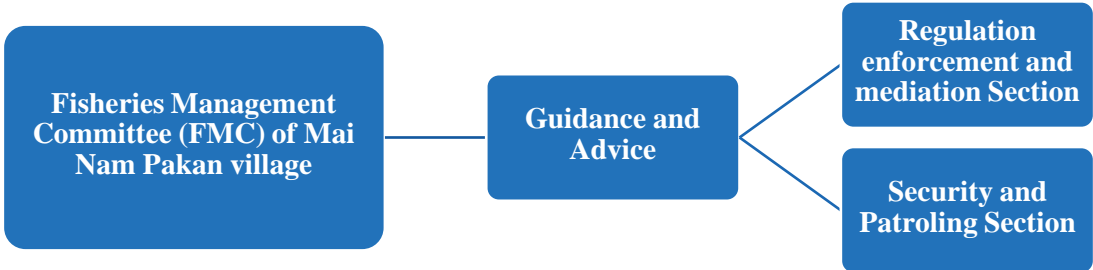
2) Consultation meeting and situation analysis

The consultation meeting which was organized at Mai Nam Pakan Village on 23-24 May 2017 was attended by community members, and discussed the importance of fisheries and the sustainable management of fishery resources, identified the issues on fishery resources, and sought the solutions to address the problems and issues.

Moreover, the community also decided that the site to be selected for the community fisheries management area should have critical habitat suitable for setting the demarcated area. The community members were convinced to participate in the management of the fishery resources, as the roles and responsibilities of FMC, the fishery conservation zone and the benefit of establishing the FMC, were presented to them. Furthermore, the community members also gained better understanding of the fishery resource management including the need to develop effective management regulations as well as on the importance of FMC.

3) Election of Committee members

The community meeting to elect the committee members for FMC was convened on 5 June 2017. The meeting availed of the assistance of a representative from the District Agriculture and Forestry Office to explain the steps of establishing FMC and the regulations on fishery resource management. In addition, the roles and responsibilities of FMC and those of the committee members were clarified during the meeting. Results of the election indicated that 29 persons comprise the members of FMC in Mai Nam Pakan Village. The FMC is composed of three sections, namely: (a) Guidance and advice, (b) Regulation enforcement and mediation, (c) Security and patrolling. The structure of the FMC is shown below:



List of Committee members (Fisheries Management Committee of Mai Nam Pakan village)

Guidance and Advice Section	Security and Patrolling Section
Mr. Sorn Jumpanuwong (Chairperson)	Mr. Kungthong Yangnuwong (Chairperson)
Mr. Larn Khamdaeng (Vice Chairperson)	Mr. Bunsong Duangmala (Vice Chairperson)
Mr. Srinongluk Intalad (Committee Member)	Mr. Ting Saengtaweek (Committee Member)
Ms. Waipetch Wongsawas (Committee Member)	Mr. Buntawee Chantawong (Committee Member)
	Mr. Buala Poasawas (Committee Member)
	Mr. Amporn Puttawee (Committee Member)
	Mr. Kaew Srisomboon (Committee Member)
	Mr. Winchai Dara (Committee Member)
	Mr. Sriporn Srisomboon (Committee Member)
	Mr. Poothon (Committee Member)
	Mr. Thon Wongsawas (Committee Member)
	Mr. Puwee Promsa (Committee Member)
	Mr. Lai (Committee Member)
	Mr. Sornchai Dungwandeaw (Committee Member)
	Mr. Sanya Chantawong (Committee Member)
	Mr. Chang Saengdala (Committee Member)
	Ms. Kongmanee Kaewaroon (Committee Member)
Regulation Enforcement and Mediation Section	
Ms. Kinnaly Chaiwut (Chairperson)	
Mr. Sriprasert nuntanurat (Vice Chairperson)	
Mr. Bunlum Chantawong (Vice Chairperson)	
Mr. Buntun Chaisongkham (Committee Member)	
Mr. Lean Pon-arsa (Committee Member)	
Mr. Sriweang Ladsapuan (Committee Member)	
Ms. Homchan Patjuk (Committee Member)	
Ms. Duang Montisad (Committee Member)	

4) Drafting of regulations and fisheries conservation zone demarcation/mapping

The community meeting to draft the regulations and fisheries conservation zone demarcation/mapping was organized on 21 June 2017 with 30 participants comprising the community key persons with technical support from the Government Office, i.e. the District Agriculture and Forestry Office. The meeting was one of the steps in the establishment of Fisheries Management Committee (FMC) after the consultation meeting, situation analysis and election of Committee members. The Committee members of FMC were announced during the meeting for acceptance. Moreover, the meeting also defined the fisheries conservation zone and the demarcation area of Nam Pakan River for mapping. Furthermore, the regulations of the FMC and fisheries conservation zone were finalized with the agreement among the community members. Then, all these were submitted by the Village to Hinboun District Office and Hinboun District Agriculture and Forestry Office for approval. The regulations on fishery resources management includes the location of the conservation zone, prohibited fishing gear, penalty for illegal fishing, the committees of FMC, and the roles and responsibilities of Committee members, and the conservation zone map.



Fig. 3-6 Local meeting to establish the Fisheries Management Committee

5) Public Announcement of Fisheries Management Committee (FMC)

The meeting to make public announcement of the Fisheries Management Committee (FMC) was organized on 3 October 2017 at Mai Nam Pakan village, and attended by 26 government officers representing the Department of Livestock and Fisheries/Head Quarters, Provincial Agriculture and Forestry Office, Provincial Livestock and Fisheries Office, District Agriculture and Forestry office, District Governor, and 44 participants who are community key persons. As the last step of the establishment of Fisheries

Management Committee (FMC), the meeting was aimed at officially informing all stakeholders concerned in the Nam Pakan Village about the FMC establishment. The Head of Mai Nam Pakan village submitted the regulations of the Fisheries Conservation Zone demarcation to the meeting that included the name, location and objectives of the conservation zone. The said conservation zone is “Kanlang Wangkhwa,” which covers an area of 50,000 square meters. The fisheries regulations and management measures consisting of the fishing gear allowed and prohibited to use, punishment and fine for breaking the law, and allocation policy as well as the roles and responsibilities of the Fisheries Management Committee, were explained during the meeting. The community then acknowledged the established Fisheries Management Committee and Fish Conservation Zone at Mai Nam Pakan Village and that the village signboard for public announcement of the details of the regulations and conservation map would be installed near the conservation area of Nam Pakan River. The signed copies of the regulations of Mai Nam Pakan FMC were distributed to neighboring villages, government offices and stakeholders concerned as well as to the community members (*Appendix 1*).



Fig. 7-9 Meeting for Public Announcement of the Fisheries Management Committee

6) Construction of meeting place for FMC

The community center of Mai Nam Pakan village used for gathering the village members, conducting meetings and doing community activities as well as public works, also served as meeting place of the Village. The meeting room was already old and dilapidated, so the Village used the temple as meeting place when most of the community members are invited to participate in meetings. After the FMC was established, a community place was needed to conduct the activities for the members together. Therefore, it was necessary to reconstruct the meeting place for multipurpose use of the community.

The Project therefore allocated a budget amounting to 4,000 USD to reconstruct the meeting place at Mai Nam Pakan Village in December 2018. Thus, the renovated meeting place was built with new pillars and metal sheet roofing, with the village members supporting the labor and materials to finish the other parts, such as the floor and wall. When construction of the meeting place was finished, the official opening ceremony was organized on 4 December 2019, attended by the SEAFDEC Project Team (4), Khammouane Provincial Officers from the Department of Livestock and Fisheries/Headquarters (3), Hinboun District Officers (2), Community Committees (4), and community members (32): (Males: 28, Females: 18). The Head of Mai Nam Pakan Village reported on the project activities implemented from 2017 to 2019. These would be useful and beneficial to the Mai Nam Pakan Village, to enable the community to manage the fishery

resources by themselves and generate alternative incomes from the fish processing and aquaculture activities that provide great opportunity for the Village. The community members were grateful to SEAFDEC for allocating some Project funds for the reconstruction of the community meeting place, which the community members could use for meetings and for conducting public activities.



Fig. 10-12 Construction of meeting place for the FMC

2.1.2 Implementation of activities related to resource management by Fisheries Management Committee

2.1.2.1 Study tour

The study tour to visit Bolikhamsai Province located in the northern part of Khammouane Province was arranged for the FMC members on 14-16 June 2018. With 18 Fisheries Management Committee (FMC) Members and four (4) government officers of Khammouane Province in attendance, the study tour was meant to enhance the knowledge of FMC members on fisheries management system and to enable them to apply the knowledge gained in the management of the fisheries conservation zone in Mai Nam Pakan Village. During their visit to Ban Don Xay Village, the FMC members discussed the management of the conservation zone in Pak Ka Ding River, which runs near a temple, and which could be a good area to protect fish and maintain the abundance of fishery resources and promote tourism through feeding of the fish by tourists. The FMC members could share the knowledge and experience gained among each other, especially on conservation zone management. In addition, they also visited Nam Lo Village to observe the fish processing activity for fermented fish, dried fish and smoked fish. The FMC members of Nam Pakan Village gained knowledge from this study tour, which they could apply for the development of relevant activities in their community, such as fisheries management system for the conservation zone, and development of the conservation area into an attractive place.



Fig. 13-16 Study tour for FMC to learn more about fisheries management system and fish processing business ventures

2.1.2.2 Implementation of surveillance activities

1) Organization of surveillance management team

Illegal fishing is one of the causes of the decline in fishery resources. Problems on illegal fishing and decreasing fishery resources have also been encountered in Nam Pakan River, especially that there is no patrol system to monitor and control these problems. After the FMC and fish conservation zone were established in Mai Nam Pakan Village, the patrol unit was established on 10 August 2018 under the Security and Patrolling Section of Fisheries Management Committee (FMC). The Unit is responsible for conducting the surveillance activity, such as monitoring the illegal fishing operations in the conservation area of Nam Pakan River. The Patrol Unit consists of 4 sub-groups with 5-6 members in each group, totaling to 21 members. The roles and responsibilities of Patrol Unit comprise mainly of conducting surveillance activity in the conservation area, which is conducted by rotating among the 4 groups, the duty of monitoring the illegal fishing operations in the conservation zone within 24 hours. The group also defines the penalty for illegal fishing, and that the Patrol Unit is allowed to arrest the fishers who do illegal fishing and send to the Regulation Enforcement and Mediation Section of the FMC for punishment based on the following three (3) steps:

- Step 1: Warning with verbal promise not to do illegal fishing again
- Step 2: Receive the penalty following the rules and regulations
- Step 3: Send to relevant government offices for further investigation

This would ensure that the capacity of the patrolling team is strengthened in fisheries management and surveillance, and be able to monitor the illegal fishing activities in the fisheries conservation area and maintain the fishery resources in Nam Pakan River. In March 2018, the Project provided the equipment necessary for the surveillance activity, such as boat with engine, binoculars, life jackets, camera, loudspeaker, raincoats, and torch light to the patrolling team for them to be able to conduct surveillance activities. Since then, they have conducted surveillance activity everyday and recorded their patrolling operations such as date/time, name of fishing operators, number of illegal fishing activities into the report book. The patrolling team plans to engage the village members in patrolling by inviting three (3) representatives from households to go with the team to inspect the conservation area. Since the fishery resources in Nam Pakan River are utilized by the community members, they should help in taking care of the river for future generations. It is noteworthy to report here that the community members continue to conduct their respective activities after this Project terminated, highly aware that conserving the fishery resources contributes to sustainable fisheries management.

2) Development of surveillance plan

The Fisheries Management Committee of Mai Nam Pakan Village constructed two buoys to be installed in the demarcated area at Nam Pakan River. This conservation zone is 1,000 meters long, 50 meters wide, and depth of 6 meters, covering an area of 50,000 square meters. The materials used for the buoy construction

consist of 200-liter tanks, bamboo poles, ropes, flags, and concrete sinkers. Costing around 18,000 Baht (or 600 USD) for two sets, the buoys were installed at the upper and lower demarcated areas of Nam Pakan River. However, during rainy season when the water current is strong, the buoys were moved on land by the patrolling team so that these would not be destroyed. Instead, the patrolling team used other materials to mark the conservation zone, such as a rope or sling attached with bottles and allowed to drape over the River for marking the demarcated zone. They also set bamboo poles with small sign board at the bank of the River to indicate the conservation zone. The FMC members also provided information about the conservation zone of Nam Pakan River, to their neighboring areas for them to be aware of the regulations of the Village and to help reduce the incidence of illegal fishing in the demarcated area.

3) Implementation of surveillance activities and results of the activities

Results of the inspection of the conservation area by the patrolling team since 2018 showed that fishers from outside the village do fishing near the conservation zone using net and diving or shooting fish underwater, with the other fishers operate fishing in the conservation area four (4) times. The patrol unit issued a warning and arrested some illegal fishers who were sent to the Regulation Enforcement and Mediation Section of the FMC. The penalty of illegal fishing that they have to pay to FMC was 500,000 Kip/person (or 55 USD/person) and this fine will be divided into six (6) parts: reporter (15%), Patrol unit (35%), Mediation unit (20%), Village (10%), patrol fund (10%), and conservation zone fund (10%). The total amount collected from fines amounted to 2,000,000 KIP (or 220 USD). Moreover, the patrol unit also built a hut near the conservation zone to monitor any illegal fishing activities. However, they were faced with the problem of lack of experience in negotiating with illegal fishers who usually come with weapons. In addition, the FMC plans to engage the village members to conduct surveillance activities by designating three (3) members from every household to help in patrolling the conservation area together with members of Patrolling Unit per day. This would encourage the villagers to conserve the fishery resources for sustainable fisheries management. Furthermore, the money obtained from fines for illegal fishing could also be allocated for the patrol unit of the FMC for their Group Fund for long term use, such as development of the conservation area to make it an attractive place for the promotion of fish feeding while the Group could also earn money from selling fish food to tourists.



Fig. 17-18 Equipment provided for the surveillance activity Fig. 19-20 Fish releasing activity

2.1.2.3 Fish releasing activity in the conservation area of Nam Pakan River

The annual national fish releasing day of Lao PDR is 13 July of each year, when the fisheries officers and other organizations hold fish releasing activities at reservoirs and rivers. The FMC members of Mai Nam Pakan Village organized the fish releasing activity on 13 July 2018, which was attended by the government officers, community members, neighboring villagers, and students. It was meant to build awareness of community members on conservation of the fishery resources. About 10,000 fingerlings of silver barb species (*Barbonymus gonionotus*) were released at the conservation zone of Nam Pakan River.

2.2 Surveys on fish catch and distribution of products to grasp the production volume and distribution mechanism

2.2.1 Statistical survey

1) Objectives

1. To gather statistical data on capture fisheries in Nam Pakan River
2. To understand the current status of utilization of fishery resources

2) Methods

1. Implementation and arrangement

Provincial Government Staff: Mr. Souksakhon & Ms. Pongsavahn

District Staff: Mr. Thongsai+1 person

Village: FMC (Community leader: 3 persons)

2. Target Area: Mai Nam Pakan Village, Hinboun District, Khammouane Province

3. Target Group:

Fulltime fishermen (current number: 17 as of June 2017), Part time fishermen (current number: 90 as of June 2017)

4. Measures of statistics survey:

4.1 Collection of catch data

a. Frequency of survey: 4 times/month

b. Sample size: fulltime 7 fishermen, part time fishermen 20 samples

c. Data collection method:

-Fulltime fishermen: by describing in catching sheet

-Part time fishermen: by interview

d. Estimation/calculation method:

-Full time fishermen: Total catch = (Total catch from sample of 7 fishermen) + ((remaining fishers (10 fishermen as of June 2017) x (7 fishermen’s average operation days per week) x (7 fishermen’s average catch per day))

-Part time fishermen: Total catch = (Total catch from sample 20 fishermen) + ((remaining fishers (70 fishermen as of June 2017) x (20fishermen’s average operation days per week) x (20 fishermen’s average catch per day))

3) Data analysis

Feedback to fishermen: Provincial Government analyzes the sample data and feedback to fishermen every month

Report: Provincial Government prepares monthly statistics report

4) Data format

Place: Ban Mai Nam Prakan Village, Hinboon District, Khammouane Province Name: Address: Type of Fishermen: <input type="checkbox"/> full time <input type="checkbox"/> part time Date: Type of gear 1: Operating day:per week					
Catch species	Total catch (kg.)	Household Consumption (kg.)	Household Processing (kg.)	Selling weight (kg.)	Selling Price (LAK/kg.)
1. Species name.....					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

5) Results

(a) Changes in catch for one year

The catch data for the two years from July 2017 to June 2019 was collected from 27 sample fishers. Throughout the year, catch variability was modest. The catches did not change significantly between the rainy season and the dry season.

The month with the highest catch was January 2018, with a total catch of 1,635 kg/month. The month with the lowest catch was October 2018, with a catch of 1,019 kg/month.

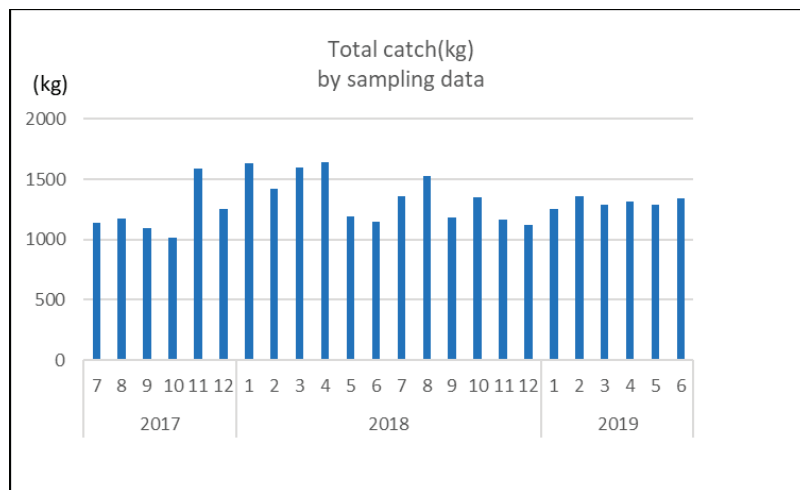


Fig. 21 Changes in fish catch for one year

(b) Percentage of fish sold in market and self-consumption

Catch sold to the market was 58%, more than half of the total catch, and for self-consumption, the ratio for fresh fish and processed (conserved at home) was 42%.

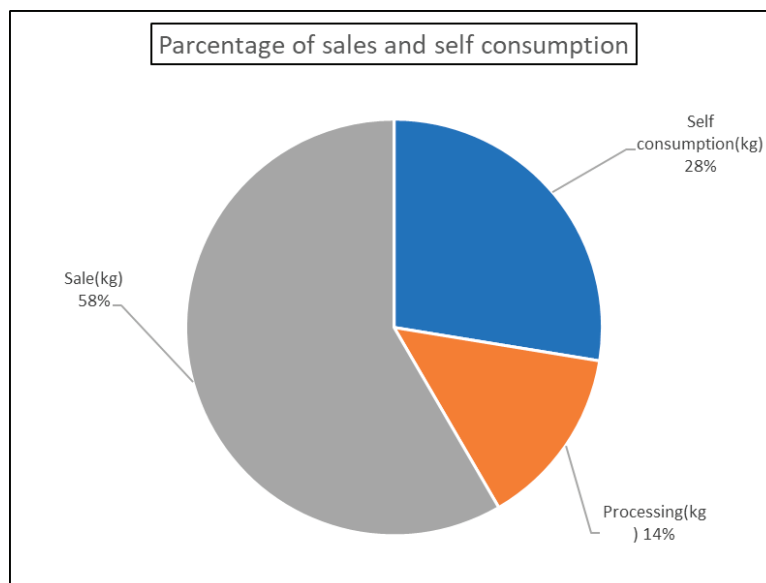


Fig. 22 Percentage of fish sold in market and self-consumption

(c) Percentage of catch by fish species

In total, 39 kinds of fishes were caught from Nam Pakan River during the survey, comprising various species as shown in **Table 1**.

Table 1 Name of fish species caught from Nam Pakan River

No.	Lao Name	English Name	No.	Lao Name	English Name
1	ບາກົດ	<i>mystus filamentus</i>	21	ບາດອກງົວ	<i>cyclocheilichthys armatus</i>
2	ບາໝາກມາງ	<i>sikukia gudgeri</i>	22	ບາເຄີງ	<i>hemibagrus wyckioides</i>
3	ບາກ່າ	<i>pristolepis fasciata</i>	23	ບາຢາງບອນ	<i>bagrichthys obscurus</i>
4	ບາຄືລາມ	<i>labiobarbus leptocheilus</i>	24	ບາຫຼາດ	<i>mastacembelus armatus</i>
5	ບາຄໍ່	Snake Head	25	ບາຕາມົນ	<i>cosmochilus sp.</i>
6	ບາດຸກ	Walking Catfish	26	ບາຍອນ	<i>pangasius marconema</i>
7	ບາຕ່າໃສ	<i>cosmochilus sp.</i>	27	ບານາງ	<i>phalacronotus micronemus</i>
8	ບາວຽນໄຟ	<i>barbonymus schwanenfeidii</i>	28	ບາອີກໍ່າ	<i>Osteochilus melanopleurus</i>
9	ບາສະແຕງ	<i>mystus albolineatus</i>	29	ບານວນຈັນ	<i>cirrihinus mrigala</i>
10	ບາເຂັງ	Climbing Perch	30	ບາເພັຍ	<i>labeo barbatulus</i>
11	ບາສູດ	<i>hampala dispar</i>	31	ບາຫຼັງໜາມ	<i>mystacoleucus marginatus</i>
12	ບາຂາວ	<i>oxygaster anomalura</i>	32	ບາຕອງ	<i>chitala ornata</i>
13	ບາປຸ່ງນ	<i>scaphognathops stejnegeri</i>	33	ບາເອີນ	<i>probarbus jullieni</i>
14	ບາບົກ	<i>puntius orphoides</i>	34	ບາຂ້າງແລກ	<i>crossocheilus atrilimes</i>
15	ບາສະກາງ	<i>Puntioplites waandersi</i>	35	ບານົນ	Tilapia
16	ບາຄ້າວ	<i>wallago attu</i>	36	ບາອິໄທ	<i>osteochilus vitatus</i>
17	ບາເລືອມ	<i>ompok siluroides</i>	37	ບາກະຈາຍ	<i>mystacoleucus sp.</i>
18	ບາໃນ	Common Carp	38	ບາກະແຕບ	<i>laubuca laubuca</i>
19	ບາບາກ	Silver Barb	39	ບາຫິດ	<i>Ophidium aculeatum</i>
20	ບາສະໂທງ	<i>xanentodon canciloides</i>			

The catch of the top 10 most caught fish species accounted for 78% of the total catch, with each fish species accounting for around 5%-10% of the total catch. Meanwhile, no fish species accounted for a particularly large portion of the total catch.

Table 2 Top 10 most caught fish species

No	English Name	Total catch (for 2 years) by sample data	
		(kg)	(%)
1	<i>Mystus filamentus</i>	4,157	13.2
2	<i>Sikukia gudgeri</i>	3,909	12.4
3	<i>Mystus albolineatus</i>	3,120	9.9
4	<i>Labiobarbus leptocheilus</i>	2,764	8.8
5	<i>Cosmochilus sp.</i>	2,659	8.5
6	Silver Barb	2,444	7.8
7	<i>Oxygaster anomalura</i>	1,784	5.7
8	<i>Puntius orphoides</i>	1,303	4.1
9	Snake Head	1,209	3.8
10	<i>Pristolepis fasciata</i>	1,113	3.5
Total		24,462	77.8

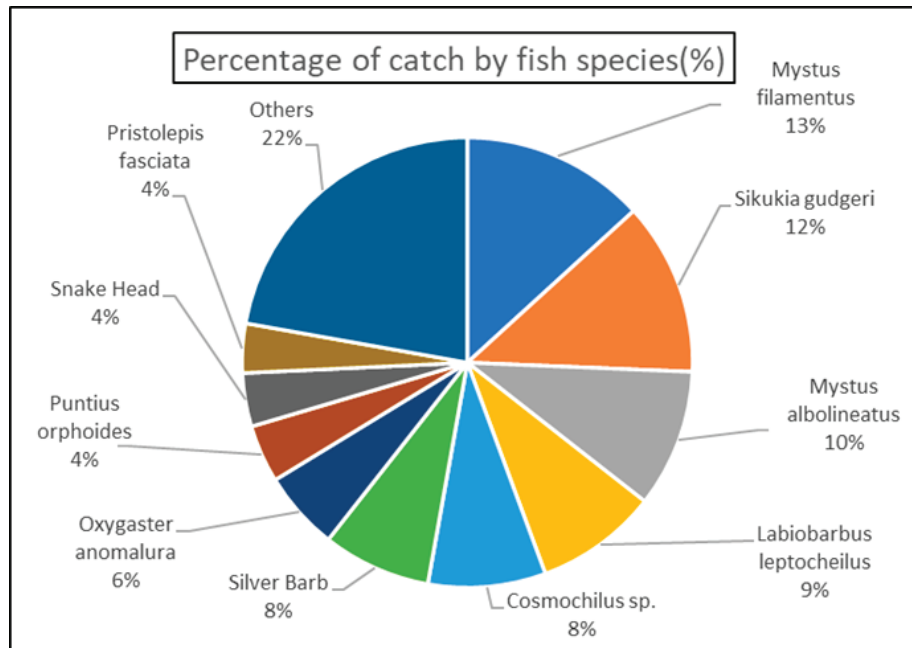


Fig. 23 Percentage of catch by fish species

(d) Changes in catch by fish species for one year

Monthly catches tended to change significantly throughout the year. The annual changes in catch of the top three fish species tend to be relatively high during the dry season.

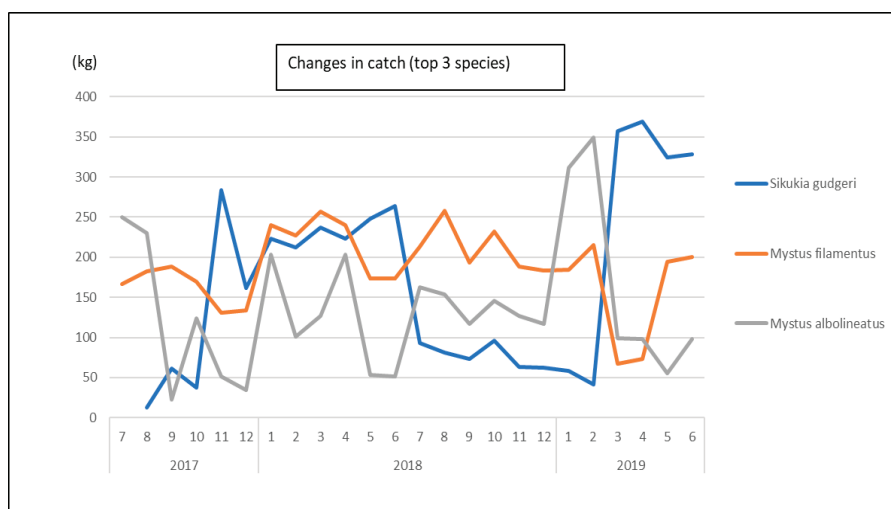


Fig. 24 Changes in catch by fish species for two year

2.2.2 Market survey

1) Objectives

1. To collect data from fish market at Hinboun and Thakhaek District, Khammouane Province
2. To understand the trend of prices and dealers' amount of fishery products at the fish market in Khammouane Province

4) Results

(a) Number of data collected and collection period

The data collected from January 2018 to June 2019 were used in the analysis of the results of the survey. In addition, market data were collected from two markets, i.e. Nampakan and Km 3.

Table 3 Number of data and data collection period

Period of data collection	Number of data by market	
January 2018- June 2019	Hinboun:	1,422
	Km3:	944
	Total	2,366

(b) Species of fresh fish sold in the market and ratio of the sales quantity

In total, it was observed that 39 fish species were sold at the fish market. The top 30 fish species sold accounted for 99% of the total sales volume, and the top 10 species accounted for 76%.

Table 4 Fish species sold in the market

No	Fish species	Sales volume in fish market for 18months	
		(kg)	(%)
1	Silver Barb	6,947	14.9
2	<i>Mystus filamentus</i>	6,826	14.7
3	<i>Wallago attu</i>	5,542	11.9
4	<i>Pangasius conchophilus</i>	3,188	6.9
5	<i>Sikukia gudgeri</i>	2,723	5.9
6	Common Carp	2,535	5.5
7	Snake Head	2,293	4.9
8	<i>Labeo barbatulus</i>	1,877	4.0
9	Walking Catfish	1,874	4.0
10	<i>Mystus albolineatus</i>	1,590	3.4
11	<i>Phalacronotus micronemus</i>	1,191	2.6
12	<i>Bagarius yarrelli</i>	1,017	2.2
13	<i>Puntius orphoides</i>	1,016	2.2
14	<i>Cosmochilus</i> sp.	874	1.9
15	<i>Labiobarbus leptocheilus</i>	818	1.8
16	<i>Mastacembelus armatus</i>	795	1.7
17	<i>Wallago leerii</i>	760	1.6
18	<i>Chitala ornate</i>	541	1.2
19	<i>Cosmochilus harmandi</i>	515	1.1
20	<i>Monopterus albus</i>	452	1.0
21	<i>Monopterus albus</i>	439	0.9
22	<i>Pangasius marconema</i>	381	0.8
23	<i>Ophidium aculeatum</i>	361	0.8
24	Tilapia	295	0.6
25	<i>Helicophagus leptorhynchus</i>	288	0.6
26	<i>Osteochilus vitatus</i>	255	0.5
27	<i>Channa micropeltes</i>	197	0.4
28	<i>Hemibagrus wyckioides</i>	194	0.4
29	<i>Ompok siluroides</i>	138	0.3
30	<i>Hampala dispar</i>	130	0.3

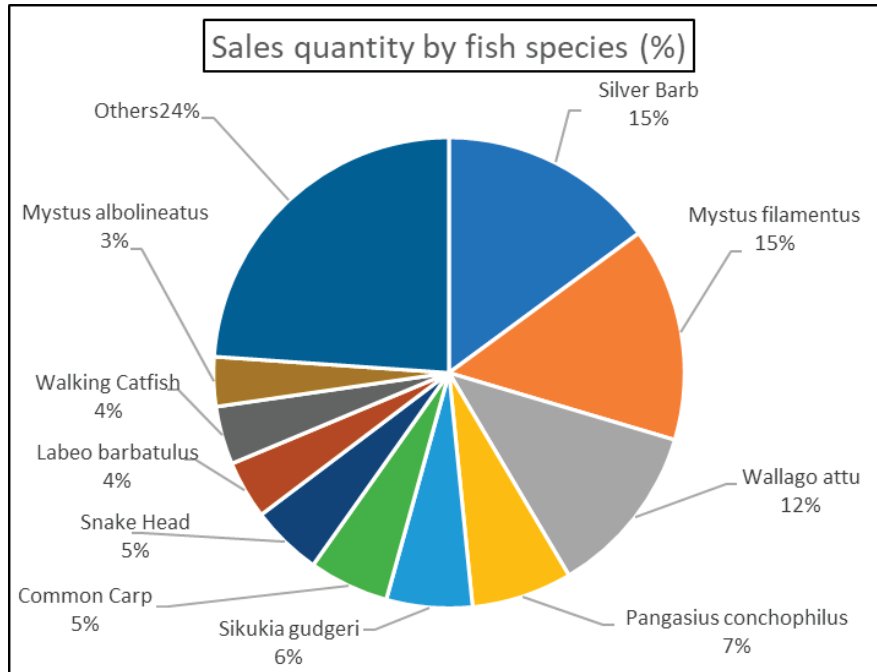


Fig. 25 Percentage of sales quantity by fish species

(c) Changes in the quantity of fresh fish sold in the market for 18 months

The prices of fresh fish sold in the market ranged from 30,000 (LAK/kg) (≈ 3.3USD) to 40,000 (LAK / kg) (≈ 4.4 USD), which did not change significantly throughout the year. Analysis of the results indicated that there was no correlation between the average price of fresh fish and the changes in the prices during the rainy and dry seasons.

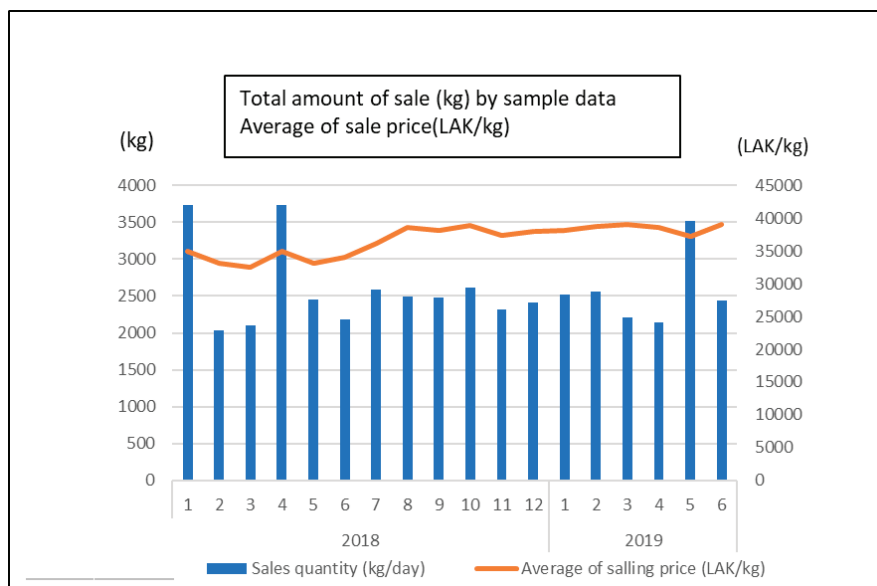


Fig. 26 Changes in the quantity of fresh fish sold in the market for 18 months

(d) Changes in the market price of fresh fish for 18 months

The highest price of fish in the market was 70,000 (LAK/kg) (≐7.7USD), which had remained unchanged throughout the year. The average price remained between 30,000 (LAK/kg) (≐ 3.3USD) and 40,000 (LAK/kg) (≐4.4USD) and did not fluctuate significantly.

The lowest prices remained between 15,000 (LAK/kg) (≐ 1.65USD) and 20,000 (LAK/kg) (≐ 2.2USD) and did not also fluctuate significantly.

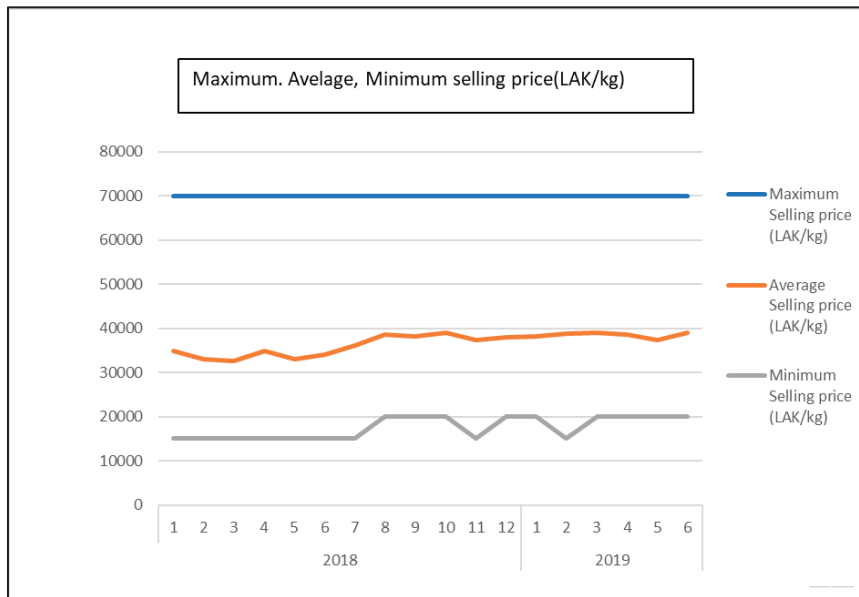


Fig. 27 Changes in market price of fresh fish for 18 months

(e) Changes in the market price and sales volume of fresh fish by fish species for 18 months

The sales volume of each fish species tended to change depending on the season, i.e. dry season (November to April) and rainy season (May to October). In general, the sales volume appeared to be high in the rainy season, although some fish species had maintained high sales volume even during the dry season.

Comparing the monthly sales volume and the average price of the 10 top fish species that account for 76% of the sales volume, the prices seemed to rise during the months when the sales volume was low. The quantity and price of fresh fish in the market therefore had been fluctuating throughout the year.

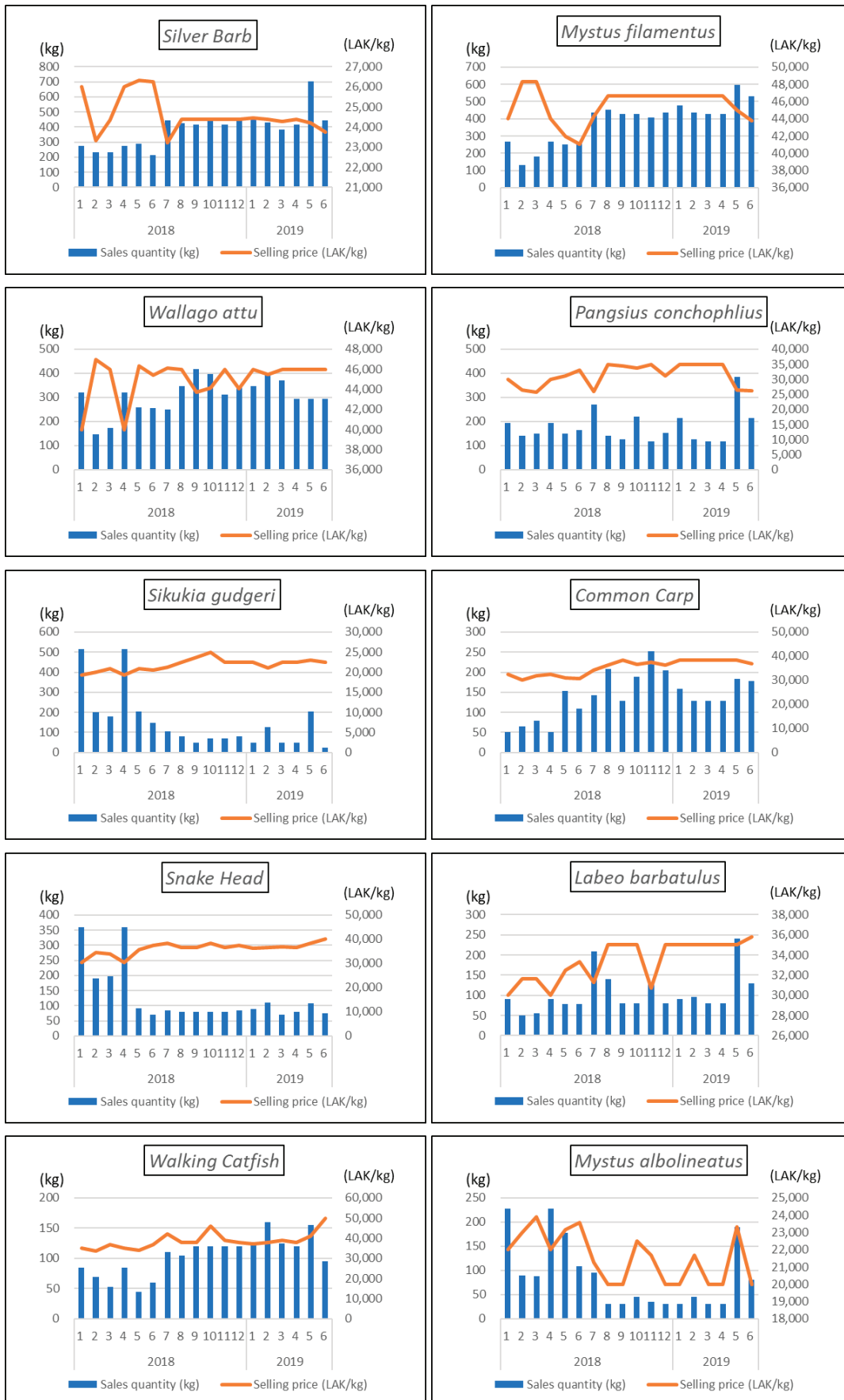


Fig. 28 Changes in market price of fresh fish by fish species for 18 months

2.3 Support for the activities of Fisheries Management Committee (FMC)

2.3.1 Introduction of fish processing techniques

Fish processing techniques were introduced to Mai Nam Pakan Village in order to promote alternative livelihood for generating additional income. Since the Village is a new settlement in 1992, the villagers obtain their main income from agriculture and labor. Their income is low and insufficient, especially when the quantity of catch is high during the rainy season and the price of fish is low. They also have limited knowledge for value adding fish products. Therefore, the Project needs to introduce fish processing techniques to this Village and that the knowledge they gained could be transferred to the other areas.

1) Planning for fish processing techniques and selection of acceptable processing techniques for target species

The Fisheries Management Committee meeting organized on 4 October 2017 discussed the idea of fish processing and sought for the appropriate fishery products of Mai Nam Pakan Village to be promoted as alternative livelihood. The meeting was attended by 50 participants including community key persons and members, representatives from the Department of Livestock and Fisheries Headquarters, local offices, and SEAFDEC/TD. From the discussion, it was found that the community members have experienced producing fermented fish “Pla Daek” (Thai: Pla Ra), produced by fermenting fish with rice bran or roasted rice powder and salt, kept in closed container for at least six months. Mostly, the fermented fish are produced during May-November (rainy season) because of big amount of fish catch during this period and the price of fresh fish is about 3,000-5,000 KIP/kg. The main problems in fish processing business are: lack of market to sell the products, inadequate sanitation and standards, and limited knowledge on packaging. Since there was no women’s group and other business ventures in this community, the Project supported the Village by providing the members the knowledge and skills on the fish processing techniques and packaging. All the community members could be involved in this processing activity, not only the women but also the fishers who would support and supply the raw materials. In addition, the community members proposed that the kind of fish processing products should be interesting to produce in this area, namely: 1) Pla Som (fermented fish with cooked rice and salt: sour taste), 2) Dried fish, 3) Jaew Pladaek (chili paste with fermented fish), and 4) Pla Daek (fermented fish with rice bran).

2) Organization of fish processing group and conduct of training on fisheries processing techniques

The fish processing group was established under the Fisheries Management Committee (FMC) of Mai Nam Pakan Village since July 2018, composed of eight (8) members all of whom are women residing in the project area. The meeting was organized to elect the members of the group committee and decide on the place for fish processing operation. The list of fish processing group committee members is shown below:

1. Ms. Kinnaly (Chairperson)
2. Ms. Bounthawi (Vice Chairperson)
3. Ms. Wanna (Treasurer)
4. Ms. Davon (Secretary)
5. Ms. Ban (Member)
6. Ms. Na (Member)
7. Ms. Phetsamai (Member)
8. Ms. Khumkaew (Member)

The meeting agreed that the fish processing activity would be conducted at the community center which is convenient for group members to join and where water supply is sufficient. Moreover, the group also drafted the rules and regulations for group management with assistance from the local fisheries officers. The group agreed to produce fermented fish or “Pla Daek” as their fish processing product because they have the experience already of the processes but still lack of knowledge on hygiene technique. They also proposed to produce the other products such as dried fish and “Pla Som” fermented fish with cooked rice in sour taste.

Training course on fish processing techniques

The fish processing group went on a study visit to Chaiburi women’s group in Tha-Uten District Nakhon Phanom Province, Thailand which is a border area of Khammouane Province, during 7-8 September 2018, with eight (8) group members and two (2) fisheries officers in tow. The group members learned and gained experience in fish processing techniques through the training course on three (3) kinds of products: 1) Pla Daek, 2) Pla Som, 3) Pla Som Hor (fermented fish meat with cooked rice covered with banana leaves, a famous product from Thailand), and were also provided information on equipment used, raw materials, ingredients, and the steps of producing as well as packaging and marketing. After they gained knowledge and experience from the training course in Thailand, the members have the confidence to produce the fish processed product “Pla Som Hor” (fermented fish meat with cooked rice covered with banana leaves) and sell to the market by themselves.

The Project provided the equipment and some raw materials to the fish processing group in November 2018 to be able to carry out their activity in fish processing. The equipment mainly comprise those used to produce Pla Som Hor, such as meat grinder with motor, mixer, steel table, ice bucket 200 liters, knife, bowls, and trays.

Table 5 List of fish processing equipment

Item	Unit	Baht
1. Meat grinder (with motor)	1	7,500
2. Mixer (with motor)	1	7,200
3. Meat grinder with spare parts	1	1,160
4. Table (made of steel)	1	2,097
5. Ice bucket/box 200 Liters	1	3,269
6. Other materials		4,693
7. Revolving fund for processing group		10,000
Total		35,919

The training course on how to use the equipment for fish processing with safety procedures for the fish processing group was organized at Mai Nam Pakan Village on 21 December 2018. Two (2) resource persons from Chaiburi women’s group of Thailand were invited to transfer the knowledge on producing “Pla Som Hor” and the instruction on use of equipment especially how to use the meat grinder and mixer safely. The training also discussed the source of raw materials and packaging, and the lecturer suggested that to reduce the cost of materials, they should plant bananas near their house to have enough supply of banana leaves to be used for packaging, and there is no need to buy the leaves.

The fish processing group meeting was organized to finalize the rules and regulations of the group and decide on the fish processed products that they would produce. The meeting also discussed the management of the group, and agreed on the process of group operations, as well as on the accounting and financial matters, allocation of profit, and processing plans. The fish processing group decided to produce products once per week and divided the roles and responsibilities to group members, such as finding raw materials, preparing the materials, producing the products, selling products at the market, and recording the sales and proceeds in accounting logbook. The group agreed to allocate their profit after gaining income from selling the products once per month, into three (3) parts: FMC = 10%, processing group = 10%, group members= 80%. The group manages their members’ attendance by recording the number of working days of members, which is used to calculate the benefit given to members. The group decided to produce three (3) kinds of fish processed products: “Pla Daek” “Pla Som Hor” and “dried fish.” The fish processing group also practices recording of their activities, transactions, and related financial matters in the accounting logbook.

3) Production of processed fish products

The Project introduced some fish processing techniques to the fish processing group of Mai Nam Pakan Village by conducting a training course and study visit to Nakhon Phanom Province in Thailand, after providing the necessary equipment for fish processing in December 2018, such as meat grinder etc. The group started to produce their target fish products, such as “Pla Som Hor” (fermented fish meat with cooked rice covered with banana leaves), “dried fish,” and “Pla Daek” (fermented fish with rice bran). These were sold by the group members in Hinboun Market, which is about 10 kilometers from the Village. The fish processing group has operated their fish processing activity only eight (8) times, and gained net profit as shown in the Table below:

Table 6 Sale of fish processing product

No.	Income (KIP)	Cost (KIP)	Net profit (KIP)
1	1,271,000	1,110,000	161,000
2	1,227,500	1,134,000	93,500
3	1,549,000	1,350,000	199,000
4	1,800,000	1,985,000	- 185,000
5	2,370,000	2,091,000	279,000
6	2,512,000	2,407,000	105,000
7	2,145,000	1,712,000	433,000
8	1,180,000	1,690,000	- 510,000
Total	14,054,500	13,479,000	575,500

From the above table, it should be noted that their fish processing operations lost some profit, which was due to the high cost of the raw materials (fresh fish) during those times, and also because of the groups' limited knowledge in preserving fresh fish that easily gets spoiled before these could be processed into safe fish products. However, the group also realized that the difficulties in finding raw materials, marketing, group management including accounting, profit allocation, production planning, were due to of their limited experience in group work. The FMC therefore organized a meeting with the fish processing group to address the groups' concerns in order to develop the fish processing group. It was in this regard that the group elected its new leader to continue the fish processing activity and the FMC has been working closely with them to monitor their processing operations and help in recording their transactions and relevant activities in the accounting book. The fish processing group plans to produce fish products once per week and the profit allocation is given every six months based on the members' recorded engagement in the processing operations. The group also constructed the small hut near the main road located in the Village where they could sell their fish processed products.



Fig. 29-40 Introduction of fish processing techniques and fish processed products on sale

2.3.2 Introduction of aquaculture techniques

The FMC of Mai Nam Pakan Village expressed the interest to conduct aquaculture venture because their members earn low income from agriculture, fisheries and labor, but the fishers had no knowledge in aquaculture operations. In addition, the aquaculture ventures had not expanded in this Village. The fishers in Mai Nam Pakan Village then indicated their interest in seeking for alternative jobs to generate additional income. The Project then planned to introduce fish aquaculture techniques to them for their alternative livelihood, and at the same time reduce the fishing pressure in Nam Pakan River as the fish products from culture could serve the protein needs of the community people.

1) Introduction of aquaculture techniques and selection of acceptable aquaculture target species, and specific techniques

The FMC meeting organized on 14 February 2018 and attended by 19 participants (one woman and 18 men), was meant to promote the generation of alternative livelihood through introduction of aquaculture techniques for the fishing community of Mai Nam Pakan Village. Specifically, the participants were made to understand the situation of aquaculture in the Project area and discuss among the community members the idea of introducing a possible aquaculture approach to be implemented in the area. The fishers also shared their experience in culturing catfish for household consumption and expressed the interest in culturing three species, such as catfish, tilapia and frog. Moreover, the fisheries officers from the Department of Livestock and Fisheries had also conducted research on the appropriate fish species for aquaculture at the Project site by checking the location and water condition. They recommended that catfish could be the target species for culture in cement ponds which is suitable for this Village. The fishers were then encouraged to establish themselves into an Aquaculture Group and formulated the structure and regulations of the group, which should be composed of a leader, vice leader and committee members before they could implement any aquaculture activity. The FMC also suggested that it would be useful for the aquaculture technique to be also transferred to the other communities in the future.

2) Organization of aquaculture group and conduct training on aquaculture techniques

Organization of Aquaculture Group

In July 2018, the Aquaculture Group was established under the FMC of Mai Nam Pakan Village, composed of twelve (12) members. The meeting was then organized to elect the members of the group's committee and discuss the target fish species which is suitable for culture in the area. The group agreed to operate fish culture in cement ponds which could maintain enough water level for stocks, and decided to culture catfish based on the result of research on appropriate fish species for culture. Moreover, the group also drafted the rules and regulations of the aquaculture group. The list of committee members is shown below:

1. Amporn Puttawi (Chairman)
2. Bounlum Wantawong (Vice Chairman)
3. Siapsert Chantarach (Vice Chairman)
4. Putorn Singyod (Financial Unit)
5. Kongthong Youngnuwong (Accounting Unit)
6. Thongthai Thammarangsi (Member)
7. Lankhamdaeng Petdara (Member)
8. Sorn Jumpanuwong (Member)
9. Saengwan Chaimongkol (Member)
10. Lien Polarsa (Member)
11. Porn Srisomboon (Member)
12. Juntra Singmaneechan (Member)

Training course on Fish Aquaculture Techniques

The training course on fish aquaculture techniques was organized at Mai Nam Pakan Village on 1-2 May 2019 and attended by twelve (12) aquaculture group members and ten (10) community members (Male:18, Female:4). Resource Person from Nam Xouang Aquaculture Center in Vientiane, Lao PDR was invited to give a lecture on catfish culture including culture systems, type of culture, fish feeds, pond cleaning, and marketing. An introduction on the culture of the other fish species, namely: silver barb, Indian carp, common carp, and frogs, was also presented to the participants for them to gain knowledge on fish culture. The trainees were encouraged to actively take part in the question and answer session in order that they could have clear understanding of fish culture techniques.

After the training course, the Aquaculture Group decided to conduct a trial fish culture using two (2) types of culture, such as: 1) cement pond, 2x3 meters; and 2) concrete pipe, size 1x0.4 meter (4 units), and the group was divided into two subgroups, to be responsible for each culture type. The Project provided 1,000 catfish seeds and 5 bags of fish feed for the subgroup culturing in cement pond, and 800 fish seeds and 4 bags of fish feed for the subgroup culturing in concrete pipe. The local fisheries officers also assisted the group to find fish seeds and feeds. These two cases would develop the human capacity of the aquaculture group through learning by doing.

3) Production from the aquaculture trial

The Aquaculture Group met on 4 September 2019 to discuss the results of the catfish culture trial and the aquaculture implementation plan. In the catfish culture trial in cement pond, the survival rate was 32%. Out of the 1,000 juvenile catfish released in cement pond, 200 catfish died in the first month and 100 fish in the second month. After three months culture with three bags of fish feed given, 64 kilograms of catfish or 320 fishes (about 5 fish per kg) were harvested from the cement pond. The fishers sold the catfish at 15,000 KIP/kg (2 USD/kg) earning a total income of 960,000 KIP (128 USD). For the catfish culture trial using concrete pipe, from the 800 fishes released, 350 fish juveniles died and two (2) bags of fish feed used for 3 months culture. Four (4) kg of catfish were harvested and sold while about 8 kg (30 fishes) remained. The main problem encountered in both trials was high mortality of the juveniles which might have been caused by poor water quality, the changing weather condition, and management system. The survival rate of catfish cultured in cement pond was better than in the concrete pipe, although the water used was less in concrete pipe than in cement pond, and found easy to clean.

Table 7 Summary of results of two aquaculture trials

Trial cultures	Cement Pond	Concrete Pipe
Catfish released (fingerlings)	1,000	800
Mortalities (tails)	300	350
Feed (bags)	3	2
Harvested fish (kg)	64	12
Harvested fish (tails)	320	50
Fish sold (kg)	64	4
Income (USD)	128	8

After learning catfish culture from the trials, the aquaculture group agreed to operate an aquaculture activity by constructing four (4) cement ponds size 3x4 meters at the Community Center. The Project provided water pump, fish seeds (about 4,000 fishes), and 24 bags of feeds for the first culture, after which the group will have to operate the activity by themselves using their own investment. Furthermore, the group also implements a management plan where three (3) members are in charge of water management and cleaning the pond and eight (8) members to take care of the stocks and feeding. The group therefore revised the group regulations to include this management plan. Finally, the group expressed confidence in continuing this aquaculture activity and agreed that part of the funds gained from selling the catfish would be kept for the next cropping.



Fig. 41-46 Introduction of aquaculture techniques

Chapter 3. Conclusion and Recommendations

3.1 Conclusion

1) Project objectives and activities

The overall goal of this Project was to conserve the fishery resources in the area and improve the fishers' livelihood at Mai Nam Pakan Village in Khammouane Province.

In order to achieve this goal, the Project carried out the following activities.

- ① Establishment of fishers' organization in Mai Nam Pakan Village
 - Fishers themselves established the fishers' organization (FMC) to manage the fishery resources
- ② Grasping of the situation of the local fishery, the quantity of catch and the price of fish in the market
 - Catch statistics survey and market survey were conducted to determine the current state of the fishery
- ③ Development of measures to conserve and manage the inland fishery resources in the area
 - Fishery regulations were formulated, protected areas established, and surveillance activities implemented
- ④ Development of measures to improve the livelihood of fishers
 - Aquaculture venture started and production of processed fishery products initiated in Mai Nam Pakan Village

2) Results

The details of the implementation and results for each project activity are described below.

- ① Establishment of fishers' organization in Mai Nam Pakan Village

Fishers' organization "FMC (Fisheries Management Committee)" was established in Mai Nam Pakan Village. Since the establishment of the FMC requires approval from the Lao Government, the local government has been involved in the process of establishing the FMC.

Meeting with fishers was held to establish the fishers' organization in the Village. At that meeting, the members and their positions in the FMC, as well as the roles of FMC were determined, and the articles of incorporation was drafted, discussed and decided.

Through these activities, the Project gained know-how on the procedures for establishing FMC and the approval process by the Government. These procedures and methods are likely to be applicable to other countries in the region.

With the establishment of FMC, a system to manage fisheries by fishers in Mai Nam Pakan Village has been established, and a situation has been created in which fisheries management activities can be carried out by the villagers.

Through the Project, the Meeting Center was constructed where all fishers in the Village could use when they gather together.

② Grasping of the situation of the local fishery, the quantity of catch and the price of fish in the market

The fishers in the Village of Nam Pakan did not have any information on the catch, the quantity and price of fish in the market in their area. Therefore, the Project conducted catch statistics surveys and market surveys from June 2017 to June 2019.

Such information is indispensable in order to grasp the actual situation of the local fisheries in the area, and the information is also necessary for the local government agencies to establish a system for collecting such information in the future.

③ Development of measures to protect and manage the inland fishery resources in the area

Fisheries regulations were developed through discussions among the fishers themselves under the established FMC. These fishing regulations include the establishment of conservation areas where fishing is prohibited. As expected, the fisheries regulations had been formulated through discussions among themselves, increasing the fishers' awareness of the conservation of fishery resources and contributed to their compliance with the fishery regulations. Therefore, it is important for fishers themselves to establish their own fishing regulations. The Project set up opportunities for concerned fishers to discuss among themselves, and encouraged and facilitated their discussions.

In order to conserve the fishery resources and achieve sustainable use, it is necessary to protect the fish juveniles and spawners. It is also necessary to manage the fishing effort so that this does not increase. For this reason, a protected area was established around Mai Nam Pakan Village where fishing operations were prohibited.

Illegal fishing had been operating in the conserved areas. The fisheries enforcement group was therefore formed under the FMC to conduct the fishing surveillance activities. These groups monitor possible illegal fishing operations daily.

The reason why the fishers were able to conduct their own surveillance activities was that they themselves recognized the importance of conservation of the fishery resources and prohibition of illegal fishing activities which is indispensable to stop the fish stocks from declining. The fisheries surveillance activity in Mai Nam Pakan Village was one of the most successful cases of monitoring the inland water fisheries.

④ Development of measures to improve the livelihood of fishers

Mai Nam Pakan Village is one of the poorest fisheries villages in Lao PDR where the villagers usually have low income.

This is true because the fishers do not obtain much income from the local fisheries. In order to improve the livelihood of fishers in Mai Nam Pakan Village, production of fish processed products and aquaculture were introduced.

➤ Production of fish processed products

In producing fish processed products, fishers add value to their fish catch and increase their income. This is also beneficial for the effective use of their catch during the rainy season. Thus, the production of fishery products had been promoted in Mai Nam Pakan Village.

Fisher-women gathered together to form a group for the production fish processed products. A team was formed under FMC to produce fish processed products. The team consists of leaders, accountants, technicians, and so on.

Training was provided by technicians from Thailand for the team in Mai Nam Pakan Village to learn the technology of producing fish processed products. Currently, the production of fish processed products is ongoing, providing supplementary income for the fishers' households.

➤ Introduction of aquaculture techniques

Aquaculture venture has not been promoted in Mai Nam Pakan Village. Aquaculture could provide not only a secondary source of income for fishers, but also a stable source of income when fishing could not be practiced. Therefore, the aquaculture of catfish was introduced to the Village. An aquaculture team has been set up under the FMC for the catfish aquaculture.

Training was provided by aquaculture technical experts for the aquaculture team in Mai Nam Pakan Village for them to acquire the necessary skills. Tanks for the aquaculture of catfish had been constructed as common facility in the Village. Catfish aquaculture had started, but there was a problem of high mortality, which was mainly due to shortage of water volume or the rising water temperature. In the future, it will be necessary to improve the technology to reduce mortality and increase the number of fish to be farmed by improving the technology.

3.2 Recommendations

In this Project, activities ①-④ were carried out to conserve and manage the fishery resources and improve the livelihood of fishers. This Project carried out case studies on sustainable fisheries management and improvement of livelihood of small inland fisheries in villages.

The approaches of this Project were:

- ① Establishment of fishers' organization
 - Established a platform for fishers to manage the fishery resources
- ② Grasping the fisheries situation
 - Conducted catch statistics surveys and market surveys

③ Implementation of fisheries management measures

- Set fisheries regulations through discussions among fishers themselves, established conservation areas, and surveillance activities conducted by fishers

④ Development of measures to improve the livelihood of fishers' households

- Introduced aquaculture technology and production of fish processed products

Each of the activities under this Project was a case study of how to manage fishery resources and improve livelihoods in small inland fisheries villages. In order to conserve and sustainably use the fishery resources, the voluntary approach of fishers themselves to carry out resource management is of foremost importance. The voluntary efforts by fishers themselves were boosted in the activities of this Project.

In addition, the production of fishery products and practice of aquaculture have shown to be effective means of improving the livelihoods in fishing villages. These small new business ventures have proven to be effective in enhancing the fishers' livelihoods.

The approach of this Project had been effective in introducing fisheries resource management and improving the livelihoods for small inland water fisheries villages, and is considered to be applicable to other countries in the region.

III. Promote co-management/community-based fisheries management in inland fisheries:

Nam Xouang Reservoir, Lao PDR

Chapter 1. Introduction of the Project: Nam Xouang (NX) Reservoir

1.1 Background of the project

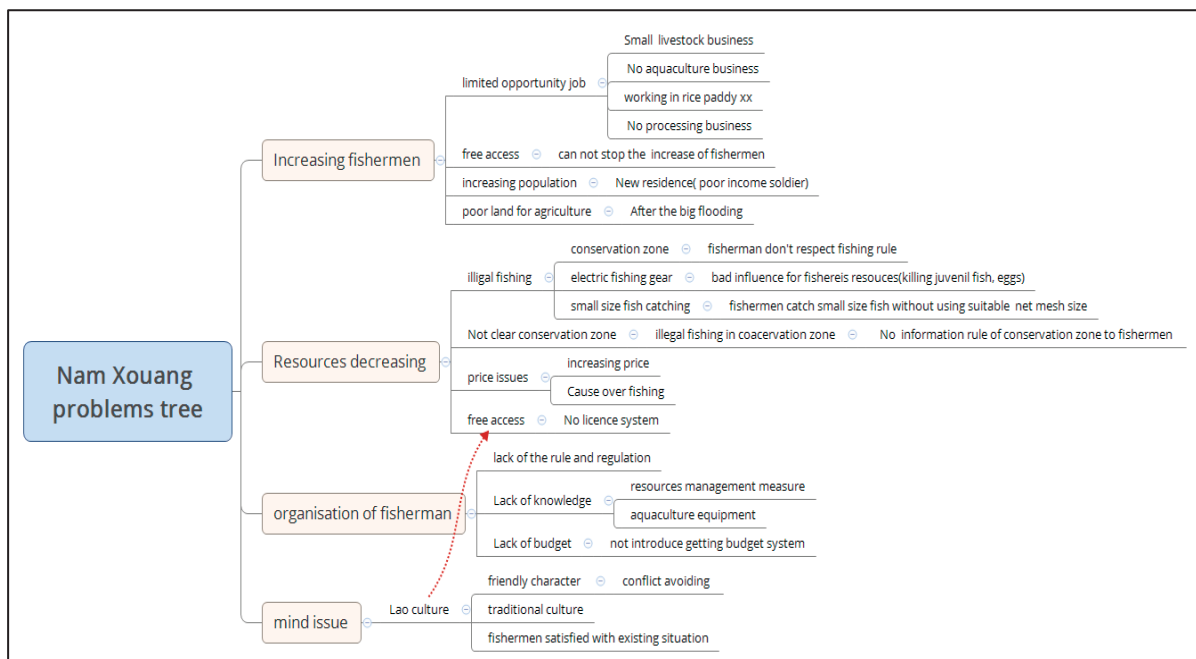
The Project Design Matrix (PDM) was created to determine the project objectives, outputs, and activities. In preparation for the PDM, a field survey was conducted to clarify the current status and problems of the inland fishery at the target site, which was the Nam Xouang Reservoir.

Based on the data obtained from the field survey, the current status and problems of inland fisheries in the Nam Xouang Reservoir were analyzed (Problem Tree), and the project goals (Objective Tree) were derived there from. The PDM was created indicating the final goals, outputs, and activities of the project. Moreover, the project was designed using the PCM (Project Cycle Management) methods.

1.1.1 Analysis of fisheries problems in Nam Xouang Reservoir

In order to design the objectives and activities of the project, interviews with fishers in the Nam Xouang Reservoir were conducted, and the necessary information collected and analyzed to come up with the compiled fisheries problems in the village.

The survey results were summarized as follows.



1) Results of the problems analysis in Nam Xouang Reservoir

➤ Number of fishers in the area is increasing as more villagers want to do fishing.

The reasons for the increasing number of fishers are as follows:

① There are few job opportunities in the community as

- The scale of livestock industry is small
- There is no aquaculture in the area
- There is no fisheries processing industry

② Anyone can freely access the fisheries

- No fisheries license system

③ The population of the area is increasing

④ Limited land for agriculture

➤ Catch volume is decreasing, because of the following:

① Illegal fishing is persistent

- Fishers are not complying with the prohibition of fishing in conservation areas
- Continued use of electricity in fishing as fishers do not consider that the use of electricity in fishing adversely affects the fishery resources, killing the fish juveniles and spawners
- Small sized fish are caught because the appropriate mesh size of fishing gear is not regulated and used

② Conservation areas are not clearly specified

- Illegal fishing continued to be in operation in conservation areas

③ Price of fish is high

- The high prices of fish encourage fishers to do over fishing

④ Anyone can do fishing because there is no fisheries license system, thus, increasing the number of fishers as well as the fishing effort

➤ There are no Fisheries Management Organizations (FMCs)

① Fisheries regulations are not established by fishers themselves because there is no fishers' organization

② Fishers do not have knowledge on fisheries management systems

③ Fishers have no funds to promote fisheries management measures

➤ Problems with traditional practices of fisheries in this area

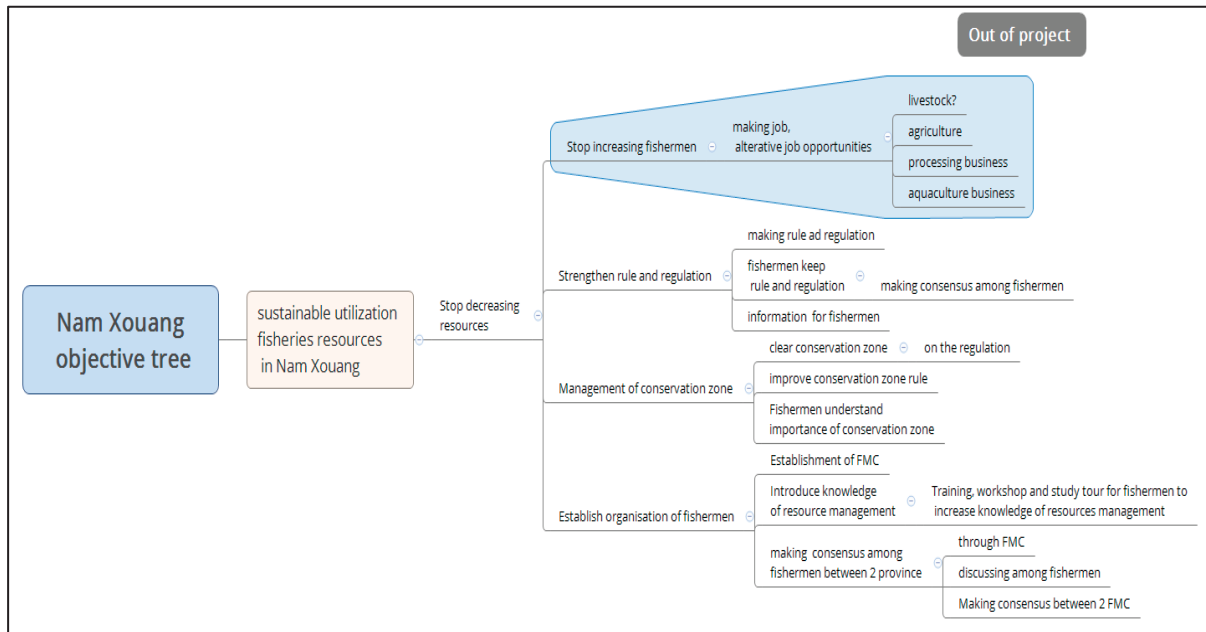
① Fishers do not punish illegal fishers because they have the custom of avoiding conflicts

② Fisheries in Nam Xouang Reservoir is possibly free access for fishing based on traditional practices

③ Fishers themselves are satisfied with the current state of their fisheries

1.1.2 Results of objective analysis

Base on the result of the problem analysis, the project objectives and activities were created.



1.1.3 Development of objectives and activities

➤ Prevent the increase in the number of fishers

- ① Create a new job opportunities
 - Introduction of aquaculture
 - Introduction of fisheries processing

➤ Strengthen fishing rules

- ① Formulation of fishing regulations
- ② Making fishers comply with fishery rules and regulations
 - Form a consensus among fishers to comply with fishery regulations
- ③ Providing fishers with information on the current state of their fisheries and fishery resources

➤ Set up conservation areas where fishing operation is prohibited

- ① Clarifying the conservation areas
 - Specify the location and rules of the conservation areas in the fishery regulations
- ② Promotion of fishing rules in conservation areas
- ③ Making fishers aware of the importance of conservation areas

➤ Establish a fishers' organization

- ① Establish fishers' organizations (FMCs)
- ② Introduce fisheries management rules to fishes organizations
- ③ Form a consensus on fishing regulations between the two FMCs in the Nam Xouang Reservoir.

1.1.4 Project Design Matrix (PDM): Project Objective, Output, Activities

The project title : Promote Co-management/Community-based Fisheries Management project in Inland Fisheries: Nam Xoang Reservoir, Lao PDR	
Overall goal	Indicators
Sustainable utilization of fishery resources and fishers' livelihood security in Nam Xouang reservoir.	
Project Objective	
The abundance of fishery resources and improve of fishers' livelihood in Nam Xouang reservoir.	
Out put	
1. Fisheries Management Committee (FMC) in 2 Districts were established	
2. The fishery rules and regulations in Nam Xouang reservoir were improved and strengthened	
3. The fisheries management in conservation zone improved	
4. Fishers' income improved by promoting fish processing	
Activities	
1. Establishment of fisheries management committee (FMC)	2 Number of FMC will be established
1-1. Conduct meeting for establishing FMCs in Phone Hong District	
1-2. Develop fisheries management rules and regulations in Nam Xouang reservoir	
2. Promote fisheries management rules and regulations	70% fishermen understanding the rules and regulations
2-1 Conduct training/meeting for information and dissemination of fisheries management rules and regulations for fishermen, and local government staff	
2-2 Produce extension media such as poster and booklet	
2-3 Implement practical surveillance activities at conservation zone	
3. Strengthen fishery resources management	Amount of fish increasing in conservation zone.
3-1 Evaluate the fishery resources (CPUE, stock assessment) (implementing by IFRDMD)	
3-2 Demarcation and mapping fish conservation zone	
3-3. Fish restocking program (e.g. releasing juvenile)	
4. Improve of fish processing technique and value added	Income of fishers' family increased
4-1 Research survey for the suitable fishery product and marketing	
4-2 Practical training course for fishery value added and fishery processing techniques	
4-3 On-site producing the fishery product in the processing group (fisher and their wife)	

1.1.5 Work plan

Work plan for 2017-2019		2017												2018												2019											
Detail activities		Act.	1	2	3	4	5	6	7	8	9	#	#	1	2	3	4	5	6	7	8	9	#	#	1	2	3	4	5	6	7	8	9	#	#		
1. Establishment of fisheries management committee (FMC)																																					
1-1. Conduct meeting for establishing FMCs in Phone Hong district.																																					
	Pre-organization meeting to establish FMC	A1																																			
	The meeting for election of committee position and set up the articles of association of FMC	A2																																			
	The meeting for drawing up draft fisheries regulation and conservation zone demarcation/mapping	A3																																			
	Public announcement of FMC	A4																																			
	Construction of FMC meeting room	A5																																			
	FMC management meeting	A6																																			
	The meeting for management of microfinance	A7																																			
	Microfinance fund	A8																																			
1-2. Develop fisheries management rule and regulation in Nam Xouang reservoir.																																					
	Pre-organization meeting for planning unification of fisheries rule and regulation among 2 FMCs	B1																																			
	Workshop for planning unification fisheries regulation and rules in 2 FMCs	B2																																			
	The meeting for monitoring and follow up fisheries management rule and regulation implementing	B3																																			
	(Note: B3 will be implemented by FMC, and DLF will follow up by getting the report from FMC)																																				
2 Promote fisheries management rules and regulations																																					
2-1 Conduct training/meeting for information and dissemination of fisheries management rules and regulations for fishermen local government staff.																																					
	Training for local government staff to increase knowledge of fisheries management	C1																																			
	Awareness creation on fisheries co-management including the community rules and regulations to fishermen and local authorities.	C2																																			
	Study tour (Bolikhumxay Province) for FMC member to increase knowledge of fisheries management	C3																																			
2-2 Produce extension media such as poster, booklet																																					
	The meeting for designing contents of extension media	D1																																			
	Produce fisheries role and regulation booklet, poster signboard, and VDO	D2																																			
	Install signboards into conservation zone.	D3																																			
2-3 Implement practical surveillance activities at conservation zone																																					
	Development of M&E system and planning by local authorities and 2 FMCs	E1																																			
	Implementation of M&E in Nam Xouang reservoir.	E2																																			
	Preparation of patrolling boat with engine	E3																																			
3. Strengthen fishery resources management																																					
3-1 Evaluate the fishery resources (CPUE, stock assessment) (implementing by IFRDMD)																																					
	Design the survey for assessment the fishery resources	IFRDMD																																			
	Implementation by survey and data collection for evaluation the fishery resources	IFRDMD																																			
	Data analysis to assessment of the fishery resources	IFRDMD																																			
3-2 Demarcation and mapping fish conservation zone																																					
	Baseline survey to identify fish species composition in Nam Xouang reservoir	F1	5month																																		
	Preparation of fish conservation zone mapping (identify latitude and longitude of conservation zone)	F2																																			
	Produce and install buoys for demarcation fish conservation zone	F3																																			
	Fisheries and Socio-economic survey by local officers (will be implemented for pre and <u>post-assessment</u>)	F4																																			
	Compiling and anlysis of data on Socio-economic survey	F5																																			
3-3 Fish restocking program (e.g. releasing juvenile)																																					
	Produce mobile hatchery system	G1																																			
	Training for FMC to master direction of hatchery system	G2																																			
	Implementation hatchery system and releasing juvenile fish	G3																																			
4. Improve of fish processing technique and value added																																					
	Research survey for the suitable fishery product and marketing	H1																																			
	Practical training course for fishery value added and fishery processing techniques	H2																																			
	On-site producing the fishery product in the processing group (fisher and their wife)	H3																																			

1.1.6 Project site and project period

Project site: Nam Xouang Reservoir in Lao PDR

Project period: January 2017 -Dec 2019

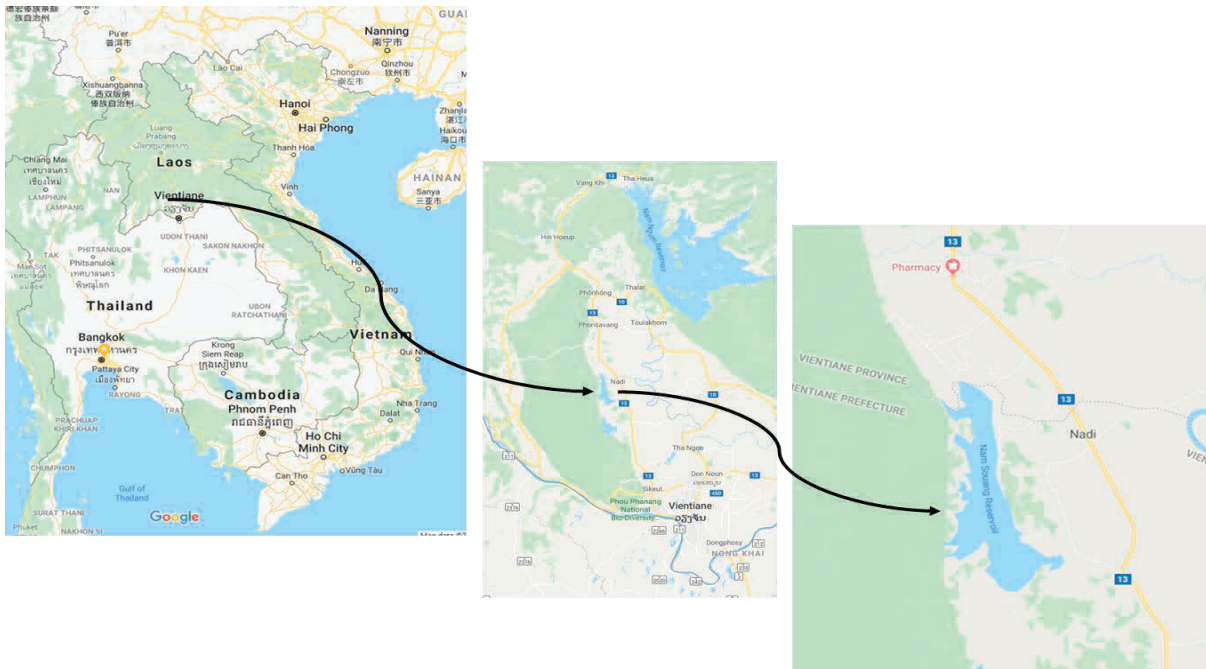


Fig. 47 The project site: Nam Xouang Reservoir in Lao PDR

Chapter 2. Project Activities and Results

2.1 Establishment of fisheries management committee (FMC)

The FMC is a fishers' organization or an association of fishers to manage the fisheries, making the fishers capable of effectively managing the fisheries and the resources by the FMC themselves. The procedures for organizing the FMC in Phone Hong (PH) District, as one of the specific sites for the Project activities in Nam Xouang (NX) Reservoir was started by convening a meeting between the fishers and officers to agree on the FMC establishment. After that, the fishers from each village were asked to register to be candidates for FMC members. Then, the meeting to elect the FMC members was organized. Subsequently, the meeting to define the roles/responsibilities and the rules/regulations of the FMC was also organized as the fishers and officers need to finalize and adopt the FMC organization altogether. Then, there would be the declaration of the FMC in PH District by the Government.

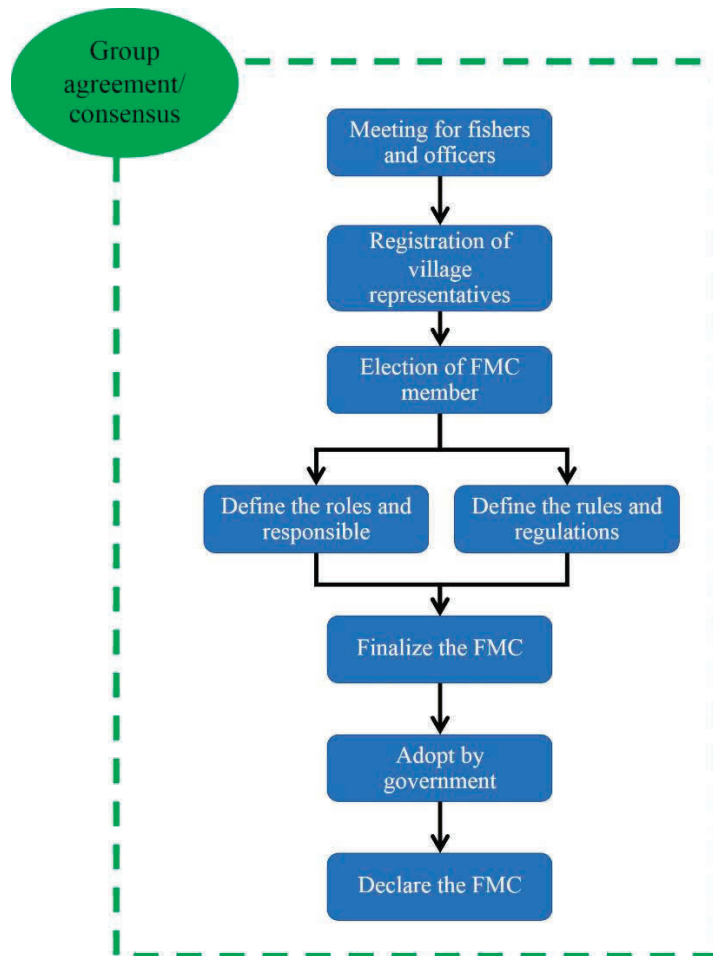


Fig. 48 The procedure for FMC organization in NX reservoir

2.1.1 Conduct meeting for establishing FMC in Phone Hong District

The NX Reservoir has two (2) Districts, Phone Hong (PH) and Naxaythong (NT). The FMC in NT District has been set up through the support of the Mekong River Commission (MRC). However, the FMC has not yet been set up in PH District, even if it is very important to establish the FMC in order to manage the NX Reservoir effectively. For the implementation of the Project in Lao PDR, SEAFDEC and DLF at the onset organized a meeting with local fishers from the two (2) Districts to brief them about the purpose of the Project.

For the FMC establishment, this was started by conducting a meeting on 8 June 2017 at PH District with fishers, local officers and head quarter representatives (*Fig. 49*). With about 30 participants, the meeting elected the Fisheries Management Committee members, as well as defined the positions and duties of the FMC. As a result, there are 25 FMC members (two (2) women and 23 men) from nine (9) villages. The positions and duties of each member are defined as they were grouped into six (6), namely; *Group 1*: three (3) persons for general management of the FMC; *Group 2*: two (2) persons for financial and accounting; *Group 3*: three (3) persons for conflict management; *Group 4*: 12 persons for monitoring, control and surveillance; *Group 5*: three (3) persons for buying and selling fish; and *Group 6*: two (2) persons for fish processing.

After that, the FMC establishment was declared on 23 June 2017. The results of the elections and details of the declaration are shown in **Table 8 and 9**.

Table 8 Results of election for committee positions in Phone Hong District (*Appendix 2*)

Articles 01: Elected 25 FMC members of Nam Xouang Reservoir			
No.	Name		Position
1	Mrs. Keakham	Sengpphouthong	Head of FMC (Nathep Village)
2	Mr. Bouanlien	Khantixay	Deputy Head of FMC (Jengsavang Village)
3	Mr. Ngeapmany	Sensy	Deputy Head of FMC (Nongpoung Village)
4	Mr. Sabai	Baodeng	FMC Member (Phonxay Village)
5	Mr. Bounmy	Silivong	FMC Member (Nathep Village)
6	Mr. Sinouan	Sivilay	FMC Member (Mai Village)
7	Mr. Khamnoun	Venvienthong	FMC Member (Jengsavang Village)
8	Mr. Chaieko	Pathoumxath	FMC Member (Tao than Village)
9	Mr. Kam	Phomvisay	FMC Member (Phonsoung Village)
10	Mr. Chonkham	Sipaseth	FMC Member (Jensavang Village)
11	Mr. Bounheuang	Thommavong	FMC Member (Jengsavang Village)
12	Mr. Nen	Pasouan	FMC Member (Nathep Village)
13	Mr. Add	Phonpida	FMC Member (Nathep Village)
14	Mr. Monesy	Sibounheuang	FMC Member (Nathep Village)
15	Mr. Noy	Sivolalath	FMC Member (Jengsavang Village)
16	Mr. Daovy	Keomanivong	FMC Member (Nathep Village)
17	Mr. Sithon	Sithanoxay	FMC Member (Dongkhao Village)
18	Mr. Tui	Airniphone	FMC Member (Phon Khong Village)
19	Mr. Bouasavanh	Xamounty	FMC Member (Nongphoung Village)
20	Ms. Douangdean	Xayyavongphet	FMC Member (Nathep Village)
21	Mr. Khamphan	Keobouaphan	FMC Member (Army Village)
22	Mr. Thongkham	Inpanya	FMC Member (Army Village)
23	Mr. Daovone	Lithvixay	FMC Member (Army Village)
24	Mr. Daylamone	Manpaseth	FMC Member (Army Village)
25	Mr. Bounphen	Xaiyavong	FMC Member (Army Village)
Articles 02: This FMC should clearly take on their positions and responsibilities among themselves			
Articles 03: The declaration letter is effective on 23 June 2017			

Table 9 Positions and duties of the FMC members (*Appendix 3*)

Articles 01: Positions and duties			
I. General Management for FMC			
<i>No.</i>	<i>Name</i>		<i>Position</i>
1	Mrs. Keakham	Sengpphouthong	Head of FMC (Nathep Village)
2	Mr. Bouanlien	Khantixay	Deputy Head of FMC (Jengsavang Village)
3	Mr. Ngeapmany	Sensy	Deputy Head of FMC (Nongpoung Village)
II. Financial and Accounting			
4	Ms. Douangdean	Xayyavongphet	FMC Member(Nathep Village)
5	Mr. Khamnoun	Venvienthong	FMC Member(Jengsavang Village)
III. FMC for Conflict Management			
6	Mr. Sinouan	Sivilay	Head
7	Mr. Bounmy	Silivong	Deputy Head
8	Mr. Chonkham	Sipaseth	Member
IV. FMC for Monitoring, Control and Surveillance			
9	Mr. Nen	Pasouan	Head
10	Mr. Bounheaung	Thommavong	Deputy Head
11	Mr. Jaikeo	Pathoumxath	Member
12	Mr. Sithon	Sithanoxay	Member
13	Mr. Kam	Phomvisay	Member
14	Mr. Tui	Airniphone	Member
15	Mr. Bouasavanh	Xamounty	Member
16	Mr. Khamphan	Keobouaphan	Member
17	Mr. Thongkham	Inpanya	Member
18	Mr. Daovone	Lithvixay	Member
19	Mr. Daylamone	Manpaseth	Member
20	Mr. Bounphen	Xaiyavong	Member
V. FMC for Buying and Selling Fish			
21	Mr. Sabai	Boadeng	Head
22	Mr. Monesy	Sibounheaung	Deputy Head
23	Mr. Ad	Phompida	Member
VI. FMC for Fish Processing			
24	Mr. Daovy	Keomanivong	Head
25	Mr. Noy	Sivolalath	Deputy Head
Articles 02: All of FMC members have the rights and duty to implement and control all fishers who access the fishing area in the northern part of Nam Xouang Reservoir			
Articles 03: FMC members need to follow this declaration letter			
Articles 04: This declaration letter is effective since 16 June 2017			



Fig. 49 Meeting to elect member of FMC at PH District and setting up of their responsibilities

In addition, the meeting for drawing up the draft fisheries rules and regulations including the conservation zone demarcation/mapping in PH District was convened on 26 June 2017 (Fig. 50). There were 33 participants in this meeting: from FMC members (25), five (5) officers from the local government, and three (3) officers from the central government. The draft of the fisheries rules and regulations including the conservation zone demarcation/mapping is shown in **Table 10**.

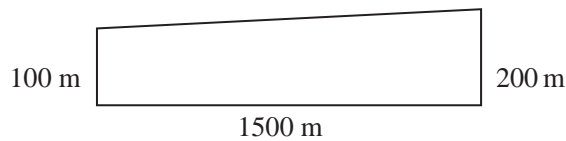
Table 10 Draft of fisheries rules and regulations

<p>Articles 01: General Fisheries Rules / Regulations for Nam Xouang Reservoir</p> <p>Fishery resources (fish) are high value national resources for Lao People and would benefit all. Water resources management is the duty of all, who should follow the rules and regulations established locally.</p>
<p>Articles 02: Regulations for fishing in the Reservoir</p> <p>The fishing regulation is aimed at those who fish in the reservoir</p> <p>It is a guideline for implementing and following the regulations</p> <p>It is controlled by fishing inspectors and officers who will enforce the regulations</p>
<p>Articles 03: Declaration for fishing gear use</p> <p>Only the following gears can be used:</p> <p>Hooks</p> <p>Castnets</p> <p>Gillnets</p> <p>Lift net maximum size 5m x 5m</p> <p>Gears that are not allowed:</p> <p>Explosives</p> <p>Guns</p> <p>Poisons</p> <p>Chemicals</p> <p>Electric fishing</p> <p>Spears</p> <p>Lee trap, seine net, traps</p>

Articles 04: Permanent conservation zones

Fishing not allowed in permanent conservation zones: area of conservation zones around 225,000 m².

Size of the conservation is shown below.

**Articles 05: Fishing season in conservation zone**

Fishing is not allowed during closed season (spawning season), which is from 1 May to 30 August, the non fishing areas are from the mouth of river at the reservoir

Seasonal conservation zone are: Houa Bong, Houa Khi Min, Houa Bak Thong, Houa E Luead, Houa Thap Pear, Houa Lath Xang and Houa Pouang None.

Articles 06: Prohibited fish species and conservation species

Giant Mekong catfish, electric fish

Articles 07: Fines for non-compliance with the regulations

For not complying with Article 3:

First time - confiscation of gears and fine of 2,300,000 Kip

2nd time - confiscation of gears and fine of 4,600,000 Kip

3rd time - arrest and send to district police

For not complying with Articles 4 and 5:

1st time - confiscation of gears and fine of 2,300,000 Kip

2nd time - confiscation of gears and fine of 4,600,000 Kip

3rd time - arrest and send to district police

In cases where electric fishing gear is used, the fine is 2,300,000 Kip for each fishing unit

If person is caught catching conserved species, the fine will be 2,300,000 Kip per kilogram of fish found in their possession

A person breaking the rules for the fishing conservation zones, must be reported to the FMC as soon as possible

Articles 08: Implementation of rules

FMC must make announcement of the conservation zone by declaring it to all people around the Reservoir

People must strictly follow the rules

Money from fines will be divided into three parts

Controlling unit 22%

Conflict resolution unit 13%

FMC management and micro-financing 65%

Articles 09: The regulation is effective from today 26 June 2017



Fig. 50 Meeting for drafting the regulations with FMC and fishers at PH District

After the FMC establishment and the fisheries rules and regulations defined for the PH District, a meeting to announce the FMC and the fisheries rules and regulations, was organized and attended by 40 participants (four (4) women and 36 men).

2.1.2 Develop fisheries management rules and regulations for Nam Xouang Reservoir (Fig. 51-54)

After the FMC establishment in PH District, a meeting/workshop was organized on 1 February 2018 to develop the fisheries rules and regulations for the whole NX Reservoir through discussion among fishers from PH and NT Districts. Organized at Ban Pho Sri Village, Naxaythong District, Vientiane Prefecture, the meeting/workshop was attended by 45 FMC members from PH and NT Districts (seven (7) women, 38 men). The meeting/workshop was facilitated by local government officers, who had been trained on fisheries management by SEAFDEC and DLF, and who introduced the fisheries laws in Lao PDR. After that, the FMC representatives from PH and NT Districts presented their rules and regulations. The FMCs of the two (2) districts agreed on the overall rules and regulations because these are mostly the same in these two districts, except the fine for illegal fishing in PH District which was higher than that of the NT District. After the workshop, each FMC had a meeting and discussed again this issue. Finally, the two (2) FMCs decided to use their own respective schemes of slapping fines because the two (2) districts have different conditions and situations. In NT District, the conservation zone is smaller than that in PH District, while illegal fishing operations are less than in PH District. Therefore, the NT District had not decided to increase the fine. Meanwhile, the PH District could not reduce the fine because it might be promote the increase of the illegal fishing practices in the Reservoir. Hence, the PH and NT Districts finalized their respective rules and regulations and use these effectively for fisheries management in the Reservoir (*Appendix 4, 5*).

Table 11 Rules and regulations for fisheries management in PH and NT Districts

Rules and Regulations for PH District (<i>Appendix 4</i>)
<ul style="list-style-type: none">- Refer to the Fisheries Law No. 03, dated 09 July 2009- Refer to the Aquatic and Wildlife Law No. 07, dated 14 January 2017- Refer to the results of Meeting on 09 January 2017
<p>Article 1: General Regulation</p> <p>Water resources (including fish) are of very high value for Lao PDR and the Lao people. Management of the rivers and responsible use of the waters are the prime duty of the people, since they will all benefit from these waters. It is the duty of all people to protect the water resources and follow the prescribed rules and regulations.</p>
<p>Article 2: Illegal fishing around Nam Xouang Reservoir</p> <ul style="list-style-type: none">- Fisheries management regulations shall remain valid- All people have to follow the regulations- Regulations are to be used as reference for officials in penalizing people who do not comply with the law
<p>Article 3: Fishing gear</p> <p>3.1. Fishing gear that are allowed to be used:</p> <ul style="list-style-type: none">- All kinds of hooks- Cast nets- Bamboo traps or basket traps- Lift nets, max. 5x5 meters- All kinds of gill nets <p>3.2. Fishing fee</p> <ul style="list-style-type: none">- Fisher's registration fee is 60,000 Lao Kip per person per year- Two (2) photographs, size 2 x 2.5 cm should be provided during registration- Boat registration fee is 20,000 Lao Kip per boat per year- Temporary fishing card fee is 20,000 Lao Kip per boat per day- Fishing boat ticket fee is 20,000 Lao Kip per person per day <p>3.3. Illegal fishing gear</p> <ul style="list-style-type: none">- All kinds of explosive materials used in fishing- All kinds of firearms- Use of electric shock- Spear guns
<p>Article 4: Whole year conservation zone</p> <ul style="list-style-type: none">- Area: length 2,000 meters and width 200 meters- Conservation zone is protected by FMC, village, and other sectors concerned- Fishing is prohibited inside the conservation zone

Article 5: Seasonal conservation period

- Fishing is prohibited and any kind of fishing gear could not be used during the seasonal conservation period from 01 May until 30 August

Article 6: Fishing of protected species

- Fishing is not allowed for the giant catfish, sting rays, and turtles

Article 7: Non-compliance and penalties

- Anyone not complying with **Article 3**, at *the first time* will have their fishing gear seized and fined 2,300,000 Lao Kip, and will be issued reprimand letter from village authorities or FMC
- *For Second Time Violation:* seizure of fishing gear and fine of 4,600,000 Lao Kip, and violator will be issued reprimand letter from village authorities or FMC
- *Third Time Violation:* persons or group who violate the regulations will be sent to District Security Office for necessary disciplinary actions according to the law
- Anybody or group not complying with **Article 4** and **Article 5**, at *the first time* will have their fishing gear seized and fined 2,300,000 Lao Kip and will be issued reprimand letter from village authorities or FMC
Second Time Violation: seizure of fishing gear and fine of 4,600,000 Lao Kip and will be issued reprimand letter from village authorities or FMC
Third Time Violation: persons or group who violate the regulations will be sent to District Security Office for necessary disciplinary actions according to the law
- Anybody or group not complying with **Article 6**, and found to be catching giant catfish will be fined 100%, and sent to District Security Office for necessary disciplinary actions according to the law. If found to be catching sting rays and turtles, they will be fined 2,300,000 Lao Kip and send to District Security Office for necessary disciplinary actions according to the law
- Anybody found to be using electric shock while fishing will be fined 2,300,000 Lao Kip. If found to be using poisonous substance while fishing, illegal fishers will be fined 2,300,000 Lao Kip, their fishing equipment will be destroyed and they will be sent to District Security Office for necessary disciplinary actions according to the law
- Anyone who sees non-compliant person or group by using the above illegal fishing gear inside or outside the conservation zone, should immediately report such person or group to the village authorities or FMC

Article 8: Implementation

- At the village level, the FMC will publish these regulations for the information of people in all the villages around Nam Xouang Reservoir and also for outsiders
- All funds earned from the fines for non-compliance of the regulations will be divided into three parts: 22% for the patrolling team, 13% for problem solving team, and 65% for FMC (for FMC operations)

Article 9: This regulation takes effect starting from the approval date.

Phone Hong District, Date: 21 February 2018

<p>Rules and Regulations for NT District (<i>Appendix 5</i>)</p>
<ul style="list-style-type: none"> - Refer to the Fisheries Law No. 03, dated 09 July 2009 - Refer to the Aquatic and Wildlife Law No. 07, dated 14 January 2017 - Refer to the results of Meeting on 09 January 2017 - Refer to the fisheries regulations in Nam Houm and Nam Xouang No. 641, dated 10/06/2002 - Refer to fisheries law of Naxaythong District No. 081, dated 07/07/2017
<p>Article 1: General Regulation</p> <p>Water resources (including fish) are of very high value for Lao PDR and Lao people. Management of the rivers and responsible use of the waters are the prime duty of the people, since they will all benefit from these waters. It is the duty of all people to protect the water resources and follow the prescribed rules and regulations. Persons or group who intend to fish in the Reservoir should obtain permission from the FMC.</p>
<p>Article 2: Illegal fishing around Nam Xouang Reservoir</p> <ul style="list-style-type: none"> - Fisheries management regulations shall remain valid - All people have to follow the regulations - Regulations are to be used as reference for officials in penalizing people who do not comply with the law
<p>Article 3: Fishing gear</p> <p>3.1. Fishing gear that are allowed to be used:</p> <ul style="list-style-type: none"> - All kinds of hooks - Cast nets (mesh size should not be more than 3 cm) - All kinds of gill nets (mesh size should not be more than 3 cm) - Bamboo traps or basket traps - Lift nets (size 5x5 meters) <p>3.2. Illegal fishing gear</p> <ul style="list-style-type: none"> - All kinds of explosive materials used in fishing - All kinds of firearms - Use of electric shock - Spear guns
<p>Article 4: Whole year conservation zone</p> <ul style="list-style-type: none"> - Fishing is prohibited inside the conservation zone 1,500 m from the ridge of the dam and in the Reservoir - Fishing is prohibited in nearby forest areas and 500 m from the river mouth of Huy Chang Sri and Huy Tub Tan to the conservation zone
<p>Article 5: Seasonal conservation period</p> <ul style="list-style-type: none"> - Fishing is prohibited and cannot use any kind of fishing gear during the seasonal conservation period from 01 May until 30 August
<p>Article 6: Fishing of protected species</p> <ul style="list-style-type: none"> - Fishing is prohibited for the giant catfish, sting rays and turtles

Article 7: Non-compliance and penalties

- Anyone not complying with **Article 3**, at *the first time* will be issued a warning, their fishing gear seized and fined 50,000 Lao Kip, and asked to pay the fee equivalent to 10 times of the damages
- *Second Time Violation*: seizure of fishing gear and fine of 2,000,000 Lao Kip, and violation is recorded
- *Third Time Violation*: fishing gear will be seized and fined 2,000,000 Lao Kip, and violators will be sent to concerned government authorities for the necessary disciplinary actions based on the law
- Anybody or group not complying with **Article 4** and **Article 5**, at *the first time* will have their fishing gear seized and fined 500,000 Lao Kip, and asked to pay the fee equivalent to 10 times of the damages
Second Time Violation: fishing gear will be seized and fined 3,000,000 Lao Kip, and violators will be asked to pay the fee equivalent to 10 times of the damages
Third Time Violation: fishing gear will be seized and fined 3,000,000 Lao Kip, and violators will be asked to pay the fee equivalent to 10 times of the damages, and will be sent to concerned government authorities for the necessary disciplinary actions based on the law
- Anybody or group not complying with **Article 6**, and found to be catching the catch giant catfish, they will be fined 100%, and sent to concerned government authorities for the necessary disciplinary actions based on the law. If found to be catching protected species such as sting rays and turtles, violators will be fined 1,500,000 Lao Kip and will be sent to concerned government authorities for the necessary disciplinary actions based on the law
- Anybody found to be using electric fishing gear will be fined 3,000,000 Lao Kip and pay the fee equivalent to 10 times of the damages. If found to be using poisonous substances in fishing, they will be fined 2,000,000 Lao Kip, fishing gear seized and will be sent to concerned government authorities for the necessary disciplinary actions based on the law
- Anyone who sees non-compliant person or group by using the above illegal fishing gear inside or outside the conservation zone, should immediately report such person or group to the village authorities or FMC

Article 8: Fishing and aquaculture fees

Any person who fish or operate aquaculture structures in the reservoir should follow these rules:

- Person who operates cage culture should pay 100,000 Lao Kip/cage/year (size 4 x 6 m)
- Fulltime fishers should pay 100,000 Lao Kip/person/year
- Part time fishers should pay 10,000 Lao Kip/person/year

Article 9: Implementation

At the village level, the FMC will publish and announce these regulations for the information of all people in the villages around the Nam Xouang Reservoir. The FMC should monitor the compliance of the regulations.

Article 10: This regulation takes effect from the approval date.

Naxaythong District, Date: 15 June 2018



Fig. 51-54 Meeting/workshop to develop the rules and regulations for the whole NX Reservoir

2.2 Promotion of Fisheries Management Rules and Regulations

2.2.1 Conduct training/meeting for information and dissemination of fisheries management rules and regulations for fishers and local government staff

The one-day training for capacity building as well as to provide the knowledge and experiences to local officers on fisheries management was conducted on 31 January 2018. This was also meant to develop the complete of co-management rules and regulations in whole NX Reservoir (*Fig. 55-56*).

The training was conducted at Naxaythong Fisheries Development Center, Naxaythong District with 25 local officers (eight (8) women and 17 men) coming from NT and PH Districts in attendance. In addition, resource persons were invited to provide lecture on the concept and importance of community-based resources management/co-management including the results of the case study in Nam Houm Reservoir in Lao PDR. The case study, conducted in Si Phan Don with focus on Muang Khong and Muang Moonlaphamok, showed that the fishers gave their utmost and good participation in the activities from planning to the establishment of the conservation zone and monitoring of illegal fishing operations. However, there were also challenges encountered such as the time and venue which should be properly appropriated for the implementation of activities. Moreover, the fisheries rules and regulations were also introduced to enhance the understanding of the participants. There was also a session on gender, to encourage the women in taking more active role in fisheries for sustainable livelihood of fishing households.



Fig. 55-56 Training for local government staff at NT District

➤ **Meeting for awareness building on fisheries co-management including community rules and regulations**

The meeting was organized during 18-22 March 2019 at the Village's office or temple whichever was convenient for the local people around the Reservoir to participate. The Meeting was intended to introduce to the local people and local officers, for their clear understanding and awareness on the importance of fisheries co-management and the fisheries rules and regulations in Nam Xouang Reservoir (*Fig. 57-62*). The fishers attending the meeting received the hand fan which contained the summary of the fisheries rules and regulations (*Fig. 63-65*). Moreover, the Meeting also provided posters (*Fig. 66-67*) to the community leaders, describing the fisheries rules and regulations in NX Reservoir, which had been posted around their villages as a notification for the villagers.

The Meeting was attended by a total of 457 participants (men and women) coming from the five (5) villages in NT District, namely: Ban Sivilay, Ban Phoxay, Ban Phone Thong, Ban Phosy, and Ban Thum, and also from 10 villages in PH District, namely: Ban Nathep, Ban May, Ban Sivilay, Ban Phone Sai, Ban Phone Sung, Ban Tao Tan, Ban Nongphung, Ban Changsavang, Ban Dongkhao, and Ban Phone Kong. The village leader informed the local people on the fisheries rules and regulations in NX Reservoir which contain various articles. The information provided also included the details on the FMC establishment such as the committee members and their duties. The rules and regulations relayed to the local people included the prohibited illegal fishing gears, the rates of fines imposed for non-compliance of the rules and regulations, the management measures for seasonal closed areas (1 May to 30 August), and the conservation zone in NX Reservoir.



Fig. 57-62 Meeting of the communities at NT District (above) and PH District (below)



Fig. 63-65 Hand fan containing the summary of rules and regulations in Nam Xouang Reservoir

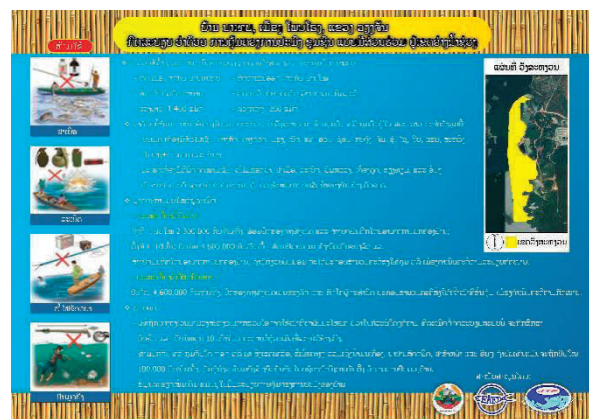


Fig. 66-67 Posters indicating the rules and regulations in NX Reservoir for NT District (left) and PH District (right)

➤ Study trip for FMC to learn fisheries management and fish processing

In order to enhance the knowledge of FMCs on fisheries management and provide them the idea and knowledge on alternative livelihood, the Project organized a study trip to Bolikhumxay Province. This study trip had 30 participants (eight (8) women and 22 men) from Nam Xouang Reservoir, comprising 20 FMCs,

four (4) District officers, one (1) Vientiane Province Officer, one (1) Vientiane Prefecture representative, two (2) Central Officers from Vientiane Province, including one (1) District Officer from Bolikhumxay, and one (1) Bolikhumxay Provincial Officer. The study trip was conducted in three (3) sites, namely: Ban Keng Sadok Village, Ban Sor Village, and Ban Done Xay Village (Fig. 68-76). Organized for three (3) days, the study trip enabled the participants to observe the activities related to fisheries management and fisheries products processing. The participants also learned the concepts on management system, patrolling, punishment for non-compliance of regulations, fish bank management, and micro-financing. They also learned that it would be good if some benefits could be provided to persons reporting to FMC the incidences of illegal fishing in NX Reservoir. Furthermore, they also gathered the idea that women could serve as good negotiators for illegal fishing cases because of the characteristics of women to look more polite and with better negotiation skills than men.

Moreover, fish processing was a very interesting topic for the participants especially for the women. The products produced comprising dried fish, fermented fish, and pickled fish, were sold in local markets located along the streets. The participants also learned about the benefits provided to the fish processing group members from the sale of the products, and on how to manage the group.



Fig. 68-76 Study trip at Ban Keng Sadok, Ban Sor, and Done Xay Villages

2.2.2 Production of extension media materials such as posters and booklets

Posters and hand fans were designed, printed, and distributed to the local fishers during the awareness building meeting with representatives from the local villages around the NX Reservoir. The rules and regulations including the fines for using illegal fishing gears had been summarized and put in these extension media.

In addition, signboards showing the rules and regulations were also prepared and installed in both districts with the cooperation of SEAFDEC/IFRDMD, TD, and the DLF of Lao PDR. Each signboard, which is big enough for fishers to read, had been prepared for the PH and NT Districts (4 signboards for each District were prepared), and put up in the most appropriate areas that fishers pass while going to the Reservoir for fishing. The signboards show the detailed fisheries rules and regulations for the fish conservation zone in NX Reservoir, as well as the prohibited or illegal fishing gears, the fines for using these prohibited gears, and other activities that are prohibited in the Reservoir.

The fishers put up the signboards before the opening ceremony at the PH District. The signboards opening ceremony had 60 persons attending (including local people and fishers) from the two (2) Districts. The Deputy Director General of DLF and the Phone Hong District Mayor gave their welcome speeches, followed by the SEAFDEC Deputy Secretary-General and the Deputy Chief of IFRDMD who also gave their remarks about the project background and the purpose of the event. The audience was informed about the three (3) year implementation of the Project including the management measures established in the conservation zone. Then, the signboard near the meeting venue was unveiled by the Deputy Director General of DLF and the SEAFDEC Deputy Secretary-General (*Fig. 77-79 and 80-82*).



Fig. 77-79 Installation and opening ceremony of the four (4) big signboards at Phone Hong District



Fig. 80-82 Installation of the four (4) big signboards at Naxaythong District

2.2.3 Implementation of practical surveillance activities at conservation zone

The patrolling team from the FMC always patrol and monitor the NX Reservoir every week using their own fishing boats. However, they had a problem when their fishing boat was destroyed by the illegal fishers that necessitated frequent repairs. For the sustainability of the communities' MCS system, the Project supported the FMCs of Nam Xouang Reservoir as part of the Project's effort in promoting the MCS system, by providing a surveillance boat with power engine.

At the PH District (*Fig. 83-85*), the conservation zone has been monitored and patrolled every week. Six (6) persons from the FMC form the patrolling team which comprises three (3) village soldiers and three (3) villagers to take charge of monitoring the illegal fishing activities in the conservation zone of PH District only. The patrolling team has to stay overnight near the conservation zone for surveillance. The members of the District's patrolling team change every day on rotation basis. In the rainy season (September - October), when water volume is high, patrolling is done four (4) days/week. But in the summer season (April - May), patrolling is done two (2) to three (3) days/week. However, the patrolling team would also monitor and respond to the situation when information is received that illegal fishing operations are going on in the Reservoir especially in the conservation zone. The fine for illegal fishing activities is divided into three parts: 65% for FMC to be used for the boat's fuel oil and food for the patrolling team, 22% for the patrolling team, and 13% for the problem-solving team.

The FMC reported that after the Project supported the installation of buoys for the conservation zone, illegal fishing activities had been considerably reduced, especially the use of electric fishing gear. However, few illegal fishing activities still continues as some local people do not understand and are not aware of the benefits from the conservation of the fishery resources, and as a result, they also do not understand the need for the rules and regulations. Therefore, some illegal fishing activities are still ongoing in the area. Moreover, after the two (2) buoys and one (1) signboard had disappeared for reasons that had not been known, the FMC made a new signboard and had new buoys installed replacing those that had disappeared.

Based on their progress and achievements, the FMC did so much especially in the implementation of the monitoring and patrolling activities. However, the Project also suggested that the FMC should have a record of the fish catch, illegal fishing cases, and other relevant information that should be reported in the group meeting which is conducted every month. Moreover, it is important for the FMC to cooperate with the officers and local people in managing the fishery resources and in patrolling, and as such should also support in building the awareness of the local people on the conservation of the fishery resources. Furthermore, since it has been recently observed that tourists are coming to the NX Reservoir, this could be an opportunity for the promotion of eco-tourism in the future. In addition, the FMC should also consider the possibility of providing incentives for fishers who inform the patrolling team about some ongoing illegal fishing activities. Furthermore, after the Project had provided the surveillance boat to the FMC for their patrolling activities, measuring eight (8) meters and 6.5 Horsepower engine, the FMC should consider establishing a committee to take care of the maintenance of the boat and engine.



Fig. 83-85 Meeting of the communities at PH District

At NT District (*Fig. 86-88*), the conservation zone had been monitored and patrolled every month. Six (6) FMC members join the patrolling team every day, and they do patrolling two (2) times per month. There are three (3) procedures for the punishment of illegal fishing activities. In their first offense, illegal fishers would be warned by the village head. In their second offense, illegal fishers would be fined by the patroller. In their third offense, the patroller would destroy their illegal fishing gears.

The FMC also planned that in their patrolling system, three (3) teams would be organized. In January – July, November, and December, the patrolling team will patrol two (2) times per month while in August, September, and October, the team will patrol four (4) times per month because these months fall during the rainy season which is also spawning season of the fish. However, upon getting the information that there are illegal fishing operations in the Reservoir, they will patrol more often. In case the FMC apprehend an illegal fisher and fined for its illegal fishing operations, the fine would be divided into two main parts: 70% goes to the FMC and 30% to the fishers who sighted and reported the illegal fishing activities to the FMC.

Furthermore, the FMC of NT District meets every 25th of the month to report the progress of the group activities and discuss the ways and means of addressing the problems. Moreover, they also cooperate with the police and the army to solve the problems. Recently, the FMC has established a revolving fund from the fines and also from middlemen who had been buying fish at the fish landing sites. Besides, the patrolling team also plans to promote and educate the local people on the regulations and enhance their awareness on the need to conserve the fishery resources, and the FMC also plans to prepare fishers' ID cards so it would be easy for the FMC to monitor the legal fishers.

After the Project supported the NT District with patrolling boat, nine (9) meters in length with nine (9) Horsepower engine for their patrolling activity, the FMC has set up the committee for taking care of the maintenance of the boat and engine.



Fig. 86-88 Meeting of the communities at NT District

2.3 Strengthen fishery resources management

2.3.1 Baseline socioeconomic survey in NX Reservoir

➤ Introduction

Nam Xouang Reservoir is located at Vientiane Prefecture (*Fig. 89*) with width and length of around 4.5 and 9.0 km, respectively, and the average area is estimated to be around 12.4 km². With water storage capacity of about 255.5 million cubic meters, the Reservoir is used mainly for irrigation, particularly for the rice paddy fields. The Reservoir covers two (2) Districts, namely: Phone Hong and Naxaythong, where Phone Hong is located in the upper part of the Reservoir and covers 10 villages, namely: Ban Nathep, Ban Changsavang, Ban May, Ban Sivilai, Ban Phone Sai, Ban Phone Sung, Ban Tao Tan, Ban Nongphung, Ban Dongkhao, and Ban Phone Kong, while two (2) villages are adjacent to the Reservoir (Ban Nathep and Ban Jangsavang). Meanwhile, Naxaythong is located in the lower part of the Reservoir and covers five (5) villages (i.e. Ban Sriwilai, Ban Phothai, Ban Phosri, Ban Thum, and Ban Phothong). There are three (3) conservation zones and eight (8) closed season areas in Nam Xouang Reservoir, of which one (1) conservation zone and three (3) closed season areas are in Phone Hong District while two (2) conservation zones and five (5) closed season areas are in Naxaythong District.

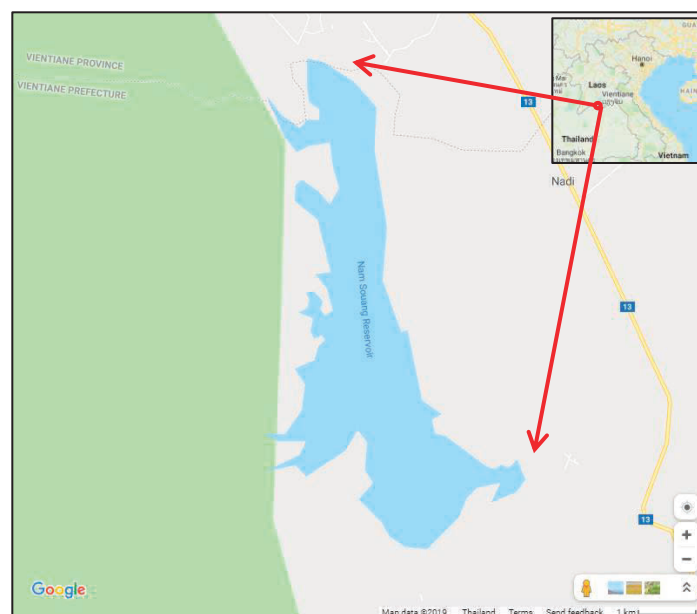


Fig. 89 Map of Nam Xouang Reservoir

➤ **Objective of the survey**

The survey was aimed at collecting data on socio-economic and fisheries information of the fishers who depend on the Nam Xouang Reservoir for their livelihoods. This data collected could serve as baseline information for monitoring and evaluation of the Project activities.

➤ **Methodology used for data collection**

The Project designed face to face interview for the socio-economic data collection conducted by the local officers. The pre- and post-data collection was collected from the two (2) Districts: PH and NT. The enumerators, all local officers were divided into six (6) and four (4) persons for PH and NT District, respectively. The questionnaire was composed of eight (8) parts, namely: 1) General information, 2) About household members, 3) Livelihood, 4) Fisheries, 5) Aquaculture, 6) Agriculture, 7) Main livestock, and 8) Fishery management in Nam Xouang Reservoir (*Appendix 6*).

For PH District, information was collected from three (3) villages with a number of fisher's households that totaled 142 households and the sample households considered was 60. While in NT District, 40 samples from 79 fishers' households from the five (5) villages were considered (**Table 12**).

Table 12 Number of households and data collected from Naxaythong and Phone Hong Districts

Villages	No. of households	No. of fishers' households	No. of samples
Phone Hong District			
Ban Nathep	92	20	20
Ban Nongphung	462	20	18
Ban Changsavang	502	102	22
Total	1,056	142	60
Naxaythong District			
Ban Sivilay	341	30	15
Ban Phoxay	205	18	2
Ban Phone Thong	246	5	5
Ban Phosy	235	20	15
Ban Thum	175	6	3
Total	1,202	79	40

➤ **Results**

General information and household members

The percentage of female and male respondents was 13% and 87%, respectively. The average age of respondents was 46 years old, with most of respondents (35%) in their middle ages (41-50 years old) while 27% and 26% were 51-60 and 31-40 years old, respectively, and only 7% of the respondents belonged to the old age group. Their educational level was generally high attaining primary school and junior high school (42% and 33%, respectively). Most of them practiced Buddhism (97%) while some were Christians (2%) and 1% was atheist. For the number of family household members, 62% of respondents had 4-5 family members (**Table 13**).

Table 13 General information

Information		Percentage
<u>Sex</u> :	Male	87
	Female	13
<u>Age</u> :	< 30 years old	5
	31-40 years old	26
	41-50 years old	35
	51-60 years old	27
	61-76 years old	7
<u>Educational level</u> :	Primary School	42
	Junior high school	33
	Senior high school	12
	Bachelor's degree	11
	Other	2
<u>Religions</u> :	Buddhist	97
	Christ	2
	Animism	1
<u>No. of family's member</u>	1-3 persons	16
	4-5 persons	62
	6-7 persons	19
	8-9 persons	3

The average net income per month of all respondents was USD 323. However, 26% of the respondents had net incomes that ranged between USD 101 and 200 each and 19% had net income of USD 20-100 and USD 201-300, while 5% of the respondents had net income of USD 1,001-5,000 (*Fig. 90*). For the average net income, in PH it was USD 233 and USD 149 in NT.

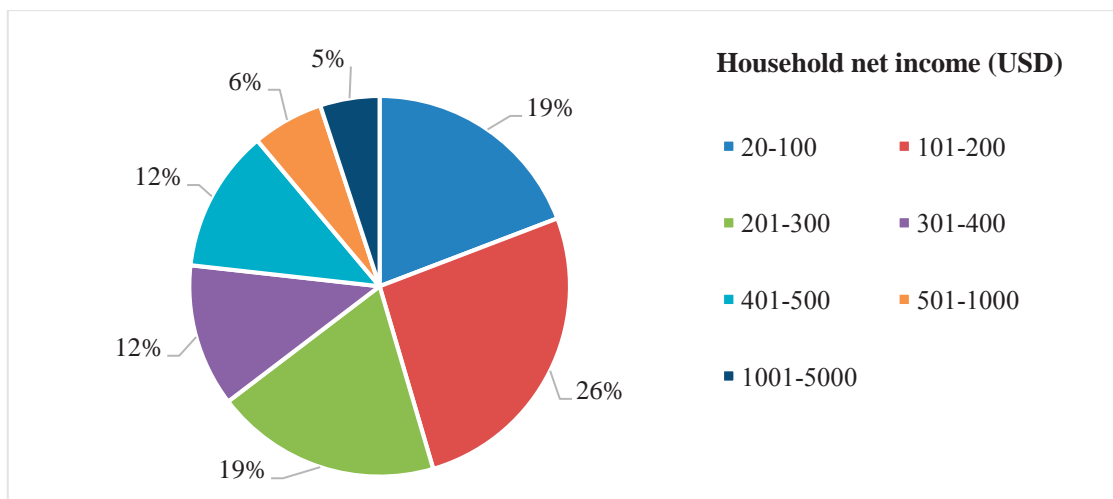


Fig. 90 Household net income

Overall livelihood

Most of the respondents had additional occupations such as fish processing, livestock raising, agriculture, and doing manual labor works. Besides fishing, the fishers were able to earn other incomes. However, few respondents were full time fishers, hence, their incomes come from fishing only (Table 14). Nonetheless, some fishers were able to gain from other sources of incomes, such as from interests, remittances from relatives, and savings (Fig. 91).

Table 14 Occupations of the respondents in PH and NT Districts

Occupation	Phone Hong		Naxaythong	
	Persons	Percentage	Persons	Percentage
Fishing only	3	5	3	8
Aquaculture	-	-	4	10
Agriculture	16	27	1	3
Livestock raising	36	60	8	20
Trading	7	12	2	5
Labor works	21	35	12	30
Fish processing	41	68	16	40
Government salaries	9	15	9	23

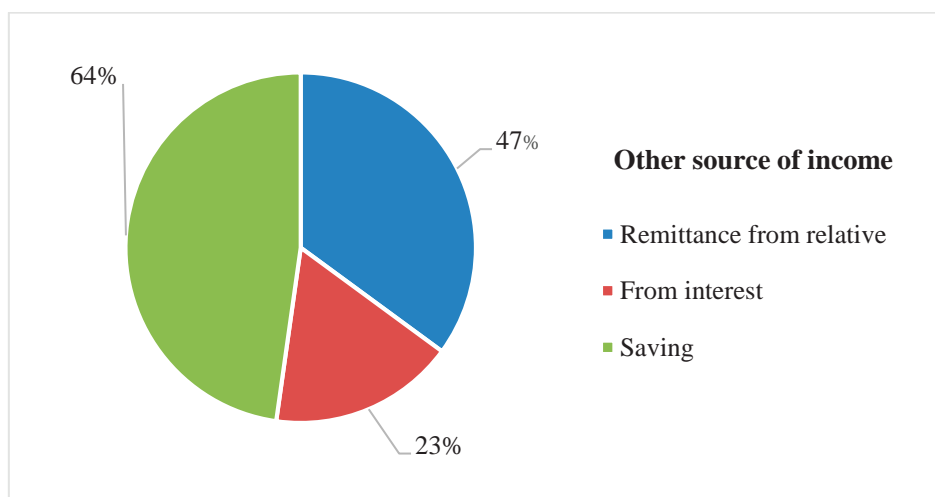


Fig. 91 Other source of income

Fishery

In PH District, all the respondents had one (1) fishing boat per household with average length of 5.5 meters, while at the NT District, 87% of the respondents had one (1) fishing boat per household while 13% had two (2) fishing boats. The average length of boats in NT was 5.9 meters. The boats of the two districts had 5.5 HP engine. Most of respondents had fishing experience for 10 to 20 years, implying that they are familiar with fishing operations and their livelihoods mostly depended on fishing (**Table 15**).

Table 15 Fishing experience of respondents from two (2) Districts

Fishing experience	Phone Hong (%)	Naxaythong (%)
< 10 years	5	12
10-20 years	78	32
21-30 years	14	17
31-50 years	3	7
Average year of experience	18 years	18 years

In PH District, 36 fishers had two (2) fishing gears while 23 fishers had one fishing gear (22 persons used gill net and one person used castnet), and only one (1) had three (3) fishing gears. On the other hand, 39 fishers in NT had one (1) fishing gear that was gill net, with one (1) fisher having two (2) fishing gears that were gill net and hook and line. The main type of fishing gear used by most of the respondents was gill net (**Table 16**).

Table 16 Number of fishing gear type and main types of fishing gear

Number of fishing gear type	Phone Hong		Naxaythong	
	Person	Percentage	Person	Percentage
One fishing gear	23	38	39	98
Two fishing gears	36	60	1	2
Three fishing gears	1	2	-	-
Total	60		40	
Main types of fishing gears				
Gill net	56	93	40	100
Hook	12	20	1	3
Castnet	15	25	-	-
Scoop net	14	23	-	-

The respondents used fishing gears appropriate for the target fish species, fishing area, and season. During high season, the respondents used gill net, that is during March to September. During March to July and October to November, they mostly used scoop net for fishing. Meanwhile, castnet is used all year round as additional fishing gear (**Table 17**).

Table 17 Fishing season (high season) and types of fishing gear used in PH and NT Districts

Fishing gear	Study area	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1. Gill net	PH												
	NX												
2. Hook	PH												
	NX												
3. Castnet	PH												
4. Scoop net	PH												

Most of fishers in NX Reservoir operate fishing as household activity, without using outside and more manpower. They operate fishing by themselves, however, 64% of the respondents have one (1) labor who is a family member or a relative. After harvesting, they sell their fish to middlemen (56%), fish retailers (40%), customers (2%), and both middlemen and customers (2%) (Fig. 92).

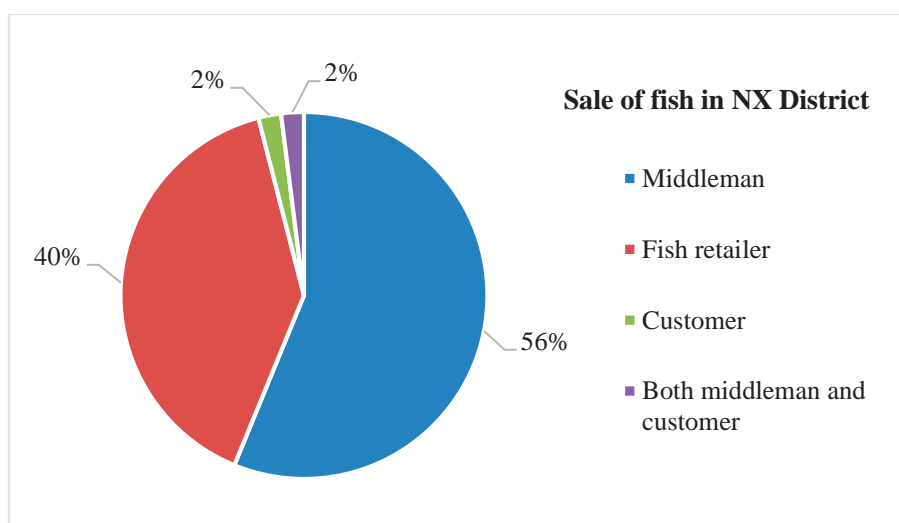


Fig. 92 Sale of fish in NX District

Problems in fisheries

The respondents, who are full time fishers, faced the problem of the low income that they get from fishing due to climate change, especially when there is heavy rains/winds, when they cannot go fishing. However, they could also gain alternative incomes from selling wickerworks and from fish processing. Furthermore, respondents (54%) also faced the problem of their fishing gears being stolen, wastewater that possibly causes pollution in their fishing areas, and presence of illegal fishing operations. Due to these problems, the fish resources in the Reservoir had been depleted, which constituted the biggest problem for many fishers utilizing the Reservoir for their livelihoods.

Opinion of respondents on the three (3)-year co-management Project

From the survey, 70% of the respondents indicated that they know about the Project and that they could learn how to conserve the fishery resources by themselves. Furthermore, the fisheries management measures established in the conservation zone are also considered very useful. Illegal fishing had also decreased because of the patrolling system by the FMC, and the installation of signboards on the rules and regulations

for the conservation area that enhances local people's knowledge and tend to follow the rules. However, they still sighted some outsiders who come to Nam Xouang Reservoir and fish in the conservation area. Overall, the fishery resources have increased and in fact, the fishers could already catch more fish, especially tilapia.

Furthermore, this Project had also promoted an alternative source of income for the fishers' wives who have free time or who wish to gain more income by processing fish products. The women's groups (wives of fishers) have been provided the opportunity to startup their fish products processing ventures. Recently, the women's groups gained knowledge and self-confidence in community participation and especially in starting up their business, as they could gain additional income from such activity.

2.3.2 Evaluate the fishery resources (CPUE, stock assessment)

1) Background and Objectives

Lao PDR is endowed with rich and abundant natural water resources as well as manmade water bodies that are inhabited by more than 481 fish species including 22 exotic species. More than ten exotic fish species have been introduced into Lao PDR through various sources, mostly not formally recorded. Phonvisay (2013) reported that these fish species could include: *Cyprinus carpio* (common carp or pa nai), *Carassius auratus* (goldfish or pa phek in the north), *Hypophthalmichthys molitrix* (silver carp or pa ked lap), *Ctenopharyngodon idella* (grass carp or pa kin gna), *Hypophthalmichthys nobilis* (bighead carp or pa houa nhai), *Oreochromis nilotica* (Nile tilapia or pa ninh), *Labeo rohita* (rohu), *Cirrhinus mrigala* (mrigal), *Catla catla* (catla) and *Clarias gariepinus* (African catfish or pa douk phanh). Although Nam Xouang Reservoir is only inhabited by 21 species, these form the biodiversity of the original rivers, particularly the principal river system. The dominant and economic fishes in each district are *Oxyeleotris marmoratus* in Naxaythong District and *Osteochilus melanopleurus* in Phone Hong District (Muthmainnah *et al.*, 2019).

This study was therefore carried out for better management of inland fisheries through the improvement of data collection systems. The data collected could contribute to the ways of establishing and strengthening regional networking for the improvement of fisheries management and the conservation of fishery resources/environment in inland waters of the Southeast Asian region.

2) Methods

Data collection

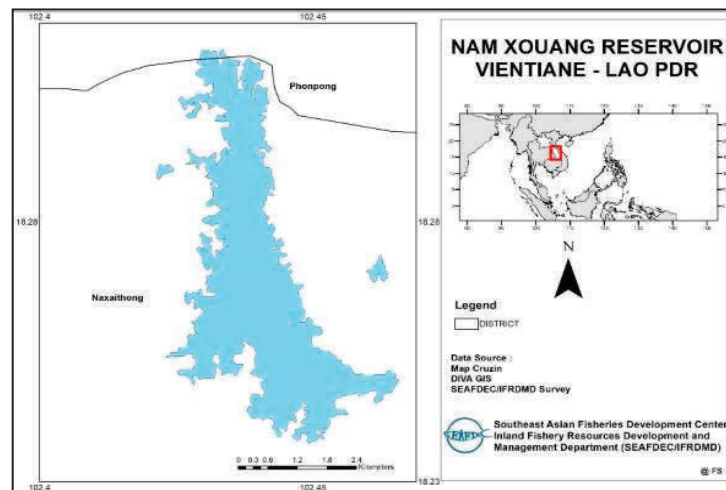
The study was conducted in Nam Xouang Reservoir, Vientiane Province, Lao PDR, from June 2018 to April 2019. Data was collected from two districts, i.e., Phone Hong and Naxaythong Districts (*Fig. 93*). The enumerators were trained to fill the datasheet for catch and fish biology. Six enumerators were hired to observe the daily fishing activities, of whom four enumerators take charge of collecting the fisheries data, and the others focused in collecting the fish biology data. One staffer was also hired to input the data and translate the data and information from the Laotian language into English, and sent to IFRDMD every month.

Catch and Production Data

Four enumerators collected the catch and production data, two of whom were located in the Phone Hong District and the others for Naxaythong District. They recorded the catch every day by filling in the form. The enumerators have to provide also in the form the date or time, fishing location, kinds of fishing gears used, units of fishing gears, fish species, total catch, catch per species, and prices of the fish.

Biological Parameters

Two enumerators were hired, one each from Phone Hong District and Naxaythong District, to measure the length of fish using a ruler, and weigh the fish using analytical balance. The enumerators recorded different species of fish from each sampling site, i.e. *Oxyeleotris marmorata* and *Pristolepis fasciatus* were collected in Naxaythong District, while *Osteochilus lini* and *Labiobarbus leptocheilus* in Phone Hong District. The enumerators were able to measure fifty individuals for each species in a month. After recording, the data was sent to the government official for compilation.



Source: (Muthmainnah et al, 2019)

Fig. 93 Sampling site

Data Analysis

Catch and Production Estimation

From the data on the kind of fishing gear used and the amount caught by each fishing gear could be used to estimate the catch and production data, which also represents the catch ability of each trip of fisher. The fishing rate is the production from fishing gear per amount of fishing gears used in each fishing activity (effort). Fishing rate (1) for each year is estimated from the correlation between the effort compared with fishing production. To estimate the fishing rate, the fishing production for each fishing gear should be standardized. Then, the standardized fishing gear is the fishing gear with the highest productivity, and finally, the highest fishing power index (FPI) (2) is obtained which is equal to one (Nurhakim, 2004).

$$\text{Fishing rate} = CF \dots\dots\dots(1)$$

$$\text{FPI} = (\text{Fishing rate}) / (\text{Maximum Fishing Rate}) \dots\dots\dots(2)$$

with:

FPI = Fishing Power Index

- C = Production for each fishing gear (kg)
- F = Total amount of fishing gear was operationalized or effort

Therefore, to estimate the total production of the Nam Xouang Reservoir in five years, data on the number of fishers from each District is necessary. The data could be obtained from the local government offices. With the assumption that the fishing rate is constant, the present total production of each year using the catch ability could be estimated. From the total catch, the fish catch composition could be drawn, from the various gill net mesh sizes used by fishers observed during the data collection.

Length – Weight Relationship

The length – weight data for each species could be estimated using the formula:

$$W = aL^b \dots\dots\dots(3)$$

Where **a** is condition factor, and **b** is slope or the allometric of growth (Kalhoro *et al*, 2014).

Growth Parameter

Estimations of the growth, mortality rate and exploitation could be calculated using the FISAT software of FAO (Gulland, 1983). The growth function follows the formula by *Von Bertalanffy* (VBGF):

$$Lt = L\infty (1 - \exp (- k (t-t_0)) \dots\dots\dots(4)$$

Lt is length estimation at time (*t*), *L∞* is the infinite length or asymptotic, *K* is condition factor or growth coefficient, and *t₀* is age hypothesis when the length is equal to 0 (zero) (usually a negative value) (Haddon, 2011). Then, *t₀* is estimated using the empirical formula (Pauly, 1983):

$$\text{Log}_{10}(-t_0) = -0,3922 - 0,275 \text{log}_{10} L\infty - 1,038 \text{log}_{10}K \dots\dots\dots(5)$$

Mortality rate

Natural mortality rate (*M*) is estimated by Pauly’s equation (Pauly, 1983):

$$\text{Log}_{10} (M) = -0,006 - 0,279 \text{log}_{10} (K)+ 0,6434 \text{log}_{10} (T) \dots\dots\dots(6)$$

Where *L∞* and *K* are VBGF parameters and *T* is the average water temperature measured in Celsius. The total mortality (*Z*) is calculated by converting the method curve of fishing analysis (Pauly, 1983), and the exploitation rate (*E*) is estimated by the formula *E = F/Z*, where *F* is mortality by fishing from *F = Z – M*.

3) Results

The fishing rate in each sampling site would be different depending on the situation of the stock and the maximum production. In this research, the fishers from Nam Xouang used only gill net with multivarious mesh sizes for daily fishing activity. It should be noted however, that the different mesh sizes and the various operation times of the gill net will produce different production rates (**Table 18**).

In Naxaythong District (NT), the standard mesh size of the gill net used by fishers was 7 cm, providing maximum total catches of 1,564.4 kg. The situation was different in Phone Hong District (PH) as the fishers there used 4 cm and 9 cm mesh sizes of their gill nets. The highest production in Phone Hong District was around 1,487.6 kg. The different situations and fishing patterns between these two areas would show different fishing rates and impacts on the fishing power index for each mesh size of fishing gear. The highest fishing rate

for NT and PH was also different, which were gill net 4 cm and gill net 10 cm, respectively (**Table 18**). The differences of the kinds fishing gears led to different fishing targets between these places. Fishers use different kinds of fishing gear and adapt the present situation to get the maximum production (Rais *et al.*, 2019). Gill net has good selectivity to catch each size of fish, as it could be adjusted to the market and consumable sizes on demand, thus, avoid or lessen bycatch (Martin & Crawford, 2015). The highest fishing power index can be used to standardize the other fishing gear to continue the analysis of the maximum sustainable yield (Nurhakim *et al.*, 2004).

Table 18 Catch and production based on gill net size

No	Fishing gear (mesh size in cm)	Effort	Production (kg)	Fishing Rate	Fishing Power Index (FPI)
Naxaythong					
1	Gill net 3.5	122	58.2	0.48	0.66
2	Gillnet 4	739	533	0.72	1.00
3	Gill net 7	4,717	1,564.4	0.33	0.46
4	Gill net 8	505	118.5	0.23	0.33
5	Gill net 12	845	304	0.36	0.50
6	Gill net 14	814	198	0.24	0.34
Phone Hong					
1	Gill net 3.5	509	410	0.81	0.32
2	Gill net 4	766	731.9	0.96	0.38
3	Gill net 6	447	218	0.49	0.20
4	Gill net 9	738	1,487.6	2.02	0.81
5	Gill net 10	74	184.8	2.50	1.00

The production based on the fishing rate could be estimated and compared with the total amount of fishers in Nam Xouang whose catch could be predicted. However, these estimates are significant for the low confidence level (Everitt, 1979). The fluctuation of the amount of catch would allow the fishers to assume the different effort each year to produce fish for the market. The change in the number of fishers and production in five years are shown in Table 19. The number of fishers will be different for each year, because in inland water fisheries, most fishers are engaged in the fisheries as their secondary jobs, and only a significant number of the fishers are engaged in the fisheries as their main job (Muthmainnah & Gaffar, 2017). Besides the catch of fishers, fish production in inland waters could be adequately related with respect to the water level fluctuation and environmental water quality (Rupawan & Aroef, 2016).

Table 19 Estimated fish production of Phone Hong and Naxaythong Districts in five years

Year	Phone Hong		Naxaythong	
	Number of Fishers	Total Production (Tons)	Number of Fishers	Total Production (Tons)
2014	330	188.31	130	81.89
2015	340	216.51	129	81.48
2016	320	201.34	114	72.46
2017	313	203.62	97	63.16
2018	217	135.09	81	51.50

The fish composition in Phone Hong District is more abundant than in Naxaythong District (Fig. 94). The experimental fishing activity indicated that there were seven species in Naxaythong District and eleven species in Phone Hong District. Pa Tong (*Notopterus notopterus*) and Pa Nin (*Oreochromis niloticus*) are the dominant species that were caught during the research activity. In Phone Hong, Pa Nin was the dominant species followed by Pa Dork Gerw (*Cyclocheilichthys apogon*). A total of 21 species had been identified by the Department of Livestock and Fisheries based on results of many research and references (Muthmainnah *et al.*, 2019), although Pa Nin has always been the dominant species in Nam Xouang Reservoir. Pa Nin can adapt to extreme environment and breed throughout the year. Some research studies found that Pa Nin can mature in January, April, May, October, November, and December every year (Khallaf *et al.*, 2003). The difference in fish composition is shown in the different distribution of fish in Nam Xouang Reservoir. The different distribution of fish can be a sign that a habitat fits and is safe for many species. The vegetation (riparian), topography, and water resources also distinguish the fish composition (Kahl *et al.*, 2008).

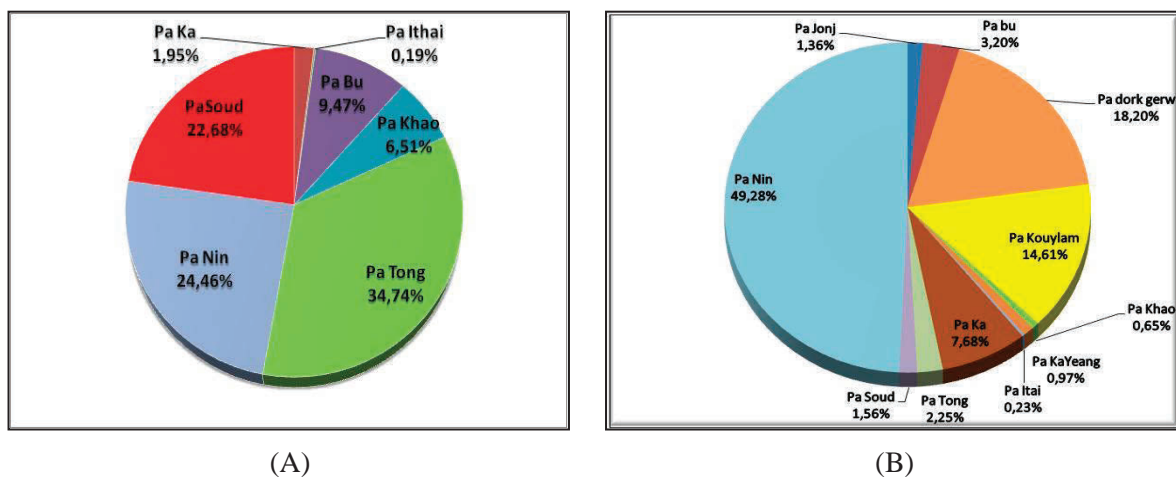


Fig. 94 Catch composition of fish caught in Naxaythong District (A) and Phone Hong District (B)

The growth coefficient of fish is indicative that the environment is safe and can support fish growth and reproduction. The availability of natural food, water productivity, predatory and competitor factors are aspects that would give greater allometric growth ($b/$ slope or the allometric of growth) (Kharat *et al.*, 2008). As shown in Fig. 95, the length-weight relationship of three main species shows the growth pattern of fish, and also their negative allometric growth. Only Pa Kelamp (*Labiobarbus leptochelilus*) shows positive allometric growth. The negative allometric growth indicates the condition of growth which implies that length grows faster than the body, and vice versa for the positive allometric (Kuparinen *et al.*, 2009). The negative allometric can describe the pressure for some species caused by competition, fishing, and environmental degradation that threaten fish sustainability (Prasad & Ali, 2007).

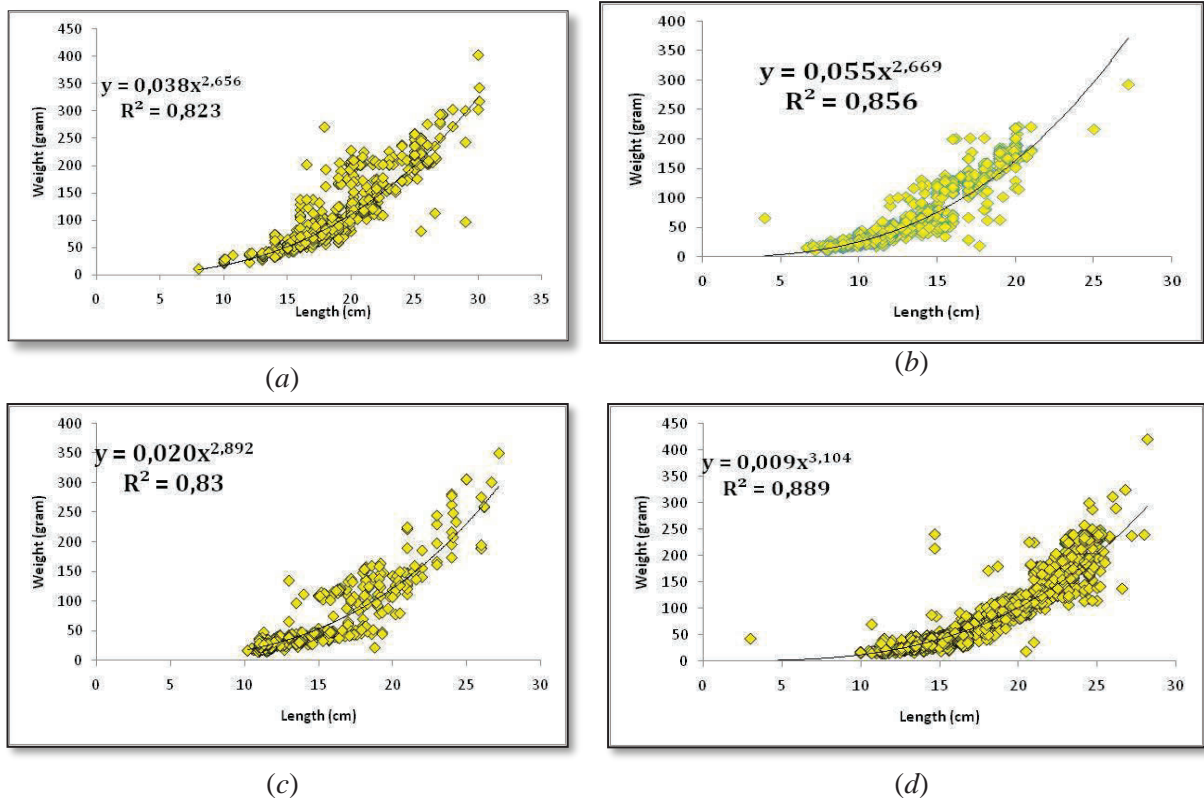


Fig. 95 Length-weight relationship of four species: (a) *Oxyeleotris marmorata*, (b) *Pristolepis fasciatus*, (c) *Osteochilus lini*, and (d) *Labiobarbus leptocheilus*

Growth and population parameters of the four measured species are shown in **Table 20**. The K-value (growth factor) shows the rate of growth to achieve an infinite length. All of the species show K values that are more than 0.5, describing that the growth of these species is on an average rate, with average age for the maximum growth. Pa Bu (*Oxyeleotris marmorata*) can grow most abundantly than the other species up to 32 cm total length. The length curve exhibited by the species shows the common length that such species could be caught in the natural habitat (Froese & Pauly, 2016). The figures (Fig. 95) showed that the fishes could grow to their maximum length in Nam Xouang Reservoir. Meanwhile, the mortality value could emanate from two situations, natural and fishing mortality. Pa Bu (*Oxyeleotris marmorata*), Pa ka (*Pristolepis fasciatus*), and Pa Ithai (*Osteochilus lini*) are usually subjected to high fishing mortality, implying that the probability of death due to fishing is much higher than natural mortality, and is being exacerbated by the exploitation rate which shows that the value of E is more than 0.5 ($E > 0.5$) (Nurdawati *et al.*, 2014). Different condition happens with Pa kelamp (*Labiobarbus leptocheilus*) as its natural mortality is higher than the fishing mortality. This could be explained by the fact that Pa kelamp is not target species for people's consumption or the market. The exploitation rate can therefore vary due to the change of consumers' behavior to utilize the fish resources, and also to the decreased fishing areas brought about by land conversion (Allan *et al.*, 2013).

Table 20 Growth and population parameters of four fish species in Nam Xouang Reservoir

Parameters	<i>Oxyeleotris marmorata</i>	<i>Pristolepis fasciata</i>	<i>Osteochilus lini</i>	<i>Labiobarbus leptocheilus</i>
K (Growth Factor)	0.55	0.6	0.54	0.57
L_{∞} (Infinitive Length)	32.0 cm	21.0 cm	25.0 cm	29.0 cm
Z (Total Mortality)	2.93	4.11	5.1	2.19
M (Natural Mortality)	1.19	1.41	1.25	1.2
F (Fishing Mortality)	1.74	2.7	3.85	0.99
E (Exploitation Level)	0.59	0.66	0.75	0.45

Generally, Nam Xouang Reservoir has high potential for exploitation by the fisheries sector as indicated by its high diversity. The good cooperation between the government and local people on sustaining the fish resources should therefore be strengthened. Friendly fishing gear with appropriate mesh sizes can increase the selectivity and avoid by-catch. Nonetheless, in order to control the exploitation of some species, the types of fishing gears to be used should be considered, time or season for fish reproduction should be observed, and conservation zone for specific species should be established.

2.3.3 Demarcation and mapping fish conservation zone

The conservation zone should be described to the fishers as areas that are spawning grounds. The fishers should be made to understand that if there is no fishing in the spawning areas, the fish and resources would be protected and increased. In NX Reservoir however, the conservation zone had not been clearly demarcated, therefore, illegal fishing continued to occur in the conservation part because the fishers argued that there is no sign to let them know the conservation zone.

Thus, to let the fishers know clearly the location of the conservation zones making it easy to monitor the illegal fishing activities too, buoys, conservation zone signboards, and closed season signboards had been installed in two (2) conservation zones at NT and PH Districts. Then, a meeting and survey of the area were carried out to determine the exact area, location points (latitude and longitude points), and water depth. Fishers, relevant government officers, and staff from SEAFDEC/TD cooperated to fabricate the buoys as well as facilitate their installation in the Reservoir. The first step undertaken to demarcate the conservation zone was to survey and identify the points for buoy installation in each conservation zone in PH and NT District. The survey team cooperated well with the fishers, used the fishers' boats, and was accompanied by the fishers during the survey, as the fishers know the areas very well. A team from SEAFDEC/TD led by Dr. Yuttana Theparoonrat and Dr. Nopporn Manajit recorded the latitude and longitude of the identified areas with the assistance of DLF staff. The survey was carried out in the morning of 22-23 May 2018 in PH and NT Districts, respectively.

In PH District (*Fig. 96-97*), the length of conservation zone is about 1.8 km and around 200 m from shore with an area of approximately 0.7 km². In this conservation zone, seven (7) buoys were used and five (5) conservation zone signboards were installed along the boundary of conservation zone and spread throughout the 1.8 km to cover the whole conservation zone. Moreover, three (3) tributary creeks were declared seasonal closed zones during May to August. Since the creeks are very shallow and could get dry during the dry season,

therefore, buoys installation was considered not suitable. Hence, three (3) seasonal closed signboards were set up near the creeks instead of buoys. Furthermore, as the water depth was recorded in every seven (7) positions, and based on the results of the survey conducted during the dry season, it was necessary to add 3-4 meters more to the calculation of the water depths of the areas where the buoys would be installed, especially that the water depth increases more during the onset of the rainy season.



Fig. 96-97 Survey of areas for buoys installation at PH District

In NT District (*Fig. 98-99*), the conservation zone is around 0.4 km². With length of about 600 meters, the conservation zone is around one (1) km away from the shore. Thus, the conservation zone could use only three (3) buoys and two (2) conservation zone signboards to cover its boundary. Moreover, there are four (4) creeks that had been declared as seasonal closed areas during the same period as with those areas in Phone Hong District (during May to August). Therefore, four (4) seasonal closed area signboards were set up, one for each creek.



Fig. 98-99 Survey to determine the locations for buoys installation at NT District

After identifying the actual locations, i.e. the latitude and longitude, the buoys were fabricated and installed in the two (2) conservation zones in PH and NT Districts on 12-13 June 2018. While the FMC members prepared the materials such as the buoys and sinkers, the Project Team from SEAFDEC/TD, DLF officers and FMC continued to work together in completing the fabrication of the buoys (*Fig. 100-107*). The volume of the buoy is 100 liters, while the concrete for balancing the buoys weighs 50 kg, the sinker weighs 70 kg,

and the main rope is made of poly propylene. The length of the main rope depends on the water depth at each point. The positions of buoys and signboards are indicated in **Table 21**.

Table 21 Positions of buoys and water depths at the conservation zones in PH and NT Districts

Position	Latitude	Longitude	Water depth (m)
PH District			
1	18 17' 36.03"	102 26' 11.26"	3.5
2	18 17' 26.55"	102 26' 09"	3.4
3	18 17' 09.97"	102 26' 09.31"	4.4
4	18 17' 03.06"	102 26' 10.25"	7.5
5	18 16' 59.31"	102 26' 10.9"	7.2
6	18 16' 44.14"	102 26' 11.76"	3.9
7	18 16' 38.72"	102 26' 16.58"	4.0
NT District			
1	18 14' 48.024"	102 27' 16.08"	7.0
2	18 14' 43.488"	102 27' 13.356"	7.0
3	18 14' 39.24"	102 27' 10.902"	5.5



Fig. 100-103 Installation of buoys and sign boards at PH District



Fig. 104-107 Installation of buoys and sign boards at NT District

The Project rented the fishers’ boats for the installation of the buoys and signboards. In PH District, the seven (7) buoys, five (5) conservation zone signboards and three (3) seasonal closed area signboards were set up along the boundary of the conservation zone. The seasonal closed area signboards were installed at the river mouth of Huy Buk Thong, Huy Khi Min, and Huy Boung. While in NT District, three (3) buoys including two (2) conservation zone signboards, and four (4) seasonal closed area signboards were installed. The seasonal closed area sign boards were installed at the river mouth of Huy Thong Mak Duey, Huy Thum Ngu Leam, Huy Dan kai Mae, and the last one covers three (3) rivers: Huy Thub Than, Huy Chang Sy, Huy Sai. It is necessary to check the water depth before installing the buoys because the rope must be longer than the water depth in each position of the buoys. The position of the buoys and signboards in PH District are shown in *Fig. 108* and in the NT District in *Fig. 109*.

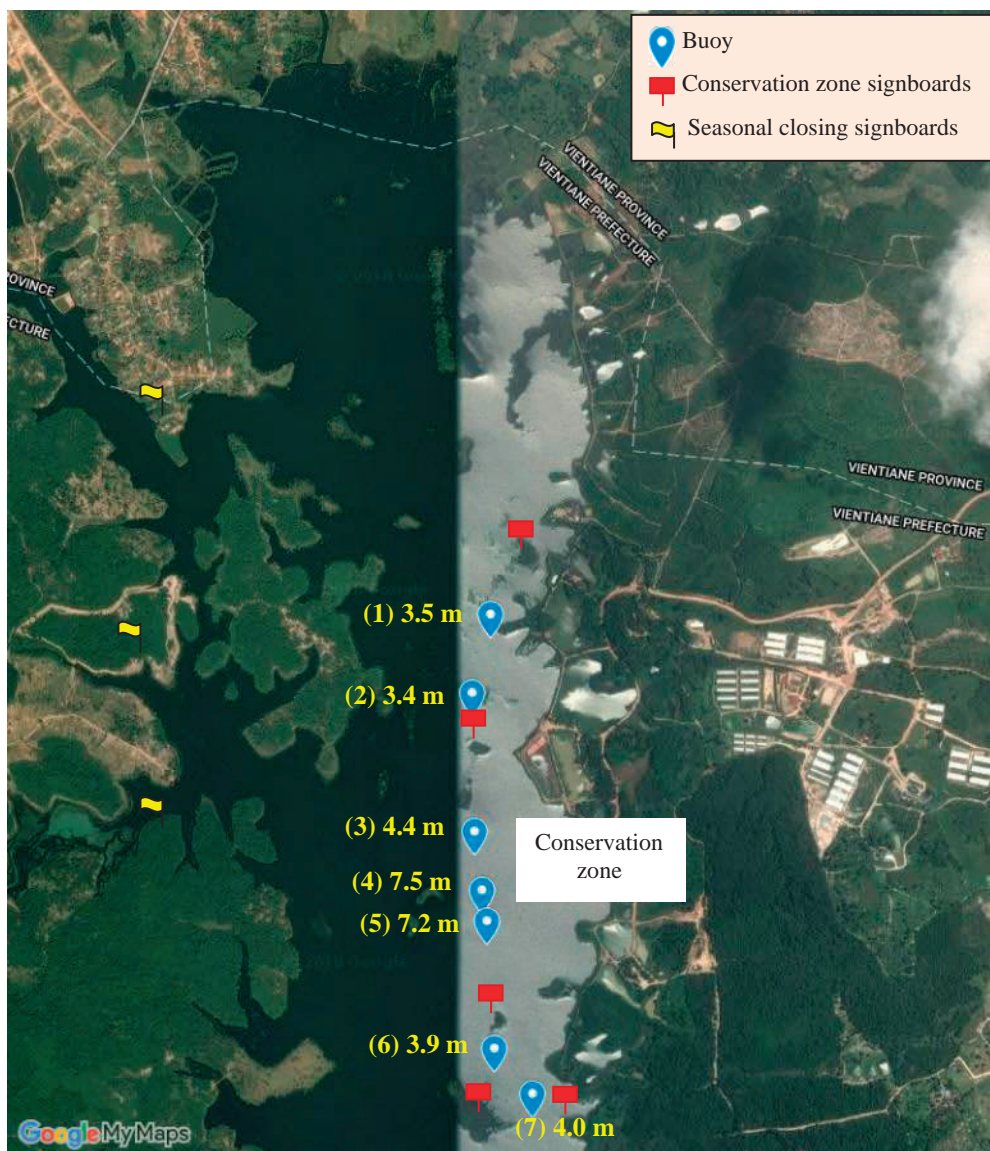


Fig. 108 Position of buoys, conservation zone signboards and seasonal closed area signboards at PH District

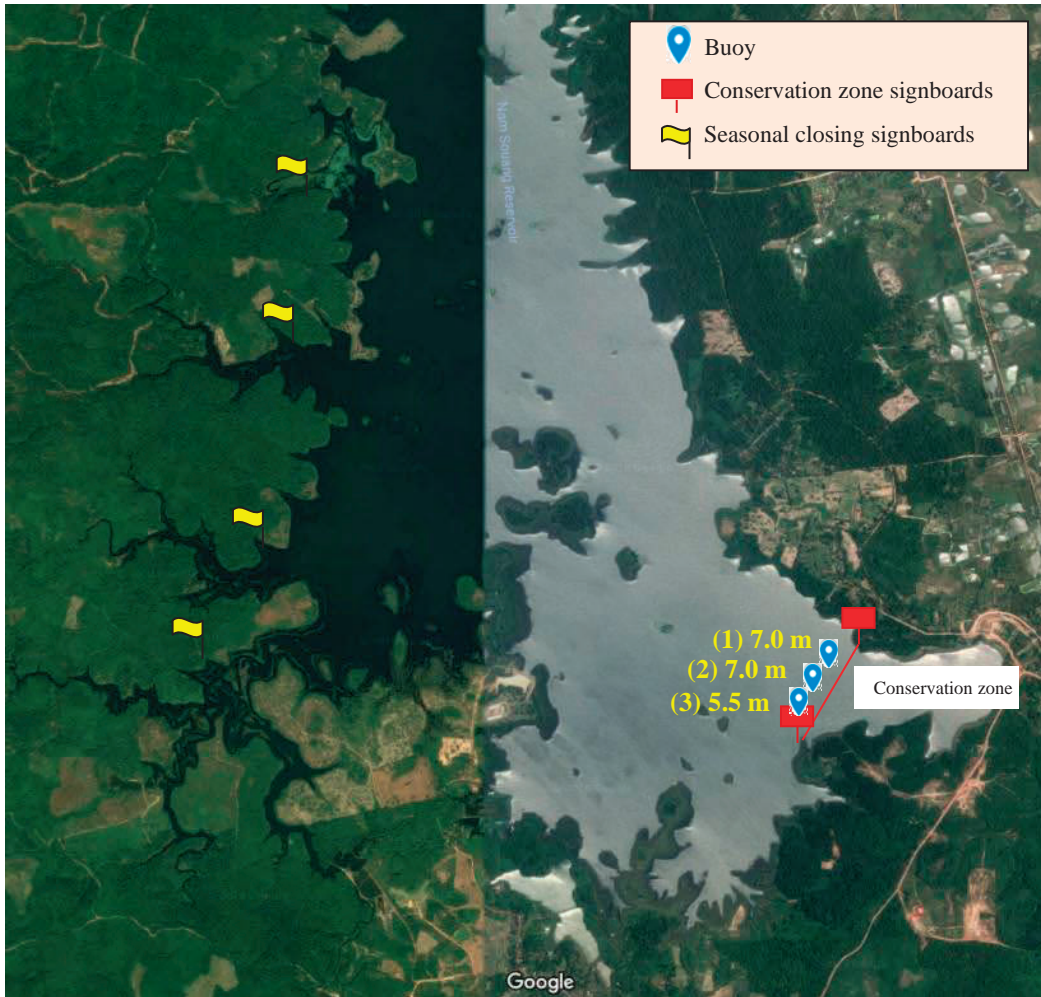


Fig. 109 Position of buoys, conservation zone signboards and seasonal closed area signboards at NT District

After three (3) months from the buoys installation, the Project Team from SEAFDEC/TD continued to follow up on the status of the conservation zone. The fishers from NT District observed that the main rope of one (1) buoy might have been too short, so they needed to increase the length of rope but had limited knowledge on how to tie the rope. Therefore, The Project Team from SEAFDEC/TD demonstrated to them the right way to tie the rope. Henceforth, the fishers were able to change the rope by themselves (Fig. 110-112).



Fig. 110-112 Following up on the buoys installation and demonstrating the right way to tie the rope

2.3.4 Fish restocking program

Training on fish hatchery management using the mobile hatchery system was introduced to the FMC members (*Fig. 113-127*). Conducted at Naxaythong Fisheries Development Center in NT District on 25-29 June 2018, the training had 30 participants from NT and PH Districts. During the five (5) days training, the participants learned the processes in hatchery operations focusing on the tilapia, silver barb, bighead carp, catfish, and frog as well as the practice of artificial fish breeding. These aforementioned species are very popular and economically-important aquatic species in Nam Xouang Reservoir. The participants also learned the general characteristics of each species which are useful when the trainees practiced the methods for breeding and hatching through artificial breeding and hormone injection.

During the training, the mobile hatchery system was introduced and its importance highlighted. The mobile hatchery makes use of bamboo and nets, making it most suitable for small-scale fishers because it is less costly and easy to use and maintain. If a mobile hatchery uses tank and pipes, it would be difficult to move from one place to another making it also difficult to maintain. Thus, mobile hatchery operations were demonstrated and the units were set up and given to PH and NT Districts.

For the practical session of the training, the participants practiced the artificial breeding of silver barb and carp, including hormone preparation, injection, and nursing. Using the ratio of broodstock, i.e. two (2) males:one (1) female, the hormone was combined and placed in distilled water 9.9 cc and Cinnafact 0.1 cc per 10 kg fish. The silver barbs were injected once at 04.00 PM while carps were injected two times at 04.00 PM and 08.00 PM. Both species were released in the mobile hatchery located at NT District.

The following day, the fish eggs were collected from the mobile hatchery and brought to the training venue. The lecturer continued introducing more artificial breeding and hatchery practices, especially on tilapia, using the ratio one (1) male:three (3) females broodstock for breeding. In the afternoon, the participants practiced the step by step processes of preparing the hormones, injection and then hatching. The participants also learned fry nursing, including feeding the fry of silver barb and carp, using both artificial feed and natural food.

The participants also learned how to breed the bighead carp and catfish in hatcheries including the practice of artificial breeding using the ratio of one (1) male:two (2) females of bighead carp broodstock. The artificial spawning grounds at the Naxaythong Fisheries Development Center were prepared using plastic ropes, which were first boiled to make it soft, and then cleaned with clean water before putting the ropes into the ponds. After injection, the fishes were released into the ponds that had been divided into two (2) (one each for Naxaythong and Phone Hong Districts). The following day, the participants were shown the fish eggs of the bighead carp. The eggs were then distributed to the communities in Naxaythong and Phone Hong Districts. Each community had to continue nursing the fry using their respective mobile hatcheries. On 13 July 2018, the FMC members used the fingerlings from the mobile hatcheries for the fish releasing day ceremonies in Lao PDR.

The evaluation of the training and the results of the training course assessment showed that 73% of the participants appreciated the skills introduced to them, as their knowledge on fish hatchery had been much enhanced from the lectures and practical sessions. The most significant skills that the participants had gained were on the preparation of the spawning ponds and nursing the fish fry in the ponds, preparation of materials for breeding, breeding techniques in general, and maintenance of the fish stocks.



Fig. 113-127 Training course on general fish hatchery and the mobile hatchery system

In addition, the Project Team from SEAFDEC/TD and representatives from the DLF also assisted the FMC in PH and NT Districts during their actual practice of the broodstock hatchery operations. After about 20 kg of broodstocks were collected from Nam Xouang Reservoir, the fishers prepared the hormones and equipment and conducted the hormone injection by themselves. Then, the fishers from PH and NT Districts brought 10 kg each of the broodstocks to their respective Districts for breeding and releasing them into their mobile hatcheries in their respective areas. After two (2) days, the fish larvae in each District were checked and it was found that the fish fry in PH District were estimated to be about 555,984 tails while at NT there were only about 173,448 tails. The fry from NT District was less than that at PH District because of many factors, such as the process of hormone injection and the mobile hatchery at NT District that was placed in a location exposed to intense hot weather causing water temperature to rise much higher. While at PH District, the mobile hatchery was set up under a tree, so the water temperature was a bit lower than that in NT District (Fig. 128-130 and 131-133).



Fig. 128-130 Fish breeding and hatching practiced by fishers at Phone Hong District



Fig. 131-133 Fish breeding and hatching practiced by fishers at Naxaythong District

2.4 Improvement of Fish Processing and Value-adding Techniques

In the fishery sector, the women also play active role in providing help to their fisher-husbands, especially in the post-harvest aspects, such as selling fresh fish. After which the women would do housework chores and take care of their families, and do not have the chance to do another job to earn additional incomes. Some women have free times for processing fish products not only for their household consumption but also selling the excess to their neighbors and nearby houses. However, most women have limited knowledge when it comes to developing or improving the value of their fish products. In this regard, the Project Team from SEAFDEC/TD introduced the techniques of processing and value adding of fish products, to the women’s groups in NX Reservoir, to provide them the knowledge in improving their products and earning addition incomes for their families.

Thus, four (4) sub-activities had been carried out, namely: 2.4.1) Research survey for suitable fishery products and marketing, 2.4.2) Training on processing fish products and value adding, 2.4.3) Practical training course for processing fish products, and 2.4.4) Follow up on the fish processing activity.

In the promotion of the fish processing technology, the Project Team from SEAFDEC/TD introduced the following step by step fish processing scheme (*Fig. 134*).

1. Organizing the women's fish processing group: as proposed by the women themselves with the intention of earning additional incomes because they only help their husbands sell the fish and have free time to do other jobs, for although the women would like to improve their current fish processing practices, they have limited know-how in improving the quality of their fish products as well as in packaging.
2. Defining the rules and regulations: after establishing the women's fish processing group, the accompanying rules and regulations had to be set up
3. Conducting the baseline survey for products and marketing: the officers of DLF had already done the survey and in their analysis, the popular fish products with high market demand had been identified
4. Capacity building for the group: study trip and training on fish processing to enhance the capacity of the women's fish processing group in fish processing technology
5. Designing the products: after the study trip and training, the women's fish processing group should agree on the products selected for production by the group
6. Practical fish processing: trial practice for the women's fish processing group could be organized, after which the women's group could practice by themselves, then some of the products could be given out free for testing and promotion or sold to members and neighbors
7. Improving fish products: after getting comments from customers during the trial phase, improvement and adjustment, especially in terms of the ingredients should be made to make the products acceptable by customers
8. Selling the products: members of the women fish processing group could sell their products around the villages and tourist areas, and also tap other channels for selling their fish products in Vientiane Province
9. Evaluating the system of selling products: the system of selling fish products by the group members is regularly evaluated including the profit gained for transparency, by using accounting books to record all transactions in selling, such as price, cost, and benefit
10. Allocating the profit properly: the profit from selling the fish products should be allocated to the members of the women's fish processing group for transparency and equitability.

Furthermore, it is necessary that there is agreement among the group members about the steps, especially the group setup, defined rules and regulations, design of products, and allocation of profit. Moreover, the participation and coordination of the group members and officers in the activities should be in place throughout the overall processes.

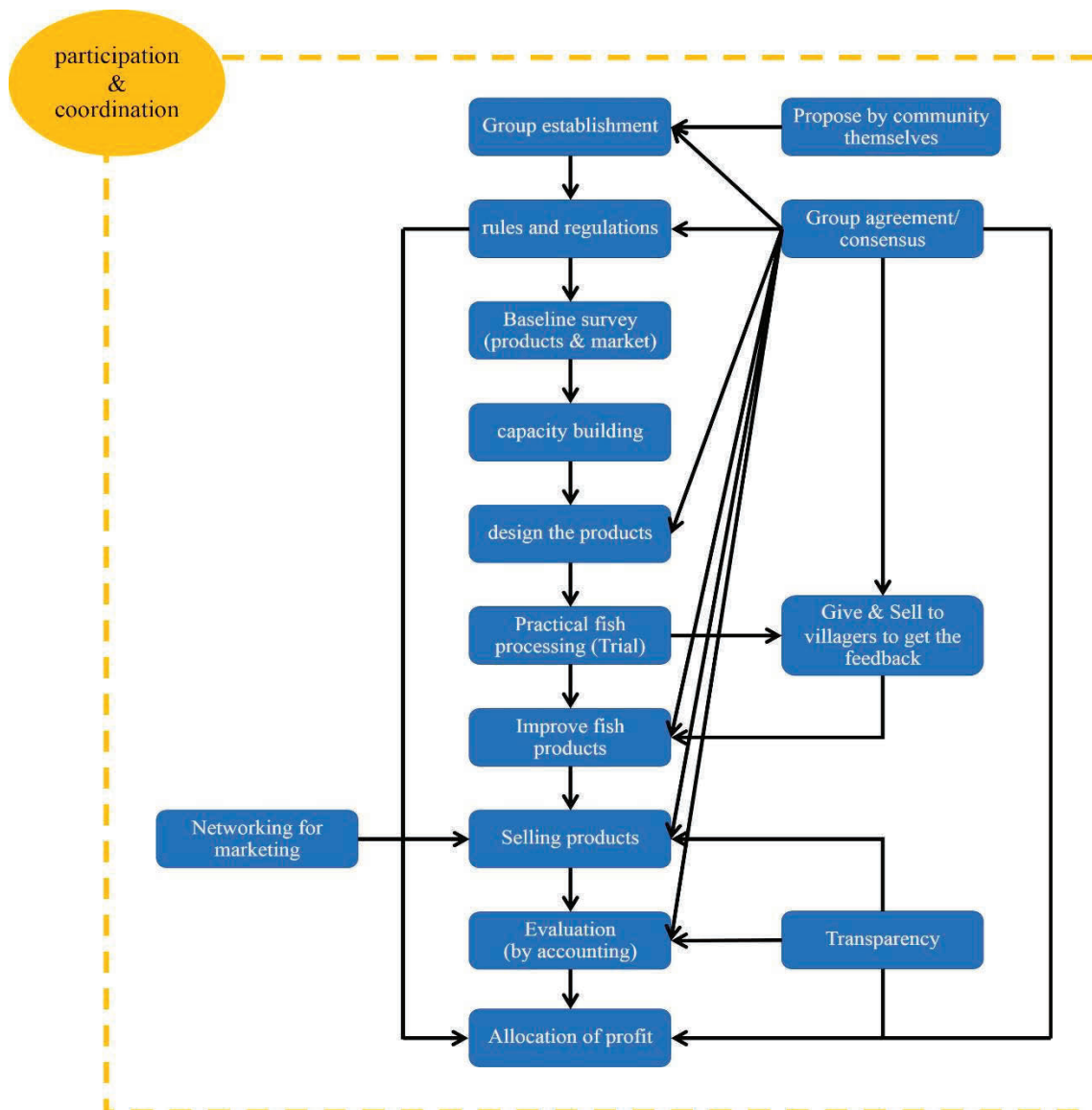


Fig. 134 Fish processing scheme for the women's group in NX Reservoir

2.4.1 Improvement of fish processing techniques in Nam Xouang Reservoir

The fisher-women in NX Reservoir are doing the basic post-harvest activities such as collecting the fish from their fisher-husbands, and selling the fish. After which they do their housework chores, and while some women have additional occupation but still earn low incomes. Therefore, in order to increase the incomes of the fisher-women, there is a need to enhance their capacity for doing other jobs. The Project Team from SEAFDEC/TD, representatives from DLF, and the fisher-women had a discussion and decided that assistance would be provided to the fisher-women for them to produce fish products. Therefore, the Project Team cooperated with DLF for the conduct of the survey in July 2018 to identify the most suitable fishery products and the marketing demand of such products around the NX Reservoir. The results indicated that there is high market demand for such products as the fermented sour fish wrapped in banana leaves, Jaew Pa Daek (fermented fish dip), dried fish, and fermented salted fish. Based on such results, the training on fish processing products was conducted for the fisher-women.

2.4.2 Organization of fishery processing group and conduct of training on fishery processing technology

During 11-15 November 2019, the training on fishery processing technology brought together 10 persons (one (1) women and nine (9) men) to Vang Vieng Province, comprising five (5) persons each from PH and NT Districts in NX Reservoir including three (3) local officers from NX Reservoir and two (2) central officers from Vientiane Province (*Fig. 135-137*). The two (2) days training was conducted in the local community focusing on fish processing practices, by the lecturers from Vang Vieng. The participants learned the processing of the six (6) fish processed products, namely: fermented sour fish wrapped in banana leaves, fermented ground fish, fermented sour fish, Jaew Pa Daek (fermented fish dip), dried fish, and fermented salted fish. The participants were very active and interested in the processes especially in the techniques to make the products more delicious and hygienic.



Fig. 135-137 Fish processing training at Vang Vieng

The fish processing trial made use of the giant snake-head fish, barb, and chitala. Most of the fish' parts were used for the processing except the scales. For example, the fish skin can be dried in the sunlight, the meat for the fermented sour fish, bone and head fermented into salted fish, and the intestines fermented into salted fish and Jaew Pa Daek (fermented fish dip). The participants also learned how to improve the packaging such as wrapping the fermented sour fish with banana leaves and packing these for sale (*Fig. 138-142*). Furthermore, the lecturer also shared the experiences in selling and marketing fish products.



Fig. 138-140 Fish processed products (fermented sour fish wrapped with banana leaves, fermented ground fish, fermented sour fish)

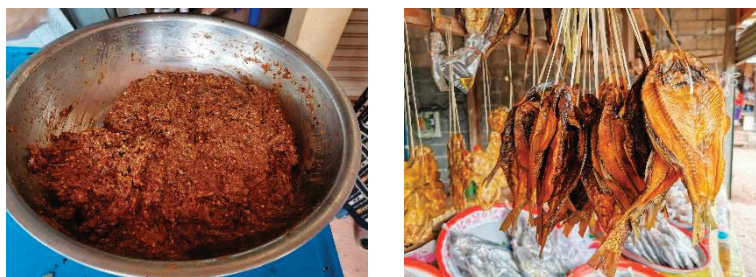


Fig. 141-142 Fish processed products (fermented fish dip, and dried fish)

There were positive feedbacks from the participants, such as the methods they learned to process fish including the marketing system. For Naxaythong District, the group decided to produce five (5) processed products, namely: fermented sour fish wrapped with banana leaves, fermented sour fish, fermented fish dip, fermented salted fish, and dried fish. These products could be sold at the villages, local markets, and tourist places. For the Phone Hong District, the group also decided to produce the same products with Naxaythong District, and intend to sell the products at the villages, local markets, and at a nearby canteen for soldiers. Moreover, the two (2) districts also developed their own schedules, processing plans, and rules for their respective fish processing groups.

2.4.3 Production of processed fishery products (production volume and sales)

During 25-26 November 2019, a practical workshop was organized to provide the women's processing groups with enhanced knowledge on fish processing and packaging, by a lecturer from Nam Ngum Reservoir. This workshop, which was conducted together in the community at PH and NT District, also provided each District with the materials and tools for fish processing such as blender, icebox, knife, and chopping blocks.

In PH District, about 20 persons, both group members and the villagers, were interested in fish processing and joined the activity (*Fig. 143-146*). The participants were very active and were asking questions on the processes before starting the fish processing themselves. Some participants, who had been trained before understood the processes very well and helped the other participants. As the participants obtained additional knowledge from the lecturer from Nam Ngum Reservoir, they were able to adapt the knowledge to suit their area. The group practiced the processing of four (4) products, namely: fermented sour fish wrapped with banana leaves, fermented sour fish, fermented fish dip, and dried fish. Furthermore, the participants also discussed the accounting system and marketing of their products, as they have learned to be transparent in their transactions through proper accounting procedures, and to make sure that all transactions are clear for their members. For the marketing system, the group continued to sell in the villages and now they are receiving orders from buyers around the villages. Besides, they could also sell in the canteen for soldiers in the village. Moreover, since the lecturer's daughter also sells processed fish products at the morning market in Vientiane, so the group can contact her to distribute their products in Vientiane. Moreover, the group also follows a processing scheme and regulations that they will produce at least two (2) times per week, although this would depend on the amount of raw materials available (fish) and the amount of order from buyers. The group divides the net profit from their sales into two, i.e. 90% for members and 10% for the group's operation.

The Project provided support to the group by giving funds amounting to USD 330.00 to be used as seed money for their operations.



Fig. 143-146 Practical workshop for fish processing at PH District

For the NT District (Fig. 147-152), around 15 persons who were all group members, participated in the practical activity. The participants, who had been trained before and understood well the processes helped in teaching the other members. While starting to process together, they were also asking the lecturers many questions related to fish processing. This District decided to process four (4) products, namely: fermented sour fish wrapped with banana leaves, fermented sour fish, fermented fish dip using the fish intestines, and dried fish. The participants also discussed the accounting system and marketing, of which they decided to continue selling by distributing the products to the group members who would like to sell the products. Nonetheless, they sell the products around the villages using motorcycles, and also bring their products for sale at the NX Reservoir which is a tourist place. Moreover, the group also contacts the lecturer’s daughter and sends their products for sale at the morning market in Vientiane. Furthermore, the group also enforces their processing scheme and regulations, i.e. production at least two (2) times per week, although this would depend on the amount of raw materials available (fish). The net profit from selling their products is divided into two parts: 80% for the members, and 20% for the group’s operation. As with the PH District, the Project also provided USD 330.00 as seed funds for the women’s processing group’s operations.



Fig. 147-152 Practical workshop for fish processing at NT District

2.4.4 Following up on the fish processing activity

The Project Team from SEAFDEC/TD and local fisheries officers convened a meeting during 12-13 December 2019, with the women's fish processing groups of PH and NT Districts to monitor their fish processing activities (Fig. 153-155). In PH District, the group leader explained that there are 12 members (10 women and two (2) men) from Nongpung and Chaengsawang villages involved in this group. They produced processed fish products after attending the training course and practical workshop in November 2019 organized by the Project. The group started to make processed fish products and sold them in their village. However, the production is dependent on the raw materials such as fresh fish, as they plan to produce two (2) times per week by dividing the roles and responsibilities among their group members. So far, they have gained profit of about 541,000 Kip (USD 61) after producing four (4) times.

In NT District, the head of the village reported that the fish processing group is located in Ban Sivilai Village and involves 10 members (eight (8) women and two (2) men). After the group gained knowledge in fish processing, they produced many kinds of products such as Pla Som Hor (fermented sour fish wrapped with banana leaves), fermented sour fish with cooked rice, and Jaew Pa Daek (fermented fish dip). Then, they sold these products inside the village and obtained profit of about 318,000 kips (USD 35) after producing four (4) times. Moreover, the group plans to operate the fish processing activity once (1) time per week and sell the products near the NX Reservoir where tourists have been visiting, especially on weekends for picnics. They still have difficulties in marketing and are seeking for marketplaces to sell their products. The group will conduct a meeting to draft the rules and regulations for their group. For the recording of transactions in the accounting book, the fish processing group has recorded the details, however, they need to practice more to make their entries in the accounting book much clearer.



Fig. 153-155 Meeting with the women's fish processing groups of PH and NT Districts

Chapter 3. Conclusion and Recommendations of the Project

3.1 Conclusion

1) Project objectives and activities

The overall goal of this Project is to conserve and manage the fishery resources of the Nam Xouang Reservoir, enrich the inland waters fishery resources in the area and improve the livelihoods of fisher households.

In order to achieve this objective, the Project carried out the following activities:

- ① Establishment of FMC and formulation of fishing regulations:
 - Fishers themselves established the fishers' organizations around Nam Xouang to manage the inland water fishery resources, with the fishers themselves formulating the fishing management rules through the FMC
- ② Grasping the situation of local fisheries and inland waters fishery resources:
 - Baseline survey was conducted to collect and analyze the socio-economic information, while catch surveys were also conducted to evaluate the status of the inland water fishery resources
- ③ Establishment of measures to conserve and manage fishery resources:
 - Establishment of protected areas, closed seasons, establishment of closed areas, and enforcement of surveillance activities
- ④ Taking the measures to improve the livelihoods of fisher households:
 - Production of processed fishery products

2) Results

The contents and results of the implementation for each project activity are described below:

① Establishment of FMC and formulation of fishing rules

➤ Establishment of FMC

FMC is a fishers' organization in Lao PDR, where fishers need to manage their fisheries. The local administrative district governing the Nam Xouang Reservoir is composed of two districts. One is Naxaythong District and the other is Phone Hong District. Since FMC has not yet been established in Phone Hong District, so it was necessary to establish a new FMC in Phone Hong area where there was no fishers' organization, to manage the fishery of the whole Nam Xouang Reservoir. The procedures for establishing the FMC include: registration of fishers as members of the FMC, election of the FMC officials, preparation of articles of incorporation, registration of the organization with the Lao PDR Government, after which the FMC was established. For inland fisheries in Southeast Asia, establishment of fishers' organizations like FMC s should be promoted. The procedures for establishing the FMC in Lao PDR is applicable in other countries in the region and could serve as a case study.

② Grasping the status of fisheries and fishery resources

➤ Conduct of socio-economic survey

Conduct of socio-economic and market research

A socio-economic survey and a market survey were conducted to understand the situation of the inland water fishery resources in Nam Xouang Reservoir. The survey items include information on the income of fishers, properties and assets, fishery operations, status of cooperation networks, awareness of resource management, market prices, market destinations, etc.

The compiled information and analysis accurately describe the status of the fishery of Nam Xouang Reservoir, and it is expected that local governments and the Fisheries Management Committee would make use of the detailed data and information obtained through the surveys for the formulation and implementation of effective management measures.

➤ Evaluation of inland waters fishery resources

Catch survey was conducted to evaluate the current state of the inland waters fishery resources. The exploitation rate of the economically-important fish species such as Pabu (*Oxyeleotris marmorata*), Paka (*Pristolepis fasciata*), and Pa Ithai (*Osteochilus lini*) seems to give high fishing mortality, however the fish resources in Nam Xouang Reservoir are not yet depleted. At present, there had been no signs of major resource deterioration, although gillnet fishing, which is the main fishery, uses gillnets with small mesh size, and there is a concern that the fishing effort could be high.

Nonetheless, a survey to evaluate the inland waters fishery resources did not provide a clear assessment of the stocks of the fishery resources, but the results indicated that for effective management, a conservation area should be established, especially conservation area for juveniles and spawners as well as for spawning areas. Moreover, the use of gillnet fishing gear with larger mesh sizes would be promoted to avoid excessive fishing effort, and also avoid catching the small fishes and fish juveniles.

③ Taking measures to protect and manage the inland waters fishery resources

➤ Conservation area was established to monitor and control fishing operations

Based on discussions with the FMC, a conservation area was established to monitor and limit fishing operations. This conservation area covers a large area of the Nam Xouang Reservoir. However, it was difficult for fishers to clearly identify the location and range of the conservation area from the water surface of the Reservoir.

Therefore, buoys had been installed on the border of the conservation area. Buoys floating on the water surface made it possible for fishers to clearly identify the location and range of conservation areas from the water surface. In addition, many posters (signboards) indicating the conservation area were installed, informing fishers about the location of the conservation area.

➤ Implementation of monitoring activities

A surveillance team was formed by the FMC members to prevent illegal fishing in the conservation area, while the enforcement of surveillance activities had been initiated. The surveillance team has six members, whose main responsibility is to conduct monitoring activities in the Reservoir, especially in the conservation area, twice a month during the dry season and four times a month during the rainy season.

The Project provided a boat with engine for the surveillance activity. Monitoring of the fishing grounds by fishers themselves is the only effective method in the absence of any government-spearheaded monitoring activities. Thus, if fishers themselves carry out such surveillance activities continuously as part of the activities of the FMC, illegal fishing operations could be eradicated.

④ Taking measures to improve the livelihood of fishers' households

The sources of income of the fisher households around Nam Xouang Reservoir are mainly the fisheries and livestock industry, although the income is extremely low. Therefore, production of processed fishery products by the fishers' wives was considered an effective way for households to earn additional income to improve their livelihoods. Producing processed fishery products from the catch also enhances the value of the fish caught and helps in making effective use of the fish resources.

Thus, under the FMC structure, a fishery processing team was formed, consisting of leaders, accountants, product technicians, and others. Training was also provided for the team to learn the fisheries processing techniques. The processed fishery products produced by the fishery processing team are sold in Vientiane, with the team under the FMC making a profit and helping the members to improve their livelihoods.

3.2 Recommendations

In this Project, the results of activities ①-④ enabled the stakeholders to promote not only the conservation and management of inland water fishery resources around Nam Xouang Reservoir, but also the sustainable use of the resources, as well as the improvement of fishers' livelihoods.

The two-pronged approach that this Project had established could be considered as an example of the possible ways of solving similar problems in small-scale inland water fisheries: the sustainable management of the fishery resources coupled with the improvement of fishers' livelihoods.

The details of such approach are:

- ① Establish a fishers' organization or what is known as FMC, which as an activity-based measure that enables the local fishers to manage the inland water resources by themselves considering that
 - (a) the participation and coordination of both fishers and the government are very important and necessary to promote sustainable fisheries in the concerned area, and
 - (b) in sustaining the resources, it is necessary that the health of the environment, human well-being, and good governance are always taken into account
- ② Formulate fisheries resource management measures by understanding the status of local fisheries and the fishery resources
- ③ Carry out activities that aim to protect and manage the fishery resources, that is, through the establishment of protected or conservation areas where fishing operations are monitored and controlled, and where illegal fishing operations are easily cracked down

④Take measures to improve the livelihood of fishers through the introduction of fish processing ventures and exploring the marketing prospects of the processed fishery products to enable the fisher households to earn additional income.

The approach established through the Project activities had proved to be effective in protecting and managing the fishery resources, and improving the livelihoods in small-scale inland fisheries communities.

One of the major difficulties in managing inland fisheries in Southeast Asia is the large number of fishers, especially the large number of temporary fishers, who really do not consider fisheries as their main source of livelihood.

Many Southeast Asian countries, including Lao PDR, do not have fishing license system for inland water fisheries. One of the reasons could be the large numbers of temporary fishers which has made it difficult to register their number at any given actual site and to issue the fishing license to each one of them.

Since the fishing grounds of Nam Xouang Reservoir are in a closed water area, the fishery resources could be easily depleted if these are not properly managed. Therefore, it is necessary to effect fisheries management measures that would prevent any increases in the fishing effort.

Specifically, the development of regulations on the mesh size of gill nets used by most fishers should be promoted and enforced, while it is also important to initiate surveillance activities to prevent the occurrence of illegal fishing operations in conservation areas.

In order for these activities to be effective, the fishers themselves should formulate the necessary regulations, conduct the surveillance activities, and promote orderly fisheries that aim to achieve good results. To that end, it is important to organize the fishers' organizations and establish a system that would enable the fishers themselves to conduct the fishery management activities.


It is believed that such an approach which has been established through this Project could be applied as a case study of the inland water fisheries management in the other Southeast Asian countries.

Approval of FMC establishment and the rules and regulations for fisheries management in Mai Nam Pakan Village, Khammouane Province


ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ
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ກະຊວງກະສິກໍາ ແລະ ປ່າໄມ້
ກົມລ້ຽງສັດ ແລະ ການປະມົງ

**ການພັດທະນາການປະມົງຢູ່ບ້ານໃໝ່ນ້ຳປະກັນ ເມືອງຫີນບູນ ແຂວງຄຳມ່ວນ
ກົດລະບຽບ
ວ່າດ້ວຍ ການຄຸ້ມຄອງປາ ແລະ ສັດນ້ຳ ແບບຍືນຍົງ
ຢູ່ ວັງສະຫງວນ: ແຄນລັງ-ວັງຂົວ**



15 ກໍລະກົດ 2017
ສະໜັບສະໜູນໂດຍ: ອົງການພັດທະນາການປະມົງອາຊີຕາເວັນອອກສ່ຽງໃຕ້ (SEAFDEC)



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

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ເມືອງ ຫົນບຸນ
ຫ້ອງການກະສິກໍາ ແລະ ປ່າໄມ້

ເລກທີ 934/ ຫກປມ
ວັນທີ 07 ສິງຫາ 2017

ໃບສະເໜີ

ຮຽນ: ທ່ານ ເຈົ້າເມືອງຫົນບຸນ ທີ່ນັບຖື.
ເລື່ອງ: ຂໍອະນຸມັດຂໍ້ຕົກລົງ ກ່ຽວກັບ ການສ້າງຕັ້ງວັງສະຫງວນເພື່ອການຄຸ້ມຄອງ ແລະ ນໍາໃຊ້
ຊັບພະຍາກອນສັດນໍ້າແບບຍືນຍົງ ຂອງບ້ານ ໃໝ່ນໍ້າປະກັນ
(ໂດຍຜ່ານອົງການຈັດຕັ້ງທີ່ກ່ຽວຂ້ອງ)

- ອີງຕາມ: ກົດໝາຍວ່າດ້ວຍການປະມົງ ສະບັບເລກທີ 033/ສພຊ ນະຄອນຫຼວງວຽງຈັນ, ວັນທີ 09 ກໍລະກົດ 2009 ພາກທີ VII ໝວດທີ 2 ມາດຕາ 50, 51, 52 ແລະ 53
- ອີງຕາມ: ກອງປະຊຸມປຶກສາຫາລື ແລະ ຕົກລົງເຫັນດີເປັນເອກະພາບກັນກ່ຽວກັບການສ້າງຕັ້ງວັງສະຫງວນ ແລະ ຮ່າງກົດລະບຽບໃນການຄຸ້ມຄອງການປະມົງ ແບບມີສ່ວນຮ່ວມ ຢູ່ເຂດນໍ້າປະກັນ ຂອງບ້ານໃໝ່ນໍ້າປະກັນ ຄັ້ງວັນທີ 21 ມິຖຸນາ 2017

ຫ້ອງການກະສິກໍາ ແລະ ປ່າໄມ້ ຂໍຖືເປັນກຽດຮຽນສະເໜີມາຍັງທ່ານ ເພື່ອຂໍອະນຸມັດອອກຂໍ້ຕົກລົງກ່ຽວກັບການສ້າງຕັ້ງວັງສະຫງວນ 1 ວັງ (ແຄນລັງ-ວັງຂົວ) ໃນສາຍນໍ້າປະກັນ ເຊິ່ງຢູ່ໃນເຂດຄຸ້ມຄອງຂອງບ້ານໃໝ່ນໍ້າປະກັນ.

ສະນັ້ນ, ຈຶ່ງຮຽນສະເໜີມາຍັງທ່ານເພື່ອຄົ້ນຄວ້າ ແລະ ພິຈາລະນາຕາມຄວາມເໝາະສົມດ້ວຍ.

ຮຽນມາດ້ວຍຄວາມເຄົາລົບ ແລະ ນັບຖືຢ່າງສູງ

ຫົວໜ້າຫ້ອງການກະສິກໍາ ແລະ ປ່າໄມ້ເມືອງ



ໂຮມມາ ສິບຸນເຮືອາ



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

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ເມືອງ ຫີນບູນ
ບ້ານ ໃໝ່ນ້ຳປະກັນ

ເລກທີ. 220/ນຍ
ວັນທີ. 3 AUG 2017

ໃບສະເໜີ

ຮຽນ: ທ່ານ ຫົວໜ້າຫ້ອງການກະສິກໍາ ແລະ ປ່າໄມ້ ເມືອງຫີນບູນ.
ເລື່ອງ: ຂໍອະນຸມັດຂໍ້ຕົກລົງ ກ່ຽວກັບ ການສ້າງຕັ້ງວັງສະຫງວນເພື່ອການຄຸ້ມຄອງ ແລະ ນໍາໃຊ້
ຊັບພະຍາກອນສັດນ້ຳແບບຍືນຍົງ ຂອງບ້ານ ໃໝ່ນ້ຳປະກັນ
(ໂດຍຜ່ານອົງການຈັດຕັ້ງທີ່ກ່ຽວຂ້ອງ)

- ອີງຕາມ: ກົດໝາຍວ່າດ້ວຍການປະມົງ ສະບັບເລກທີ 133/ສພຊ ລົງວັນທີ 09 ກໍລະກົດ 2009
- ອີງຕາມ: ກອງປະຊຸມປຶກສາຫາລື ແລະ ຕົກລົງເຫັນດີເປັນເອກະພາບກັນກ່ຽວກັບການສ້າງຕັ້ງວັງສະຫງວນ ແລະ ວາງ
ລະບຽບໃບການຄຸ້ມຄອງປະມົງ ສັດນ້ຳ ຢູ່ເຂດນ້ຳປະກັນ ບ້ານໃໝ່ນ້ຳປະກັນ ຄັ້ງວັນທີ 21 ມິຖຸນາ 2017

ອີງການປົກຄອງ ບ້ານໃໝ່ນ້ຳປະກັນ ຂໍຖືເປັນກຽດຮຽນສະເໜີມາຍັງທ່ານ ເພື່ອຂໍອະນຸມັດຂໍ້ຕົກລົງກ່ຽວກັບການສ້າງຕັ້ງ
ວັງສະຫງວນ 1 ວັງ (ແຄນລັງ-ວັງຂົວ) ຢູ່ ສາຍນ້ຳປະກັນ ໃນຂອບເຂດການຄຸ້ມຄອງຂອງບ້ານເຊິ່ງມີລາຍລະອຽດດັ່ງລຸ່ມນີ້:

ກ. ວັງສະຫງວນ ບ້ານ ໃໝ່ນ້ຳປະກັນ

❖ ທີ່ຕັ້ງ ແລະ ຂະໜາດຂອງວັງສະຫງວນ

- | | |
|------------------|---------------------------------|
| - ທິດເໜືອ | ຕິດກັບທ່າບ້ານ(ປາກຮ່ອງໜອງແຄນລັງ) |
| - ທິດໃຕ້ | ຕິດກັບ ທ່າລຶດຊາລິງ |
| - ທິດຕາເວັນອອກ | ຕິດກັບສອງພາກນ້ຳປະກັນ |
| - ທິດຕາເວັນຕົກ | ຕິດກັບ ສອງພາກນ້ຳປະກັນ |
| - ລວງກວ້າງ | 50 ແມັດ |
| - ລວງຍາວ | 1,000 ແມັດ |
| - ຄວາມເລິກ | 6 ແມັດ (ໃນເດືອນພຶດສະພາ) |
| - ເນື້ອທີ່ທັງໝົດ | 50,000 ຕາແມັດ (5 ເຮັກຕາ) |

ຈຸດພິກັດ

- ຫົວວັງ X: 460782 Y: 1953038
- ຫ້າຍວັງ X: 460329 Y: 1953164

ດັ່ງນັ້ນ, ຈຶ່ງຮຽນສະເໜີມາຍັງທ່ານ ເພື່ອຄົ້ນຄວ້າ ແລະ ພິຈາລະນາຕາມຄວາມເໝາະສົມດ້ວຍ
ຮຽນມາດ້ວຍຄວາມເຄາະລົບ ແລະ ນັບຖືຢ່າງສູງ

ນາຍບ້ານ



ສອນ ຈຳປານຸວິງ



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ແຂວງ ຄຳມ່ວນ
ເມືອງ ຫີນບູນ

ເລກທີ: 157/ຈມ
ວັນທີ: 14.1.08.2017

ຂໍ້ຕົກລົງ

ຂອງເຈົ້າເມືອງ

ວ່າດ້ວຍການອະນຸມັດໃຫ້ສ້າງຕັ້ງວັງສະຫງວນຂຶ້ນຢູ່ໃນເຂດຄຸ້ມຄອງຂອງບ້ານ ໃໝ່ນ້ຳປະກັນ

- ອີງຕາມ: ກົດໝາຍວ່າດ້ວຍການປະມົງ ສະບັບເລກທີ 03/ສພຊ ນະຄອນຫຼວງວຽງຈັນ, ວັນທີ 09 ກໍລະກົດ 2009 ພາກທີ VII ໝວດທີ 2 ມາດຕາ 50, 51, 52 ແລະ 53
- ອີງຕາມ: ໃບສະເໜີຂອງບ້ານ ໃໝ່ນ້ຳປະກັນ ສະບັບເລກທີ...../ນບ, ລົງວັນທີ/...../2017 ກ່ຽວກັບການຂໍສ້າງຕັ້ງວັງສະຫງວນໃນເຂດການຄຸ້ມຄອງການປະມົງແບບມີສ່ວນຮ່ວມ ຢູ່ເຂດນ້ຳປະກັນ ຂອງບ້ານໃໝ່
- ອີງຕາມ: ໃບສະເໜີຂອງຫ້ອງການກະສິກຳ ແລະ ປ່າໄມ້ ສະບັບເລກທີ...231.../ຫກປມ, ລົງວັນທີ 07.12.2016

ເຈົ້າເມືອງຕົກລົງ:

- ມາດຕາ 1: ຕົກລົງເຫັນດີອະນຸມັດໃຫ້ບ້ານໃໝ່ນ້ຳປະກັນ ສ້າງຕັ້ງວັງສະຫງວນ 1 ວັງຂຶ້ນໃນສາຍນ້ຳປະກັນ, ຊື່ວັງສະຫງວນ: ແຄນລັງ-ວັງຂົວ, ເນື້ອທີ່ທັງໝົດ 50.000 ຕາແມັດ (5 ເຮັກຕາ), ກວ້າງ 50 ແມັດ, ຍາວ 1.000 ແມັດ, ເລິກ 6 ແມັດ (ຊ່ວງເດືອນ ພຶດສະພາ), ຂຶ້ນກັບເຂດຄຸ້ມຄອງຂອງບ້ານ ໃໝ່ນ້ຳປະກັນ;
- ມາດຕາ 2: ບັນດາອົງການຈັດຕັ້ງຕ່າງໆ, ປະຊາຊົນບ້ານໃກ້ຄ່ຽງ ແລະ ບ້ານອື່ນໆ ຈົ່ງໃຫ້ການຮ່ວມມືກັບບ້ານໃໝ່ນ້ຳປະກັນ ພ້ອມກັນປົກປັກຮັກສາ ແລະ ຈັດຕັ້ງປະຕິບັດກົດລະບຽບສະບັບນີ້ໃຫ້ໄດ້ຮັບໝາກຜົນສູງ;
- ມາດຕາ 3: ມອບໃຫ້ຫ້ອງການກະສິກຳ ແລະ ປ່າໄມ້ເມືອງ, ຄະນະກຳມະການຄຸ້ມຄອງການປະມົງຂຶ້ນບ້ານ ປະສານສົມທົບກັບອຳນາດການປົກຄອງບ້ານ ພ້ອມດ້ວຍປະຊາຊົນພາຍໃນບ້ານພ້ອມກັນຈັດຕັ້ງປະຕິບັດ ແລ້ວລາຍງານຜົນໄດ້ຮັບໃຫ້ຂັ້ນເທິງຮັບຊາບເປັນແຕ່ລະໄລຍະ;
- ມາດຕາ 4: ຂໍ້ຕົກລົງສະບັບນີ້ ມີຜົນສັກສິດນັບແຕ່ມີລົງລາຍເຊັນເປັນຕົ້ນໄປ.

ເຈົ້າເມືອງຫີນບູນ

ເທວາ ສີໂສພາ
Thayva SYSOPHA



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ເມືອງ ຫົນບຸນ
ບ້ານໃໝ່ນ້ຳປະກັນ

ເລກທີ: 221 / ນບ
ວັນທີ: 03 AUG 2017

ກົດລະບຽບ

ວ່າດ້ວຍ ການຄຸ້ມຄອງປ່າ-ສັດນ້ຳອື່ນໆ ແບບຍືນຍົງໃນວັງສະຫງວນຂອງບ້ານໃໝ່ນ້ຳປະກັນ

- ອີງຕາມ: ກົດໝາຍວ່າດ້ວຍການປະມົງ ສະບັບເລກທີ 03/ສພຊ ນະຄອນຫຼວງວຽງຈັນ, ວັນທີ 09 ກໍລະກົດ 2009 ພາກທີ VII ໝວດທີ 2 ມາດຕາ 50, 51, 52 ແລະ 53
- ອີງຕາມ: ກອງປະຊຸມປຶກສາຫາລື ແລະ ຕົກລົງເຫັນດີເປັນເອກະພາບກັນກ່ຽວກັບການສ້າງຕັ້ງວັງສະຫງວນ ແລະ ຮ່າງກົດລະບຽບການຄຸ້ມຄອງປະມົງແບບມີສ່ວນຮ່ວມ ຢູ່ເຂດບ້ານໃໝ່ນ້ຳຂອງ ຄັ້ງວັນທີ 21 ມິຖຸນາ 2017.

1. ຂໍ້ມູນພື້ນຖານບ້ານ

ບ້ານ ໃໝ່ນ້ຳປະກັນ ແມ່ນບ້ານ ທີ່ຕັ້ງໃໝ່, ຕັ້ງລຽບຕາມທາງເລກທີ 13 ໃຕ້ ຫ່າງຈາກຫ້ອງວ່າການເມືອງ 15 ຫລັກ ມີນ້ຳປະກັນໄຫລຜ່ານບ້ານ ນັບຖືສາສະໜາພຸດ, ບ້ານມີເນື້ອທີ່ລວມບ້ານທັງໝົດແມ່ນ 720 ເຮັກຕາ, 83 ຫລັງຄາເຮືອນ, 85 ຄອບຄົວ ພົນລະເມືອງທັງໝົດແມ່ນ 430 ຄົນ ແລະ ຍິງ 227 ຄົນ (ຂໍ້ມູນປີ 2017).

2. ຈຸດປະສົງ

- ເພື່ອເປັນບ່ອນອະນຸລັກ ແລະ ປົກປັກຮັກສາຊະນິດພັນປ່າ ແລະ ຊັບພະຍາກອນສັດນ້ຳອື່ນໆ ໃຫ້ມີຄວາມອຸດົມສົມບູນ ແລະ ມີຄວາມຍືນຍົງຕະຫຼອດໄປ;
- ເພື່ອເປັນບ່ອນທີ່ຢູ່ອາໄສ, ພັກເຊົາ ຫລື ລີ້ຊ້ອນ, ເປັນບ່ອນວາງໄຂ່ ແລະ ຂະຫຍາຍພັນຂອງຊະນິດພັນປ່າ ແລະ ສັດນ້ຳອື່ນໆ ຕາມລະດູການ;
- ເພື່ອໃຫ້ປະຊາຊົນຮັບຮູ້ ແລະ ເຂົ້າໃຈ ແບບແຜນວິທີການຄຸ້ມຄອງ ແລະ ການນຳໃຊ້ປ່າ ແລະ ສັດນ້ຳອື່ນໆ ແບບຍືນຍົງ ແລະ ເປັນສະບຽງອາຫານ ພ້ອມທັງສ້າງລາຍຮັບ ແລະ ແກ້ໄຂຊີວິດການເປັນຢູ່ຂອງປະຊາຊົນໃນບ້ານ.
- ເພື່ອເປັນບ່ອນທ້ອງທ່ຽວໃນອານາຄົດ.

3. ຊີ້ວັງສະຫງວນ

ອີງການປົກຄອງບ້ານພ້ອມດ້ວຍຊາວບ້ານໄດ້ຕົກລົງເຫັນດີເອົາ ແຄນລັງ-ວັງຂົວ ນ້ຳປະກັນ ເປັນວັງສະຫງວນບ້ານ ຢ່າງເປັນທາງການ.

ເປັນທາງການ.

4. ທີ່ຕັ້ງ, ຂອບເຂດ ແລະ ຂະໜາດຂອງວັງສະຫງວນ

4.1 ທີ່ຕັ້ງ ແລະ ຂະໜາດຂອງວັງສະຫງວນບ້ານ ໃໝ່ນ້ຳປະກັນ.

- ທິດເໜືອ ຕິດກັບທ່າບ້ານ
- ທິດໃຕ້ ຕິດກັບ ທ່າລິດຊາລົງ
- ທິດຕາເວັນອອກ ຕິດກັບສອງພາກນ້ຳປະກັນ
- ທິດຕາເວັນຕົກ ຕິດກັບ ສອງພາກນ້ຳປະກັນ
- ລວງກວ້າງ 50 ແມັດ
- ລວງຍາວ 1,000 ແມັດ
- ຄວາມເລິກ 6 ແມັດ (ໃນເດືອນ ພຶດສະພາ)
- ເນື້ອທີ່ທັງໝົດ 50,000 ຕາແມັດ (5 ເຮັກຕາ)
- ຈຸດພິກັດ

• ຫົວວັງ X: 460782 Y: 1953038

• ຫ້າຍວັງ X: 460329 Y: 1953164

5. ກົດລະບຽບ, ມາດຕະການຄຸ້ມຄອງ ແລະ ນຳໃຊ້ວັງສະຫງວນ

5.1. ກົດລະບຽບການຄຸ້ມຄອງວັງສະຫງວນ

ຫ້າມບຸກຄົນ ຫລື ກຸ່ມຄົນເຂົ້າຫາປາ ແລະ ສັດນ້ຳທຸກຊະນິດຢູ່ວັງສະຫງວນຕະຫຼອດໄປ;

- ປະເພດເຄື່ອງມືທີ່ໄປໃນວັງເຊັ່ນ: ດາງກັດ, ດາງກວດ, ມອງ, ເບັດ, ແຫ, ອວນ, ລານ, ຊ້ອນ, ກະດູງ, ຈັນ, ອູ່, ໄຊ ຈິບ, ລອບ, ເສື້ອນອນກິນ, ສະຫວີງ, ບືນຢາງ+ໜ້າກາກ ແລະ ອື່ນໆ;
- ປະເພດເຄື່ອງມືແບບຜິດກົດໝາຍນອກວັງເຊັ່ນ: ຢາເບືອ, ໜ້າກາກລົງດຳຢິງ, ໄຟຟ້າຊອດ, ສານເຄມີ ຕ່າງໆ

5.2. ມາດຕະການຕໍ່ຜູ້ລະເມີດ

5.2.1 ປະເພດເຄື່ອງມືທີ່ໄປໃນວັງ:

ຖ້າບຸກຄົນ ຫລື ກຸ່ມຄົນໃດ ຫາກລ່ວງລະເມີດລະບຽບການທີ່ໄດ້ລະບຸໄວ້ຂ້າງເທິງຈະຖືກປັບໃຫມດັ່ງລຸ່ມນີ້:

ຄັ້ງທີ 1: ປັບໃໝ 500,000 ກີບ/ຄົນ/ຄັ້ງ ພ້ອມຍຶດຂອງກາງທັງໝົດ ແລະ ສ້າງບົດບັນທຶກໂດຍຊ້ອງໜ້າອີງ
ການຈັດຕັ້ງອຳນາດການປົກຄອງບ້ານ;

ຄັ້ງທີ 2: ປັບໃໝ 1,000,000 ກີບ/ຄົນ/ຄັ້ງ ພ້ອມຍຶດຂອງກາງທັງໝົດ ແລະ ສ້າງບົດບັນທຶກໂດຍຊ້ອງໜ້າອີງ
ການຈັດຕັ້ງອຳນາດການປົກຄອງບ້ານ, ຖ້າຜູ້ກ່ຽວບໍ່ຍິນຍອມ ຈະປະກອບສຳນວນຄະດີສິ່ງໃຫ້ເມືອງ;

ຄັ້ງທີ 3: ປັບໃໝ 1,500,000 ກີບ/ຄົນ/ຄັ້ງ ພ້ອມຍຶດຂອງກາງທັງໝົດ ແລະ ພ້ອມທັງປະກອບສຳນວນຄະດີສິ່ງ
ໃຫ້ເຈົ້າໜ້າທີ່ຂັ້ນເມືອງ.

5.2.2 ປະເພດເຄື່ອງມືທີ່ຜິດກົດໝາຍ:

- ປະເພດເຄື່ອງມືທີ່ຜິດກົດໝາຍເຊັ່ນ: ໝໍ້ໄຟຊ່ອດປາ, ຢາເບືອ, ລະເບີດ, ບືນຫລວງ, ເຄື່ອງດູດ, ສຽງ
ທຽມ ແລະອື່ນໆ ເພື່ອຫາປາແບບດັບສູນຢູ່ໃນຂອບເຂດການຄຸ້ມຄອງຊັບພະຍາກອນສັດນ້ຳ ພາຍໃນ
ຂອບເຂດສາຍນ້ຳປະກັນທີ່ຂຶ້ນກັບບ້ານຢ່າງເດັດຂາດ.

- ຄັງທີ 2: ປັບໃໝ 6,000,000 ກີບ/ຄົນ/ຄັ້ງ ພ້ອມຍຶດຂອງກາງທັງໝົດ ແລະ ກັກໂຕຜູ້ກະທຳຜິດ ແລະ ປະກອບສຳນວນຄະດີສິ່ງໃຫ້ເຈົ້າໜ້າທີ່ດຳເນີນຕາມກົດໝາຍ.
- ຜູ້ທີ່ຖືກແຕ່ງຕັ້ງເວນຍາມວັງສະຫງວນຫາກສວຍໂອກາດໃຊ້ໜ້າທີ່ຫາຜົນປະໂຫຍດບໍ່ວ່າໃນກໍລະນີໃດໆກໍ່ຕາມທີ່ລະເມີດຕໍ່ກົດລະບຽບສະບັບນີ້ຈະຖືກສຶກສາອົບຮົມແລະປັບໃໝ 10,000,000ກີບ/ຄົນ/ຄັ້ງ;

❖ ຖ້າຜູ້ໃດຫາກທຳລາຍປ້າຍວັງສະຫງວນ ໃຫ້ມີຄວາມເສຍຫາຍ ກໍ່ຈະຖືກປັບໃໝ 1.000.000 ກີບ.

6. ນະໂຍບາຍການແບ່ງປັນຕ່າງໆໃນການຄຸ້ມຄອງ ວັງສະຫງວນ

- ມອບເຂົ້າຄັງລວມຂອງບ້ານ 10% ຂອງມູນຄ່າປັບໃໝ;
- ມອບໃຫ້ຜູ້ມາລາຍງານຜູ້ກະທຳຜິດ 30% ຂອງມູນຄ່າປັບໃໝ (ຖ້າຈັບໄດ້ໄລ່ທັນ);
- ມອບໃຫ້ໜ່ວຍງານເວນຍາມ 30% ຂອງມູນຄ່າປັບໃໝ;
- ມອບໃຫ້ການຈັດຕັ້ງບ້ານຜູ້ທີ່ໄກ່ແກ່ຍດຳເນີນຄະດີ 20% ຂອງມູນຄ່າປັບໃໝ;
- ມອບໃຫ້ໜ່ວຍງານຊີ້ນຳລວມບ້ານ 10% ຂອງມູນຄ່າປັບໃໝ;
- ໃນກໍລະນີມີລາຍໄດ້ອື່ນໆຈາກວັງສະຫງວນ ແມ່ນໃຫ້ນຳໃຊ້ເຂົ້າໃນການພັດທະນາບ້ານ.

7. ຄະນະຊີ້ນຳ ແລະ ຄະນະກຳມະການຄຸ້ມຄອງວັງສະຫງວນ

7.1. ຄະນະຊີ້ນຳລວມ

- ເລຂາພັກບ້ານ 1 ທ່ານ
- ນາຍບ້ານ 1 ທ່ານ
- ຄະນະແນວໂຮມບ້ານ 2 ທ່ານ

7.2. ຄະນະກຳມະການໃກ້ແກ່ຍ

ການປະຕິບັດ ແມ່ນອີງໃສ່ຕາມຄະນະຈັດຕັ້ງແກ້ໄຂຂັ້ນຕົ້ນຂອງບ້ານ ທີ່ໄດ້ຮອງຮັບການແຕ່ງຕັ້ງຈາກຂັ້ນບ້ານໂດຍພື້ນຖານທີ່ມີຢູ່ແລ້ວ.

7.3. ຄະນະກຳມະການກວດກາລາດຕະເວນ

- ຄະນະບ້ານ
- ປ ກ ສ ບ້ານ
- ປ ກ ຊ ບ້ານ
- ພ້ອມດ້ວຍ ຫົວໜ້າໜ່ວຍແຕ່ລະໜ່ວຍ

8. ສິດ ແລະ ໜ້າທີ່ຂອງຄະນະຊີ້ນຳ ແລະ ຄະນະກຳມະການຮັບຜິດຊອບໃນການຄຸ້ມຄອງວັງສະຫງວນ

8.1. ຄະນະຊີ້ນຳລວມ

- ຊີ້ນຳໂດຍກົງຕໍ່ວຽກງານການຄຸ້ມຄອງ ແລະ ພັດທະນາປາ-ສັດນ້ຳອື່ນໆ, ລົງເລິກຊີ້ນຳນຳພາວຽກງານໃກ້ແກ່ຍ, ສືບສວນສອບສວນໄກ່ແກ່ຍຄະດີຂອງຜູ້ກະທຳຜິດໃຫ້ຖືກຕ້ອງຕາມລະບຽບກົດໝາຍ;
- ສຶກສາອົບຮົມປະຊາຊົນລູກຫລານພາຍໃນບ້ານຂອງຕົນໃຫ້ເຂົ້າໃຈແຈ້ງກ່ຽວກັບລະບຽບການຄຸ້ມຄອງການປະມົງ ແລະ ຊັບພະຍາກອນສັດນ້ຳ ເພື່ອພ້ອມກັນຈັດຕັ້ງປະຕິບັດໃຫ້ໄດ້ດີ;
- ຊີ້ນຳໂດຍກົງຕໍ່ວຽກງານການຄຸ້ມຄອງ ແລະ ຊົມໃຊ້ປາ ແລະ ສັດນ້ຳອື່ນໆ, ລົງເລິກຊີ້ນຳນຳພາວຽກງານການປ້ອງກັນເວນຍາມ.

8.2. ຄະນະກຳມະການໃກ້ເກ່ຍ

- ສືບສວນສອບສວນ ແລະ ໃກ້ເກ່ຍຄະດີຂອງຜູ້ກະທຳຜິດໃຫ້ຖືກຕ້ອງຕາມມາດຕະການທີ່ໄດ້ລະບຸໄວ້ໃນກົດລະບຽບ;
- ກໍລະນີໃກ້ເກ່ຍຄະດີຂອງຜູ້ກະທຳຜິດບໍ່ໄດ້ ຕ້ອງໄດ້ລາຍງານໃຫ້ຄະນະຊີ້ນຳລວມຮັບຊາບ;
- ຕ້ອງສຶກສາອົບຮົມປະຊາຊົນລູກຫລານພາຍໃນບ້ານຂອງຕົນໃຫ້ເຂົ້າໃຈຈະແຈ້ງກ່ຽວກັບລະບຽບການຄຸ້ມຄອງຊັບພະຍາກອນສັດນ້ຳ ເພື່ອພ້ອມກັນຈັດຕັ້ງປະຕິບັດໃຫ້ໄດ້ດີ.

8.3. ຄະນະກຳມະການກວດກາລາດຕະເວນ

- ກວດກາບ້ອງກັນເວນຍາມປົກກະຕິ, ແຕ່ງຕັ້ງປະຊາຊົນພາຍໃນບ້ານ ຫລື ແຕ່ລະໜ່ວຍເຂົ້າຮ່ວມໃນການເວນຍາມ ໂດຍຈັດເປັນຕາຕະລາງເວນຍາມໃສ່ປຶ້ມບັນທຶກການເວນຍາມໃນແຕ່ລະມື້ຢ່າງລະອຽດ;
- ຜູ້ຖືກແຕ່ງຕັ້ງກວດກາເວນຍາມມີສິດກັກຕົວຜູ້ກະທຳຜິດ, ພ້ອມຍຶດຂອງການທັງໝົດ ແລ້ວສະຫລຸບລາຍງານໃຫ້ຄະນະຊີ້ນຳລວມຮັບຊາບໃຫ້ທ່ວງທັນເວລາ.

8.4 ບົດບັນຍັດສຸດທ້າຍ

- ກົດລະບຽບວ່າດ້ວຍການຄຸ້ມຄອງ ແລະ ຊົມໃຊ້ປ່າ ແລະ ສັດນ້ຳອື່ນໆໃນວັງສະຫງວນຂອງບ້ານ ໃໝ່ນ້ຳປະກັນສະບັບນີ້ ໄດ້ສ້າງຂຶ້ນໂດຍອີງຕາມກົດໝາຍວ່າດ້ວຍການປະມົງ ພາກທີ VII ໝວດທີ 2 ມາດຕາ 50, 51, 52, 53 ແລະ ການຕົກລົງເຫັນດີເປັນເອກະພາບຂອງອົງການປົກຄອງພ້ອມດ້ວຍປະຊາຊົນພາຍໃນບ້ານ ແລະ ອົງການຈັດຕັ້ງຕ່າງໆທີ່ກ່ຽວຂ້ອງພາຍໃນເມືອງຫີນບຸນ, ແຂວງ ຄຳມ່ວນ.

9. ຜົນສັກສິດ

ກົດລະບຽບສະບັບນີ້ມີຜົນສັກສິດນຳໃຊ້ໄດ້ນັບແຕ່ມີປະກາດເປັນຕົ້ນໄປ.

ຫົວໜ້າອົງການກະສິກຳ ແລະ ປ່າໄມ້ເມືອງ



ໂຮມມາ ສີບຸນເຮືອາ

ຫົວໜ້າກຸ່ມບ້ານ



ບຸນໄທ ສອນໄພທອງ

ຍິ່ງຍິນ ແລະ ຮັບຮູ້ຈາກ
ເຈົ້າເມືອງ ຫີນບຸນ

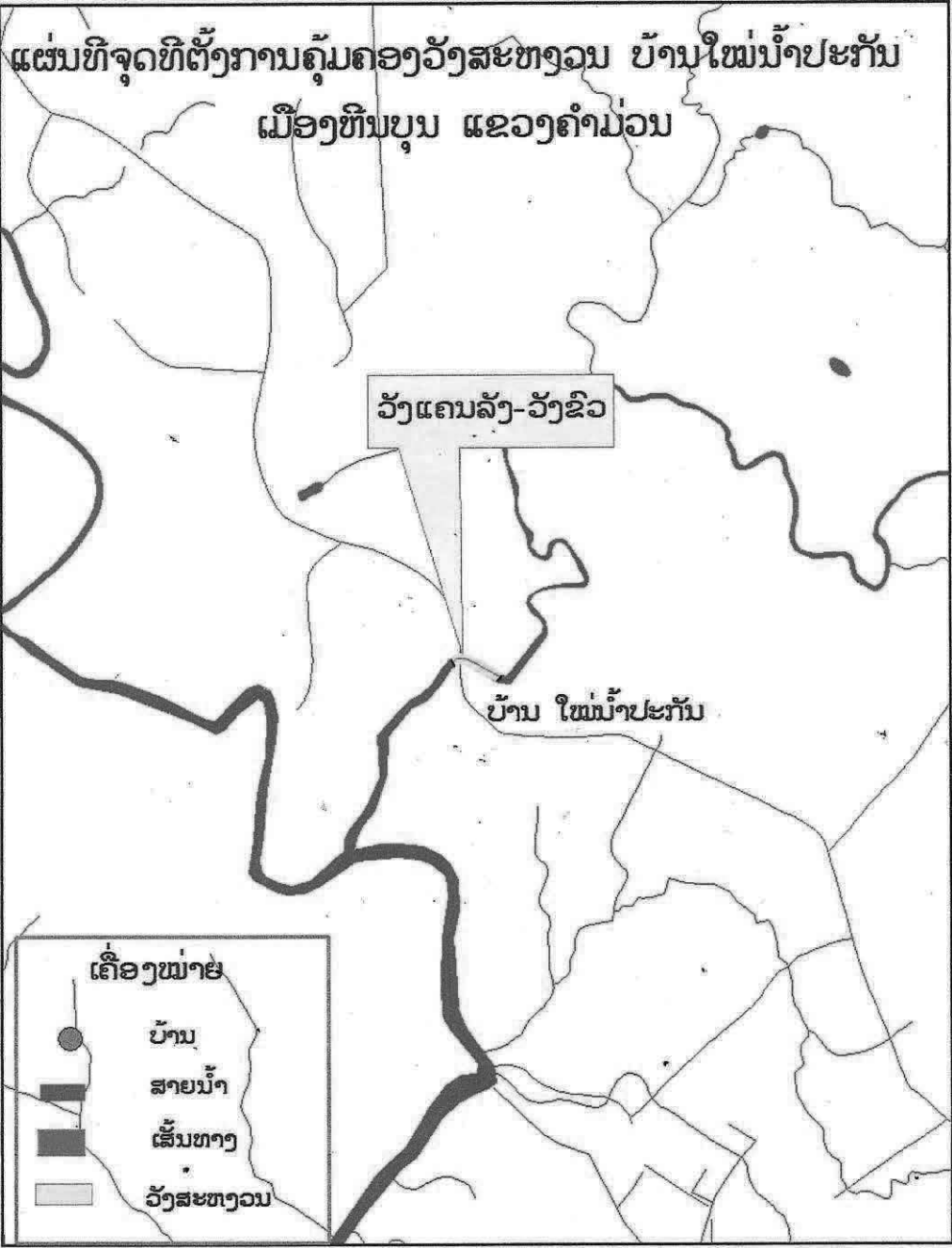
ນາຍບ້ານ



ສອນ ຈຳປານຸວົງ



ເທວາ ສີໂສພາ
Thayva SYSOPHA





ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

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ເມືອງຫິນບຸນ
ບ້ານໃໝ່ນ້ຳປະກັນ

ວັນທີ... 3 AUG 2017

ລາຍຊື່ຄະນະກຳມະການຄຸ້ມຄອງການປະມົງປະຈຳບ້ານໃໝ່ນ້ຳປະກັນ

- ອີງຕາມ ມາດຕາ 50 ກົດໝາຍ ວ່າດ້ວຍການປະມົງ ສະບັບ 133 ສພຊ ລົງວັນທີ 9 ກໍລະກົດ 2009
- ອີງຕາມກອງປະຊຸມເຫັນດີເປັນເອກະພາບກັນ ຄັ້ງວັນທີ 21 ມິຖຸນາ 2017 ທີ່ບ້ານໃໝ່ນ້ຳປະກັນ

I. ຄະນະຊີ້ນຳລວມ: 4 ທ່ານ

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| 1. ທ່ານ ລ້ານ ຄຳແດງ ເລຂາພັກ | ເປັນປະທານ |
| 2. ທ່ານ ສອນ ຈຳປານຸວິງ ນ້າຍບ້ານ | ຮອງ |
| 3. ທ່ານ ສິນິງສັກ ອິນທິລາດ ແນວໂຮມ | ກຳມະການ |
| 4. ທ່ານ ນ.ໃຈເພັດ ວົງສະຫວັດ ແນວໂຮມ | ກຳມະການ |

II. ຄະນະໄກ່ແກ້: 8 ທ່ານ

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| 1. ທ່ານ ບຸນລ້າ ວັນທະວົງ | | ເປັນປະທານ |
| 2. ທ່ານ ນ. ກິນນະລີ ໄຊຍະບຸດ | ຮອງນາຍບ້ານ | ເປັນຮອງ |
| 3. ທ່ານ ສີປະເສີດ ນິນທະໂນລາດ | ແນວໂຮມ | ກຳມະການ |
| 4. ທ່ານ ບຸນທັນ ໄຊສິງຄາມ | ເຖົ້າຂຸນ | ກຳມະການ |
| 5. ທ່ານ ຫລຽນ ພິນອາສາ | ປກສ | ກຳມະການ |
| 6. ທ່ານ ສິວງຽງ ລາດສະພອນ | ຊາວຫຸ່ມ | ກຳມະການ |
| 7. ທ່ານ ນ. ດວງ ມິນທິສານ | ສະຫະພັນຍິງ | ກຳມະການ |
| 8. ທ່ານ ນ. ຫອມຈັນ ພິມມະຈັກ | ເຖົ້າຂຸນ | ກຳມະການ |

III. ຄະນະກວດກາລາດຕະເວນ ປົກປັກຮັກສາ ຊັບພະຍາກອນສັດນ້ຳ: 17 ທ່ານ

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| 1. ທ່ານ ກົງທອງ ຍິງນຸວົງ ຮອງນາຍບ້ານ | ເປັນປະທານ |
| 2. ທ່ານ ບຸນສິງ ດວງມະລາ ປກຊ | ຮອງ |
| 3. ທ່ານ ຕິງແສນ ທະວິສຸກ | ຫົວໜ້າໜ່ວຍ 1 ກຳມະການ |
| 4. ທ່ານ ບຸນທະວີ ຈິນທະວົງ | ຫົວໜ້າ ໜ່ວຍ 2 ກຳມະການ |
| 5. ທ່ານ ປົວລາ ເພັງສະຫວັດ | ຫົວໜ້າ ໜ່ວຍ 3 ກຳມະການ |
| 6. ທ່ານ ອຳພອນ ພູດທະວີ | ຫົວໜ້າ ໜ່ວຍ 4 ກຳມະການ |
| 7. ທ່ານ ແກ້ວ ສິສິມບຸນ | ຫົວໜ້າ ໜ່ວຍ 5 ກຳມະການ |
| 8. ທ່ານ ວິນໄຊ ດາລາ | ປກສ ກຳມະການ |


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| 9. ທ່ານ ສີພອນ ສີສິມບູນ | ປກຊ ກຳມະການ |
| 10. ທ່ານ ພູທອນ (ຮອດ) | ປກຊ ກຳມະການ |
| 11. ທ່ານ ທອນ ວົງສະຫວັດ | ປກຊ ກຳມະການ |
| 12. ທ່ານ ພູວິ ພິມມະສາ | ປກຊ ກຳມະການ |
| 13. ທ່ານ ລາຍ | ປກຊ ກຳມະການ |
| 14. ທ່ານ ສອນໄຊ ດັງວັນດຽວ | ປກຊ ກຳມະການ |
| 15. ທ່ານ ສິນຍາ ວັນທະວິງ | ປກຊ ກຳມະການ |
| 16. ທ່ານ ຊ້າງ ແສງມາລາ | ປກຊ ກຳມະການ |
| 17. ທ່ານ ກອງມະນີ ແກ້ວອາລຸນ | ປກຊ ກຳມະການ |

ນາຍບ້ານ



ສອນ ຈຳປານຸວິງ

Election for committee positions in Phone Hong District



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ

ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ

ແຂວງວຽງຈັນ
ເມືອງໂພນໂຮງ

218 - - - -

ເລກທີ : / ຈມ.ພຮ
ໂພນໂຮງ, ວັນທີ : 2.3.11.11.2017

ຂໍ້ຕົກລົງ

ຂອງເຈົ້າເມືອງ ເມືອງໂພນໂຮງ

ວ່າດ້ວຍ: ການແຕ່ງຕັ້ງ ກຳມະການ ຄຸ້ມຄອງການປະມົງອ່າງນ້ຳຊ່ວງ
ຕອນເທິງ.

- ອີງໃສ່: ແຜນພັດທະນາເສດຖະກິດ-ສັງຄົມດ້ານການປະມົງຢູ່ພາຍໃນເມືອງໂພນໂຮງ ແຂວງວຽງຈັນ.
- ອີງໃສ່: ກອງປະຊຸມຜູ້ຕາງໜ້າຂອງບັນດາບ້ານອ້ອມຂ້າງອ່າງນ້ຳຊ່ວງຕອນເທິງ ຄັ້ງວັນທີ 16/6/2017.
ໄດ້ຄົ້ນຄ້ວາກ່ຽວກັບການສ້າງຄະນະກຳມະການຄຸ້ມຄອງ ແລະ ພັດທະນາການປະມົງອ່າງ

ເຈົ້າເມືອງ ເມືອງໂພນໂຮງ ຕົກລົງ :

ມາດຕາ 01 : ເຫັນດີແຕ່ງຕັ້ງ ຄະນະກຳມະການຄຸ້ມຄອງການປະມົງພາຍໃນອ່າງນ້ຳຊ່ວງ ຕອນເທິງ
ຊຶ່ງປະກອບມີລາຍຊື່ລະອຽດລຸ່ມນີ້ :

1. ທ່ານ ນາງ ເຄື່ອຄຳ ແສງພູທອງ ນາຍບ້ານງູນາເທບ	ເປັນຫົວໜ້າ
2. ທ່ານ ບົວລຽນ ຂັນຕິໄຊ ຮອງນາຍບ້ານງູນາເທບ	ເປັນຮອງ
3. ທ່ານ ແງ້ຍມະນີ ແສນສີ ຮອງນາຍບ້ານໜອງປຸ້ງ	ເປັນຮອງ
4. ທ່ານ ສະໄຫວ ເປົ້າແດງ ຮອງນາຍບ້ານໂພນໄຊ	ເປັນຄະນະ
5. ທ່ານ ບຸນມິ ສຸລິວິງ ຮອງນາຍບ້ານນາເທບ	ເປັນຄະນະ
6. ທ່ານ ສິນວນ ສິວິໄລ ປະທານແນວ ບ້ານໃໝ່	ເປັນຄະນະ
7. ທ່ານ ຄຳໜຸນ ແວ່ນວຽງທອງ ປກສ ບ້ານແຈ້ງສະຫວ່າງ	ເປັນຄະນະ
8. ທ່ານ ໄຈແກ້ວ ປະທຸມຊາດ ປກສ ເຕົ້າຖານ	ເປັນຄະນະ
9. ທ່ານ ກຳ ພິມວິໃສ່ ປກສໂພນສູງ	ເປັນຄະນະ
10. ທ່ານ ຈອນຄຳ ສີປະເສີດ ປກຊ ແຈ້ງສະຫວ່າງ	ເປັນຄະນະ

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| 11. ທ່ານ ບຸນເຮືອງ ທຳມະວົງ ປກສ ແຈ້ງສະຫ່ວາງ | ເປັນຄະນະ |
| 12. ທ່ານ ນ່ຽນ ພາສວນ ປກຊ ນາເທບ | ເປັນຄະນະ |
| 13. ທ່ານ ແອັດ ພິມປິດາ ຊາວປະມົງ ນາເທບ | ເປັນຄະນະ |
| 14. ທ່ານ ມອນສີ ສີບຸນເຮືອງ ປກສ ນາເທບ | ເປັນຄະນະ |
| 15. ທ່ານ ນ້ອຍ ສີວໍລະລາດ ຊາວໜຸ່ມ ແຈ້ງສະຫ່ວາງ | ເປັນຄະນະ |
| 16. ທ່ານ ດາວວີ ແກ້ວມະນີວົງ ປກຊ ນາເທບ | ເປັນຄະນະ |
| 17. ທ່ານ ສີທິນ ສີທະນິນໄຊ ປກສ ບ້ານດົງຂາວ | ເປັນຄະນະ |
| 18. ທ່ານ ຕຸ້ຍ ແອນິພິນ ປກສ ບ້ານໂພນຄອ້ງ | ເປັນຄະນະ |
| 19. ທ່ານ ບົວສະຫວັນ ຊາມຸນຕີ ປກສ ບ້ານໜອງປຸ່ງ | ເປັນຄະນະ |
| 20. ນາງ ດວງເດືອນ ໄຊຍະວົງເພັດ ສະຫະພັນແມ່ຍິງບ້ານນາເທບ | ເປັນຄະນະ |

ມາດຕາ 02 : ມອບໃຫ້ ຄະນະກຳມະການຕັ້ງກ່າວຄື້ນຄື້ວາແບ່ງປັນວຽກພາຍໃນໝູ່ຄະນະຢ່າງ
ລະອຽດ ກຳນົດພາລະບົດບາດ,ສິດ ແລະ ໜ້າທີ່ ຂອງຄະນະກຳມະການໃນການ
ເຄື່ອນໄຫວຢ່າງຈະແຈ້ງ.

ມາດຕາ 03 : ຂໍ້ຕົກລົງສະບັບນີ້ມີຜົນສັກສິດ ແລະ ນຳໃຊ້ໄດ້ນັບແຕ່ມີລົງລາຍເຊັນເປັນຕົ້ນໄປ ທຸ

ເຈົ້າເມືອງ ເມືອງໂພນໂຮງ



ອິນຄຳ ພັນດາລາ
Inkham PHANDALA



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ

ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ກະຊວງປ້ອງກັນປະເທດ
ວິທະຍາຄານກົມມະດໍາ

ເລກທີ..051.../ວກ
ວັນທີ 26...ມິຖຸນາ 2017

ຂໍ້ຕົກລົງ

ວ່າດ້ວຍການແຕ່ງຕັ້ງຄະນະກຳມະການກວດກາອ່າງນໍ້າຊວງຕອນເໜືອ
ຮ່ວມກັບ 10 ໝູ່ບ້ານທີ່ຂຶ້ນກັບກຸ່ມໂພນສູງ, ເມືອງໂພນໂຮງ, ແຂວງວຽງຈັນ.

- ອີງຕາມ: ກອງປະຊຸມຮ່ວມກັບອຳນາດການປົກຄອງເມືອງໂພນໂຮງ ຄັ້ງວັນທີ 16 ມິຖຸນາ ປີ 2017 ທີ່ຜ່ານມາ.
- ອີງຕາມ: ທິດຊີ້ນຳຂອງເຈົ້າເມືອງໂພນໂຮງ ຄັ້ງວັນທີ 29 ກໍລະກົດ ປີ 2016 ໃຫ້ວິທະຍາຄານກົມມະດໍາເຂົ້າຮ່ວມການອະນຸລັກ ສັດນໍ້າ - ສັດປ່າ.
- ອີງຕາມ: ການຄົ້ນຄ້ວາເຫັນດີເປັນເອກະພາບຂອງຄະນະພັກ - ຄະນະບັນຊາ ວິທະຍາຄານ ກົມມະດໍາ ຄັ້ງວັນທີ 15 ພຶດສະພາ ປີ 2017 ເລກທີ 021/ວກ ໂດຍໄດ້ຄົ້ນຄວ້າເຫັນດີຈັດຕັ້ງຄະນະກວດກາຈຳນວນ 5 ສະຫາຍ ເຂົ້າຮ່ວມວຽກງານເຄື່ອນໄຫວກວດກາອ່າງນໍ້າຊວງຕອນເໜືອນໍາ 3 ໝູ່ບ້ານເປັນຈຸດໜັກ ເຊັ່ນ: ບ້ານ ນາເທບ, ບ້ານ ແຈ້ງສະຫ່ວາງ, ບ້ານ ໜອງປ່າງ.

ມາດຕະການ1. ແຕ່ງຕັ້ງຄະນະອຳນວຍການ ວິທະຍາຄານ ກົມມະດໍາ ຕົກລົງ ເຂົ້າຮ່ວມວຽກງານກວດກາອ່າງນໍ້າຊວງຕອນເໜືອມີລາຍຊື່ດັ່ງລຸ່ມນີ້:

- ①. ພ.ທ ຄຳພັນ ແກ້ວບົວພັນ ຫົວໜ້າພະແນກ ບໍລິຫານ ເປັນຫົວໜ້າ
- ②. ພ.ຕ ທອງຄຳ ອິນປັນຍາ ຊ່ວຍວຽກພະແນກ ບໍລິຫານ ເປັນຮອງ
- ③. ພ.ຕ ດາວວອນ ລິດວິໄຊ ຊ່ວຍວຽກພະແນກ ບໍລິຫານ ເປັນຄະນະ
- ④. ຮ.ອ ເດລາມອນ ໜັ້ນປະເສີດ ຫົວໜ້າ ຄໍປ້ອງກັນ ເປັນຄະນະ
- ⑤. ຮ.ທ ບຸນເພັງ ໄຊທະວິງ ຊ່ວຍວຽກ ຄໍປ້ອງກັນ ເປັນຄະນະ

ມາດຕະການ2. ມອບໃຫ້ບັນດາອົງການ,ກົມກອງ,ອຳນາດການປົກຄອງ ຕະຫຼອດຮອດບັນດາສະຫາຍທີ່ຖືກແຕ່ງຕັ້ງຈົ່ງພ້ອມກັນເຊື່ອມຊຶມຈັດຕັ້ງປະຕິບັດໃຫ້ຖືກຕ້ອງ.


ມາດຕະການ3. ຂໍ້ຕົກລົງສະບັບນີ້ມີຜົນສັກສິດນັບແຕ່ມີລົງລາຍເຊັນເປັນຕົ້ນໄປ.

ອຳນວຍການ
ວິທະຍາຄານກົມມະດໍາ



ຖາວອນ ແກ້ວອິນທະວິງ

The positions and duties of the FMC members



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ

ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ

ເມືອງໂພນໂຮງ
ຫ້ອງການກະສິກໍາ ແລະ ປ່າໄມ້ເມືອງ

ຂໍ້ຕົກລົງແຕ່ງຕັ້ງ

ວ່າດ້ວຍ: ສິດ,ໜ້າທີ່ ແລະ ພາລະບົດບາດຂອງ ຄຄປອ ນໍ້າຊ່ວງຕອນເທິງ.

- ອີງຕາມ: ການຄົ້ນຄ້ວາເຫັນດີຂອງ ຄຄປອ ນໍ້າຊ່ວງຕອນເທິງ ຄັ້ງວັນທີ 16/6/2017.

- ອີງຕາມ: ໜ້າທີ່ວຽກງານລວມຂອງ ຄຄປອ ນໍ້າຊ່ວງໃນການຈັດແບ່ງສິດ,ໜ້າທີ່ ແລະ ຄວາມຮັບຜິດຊອບບັນດາສາມະຊິກ ຄຄປອ ນໍ້າຊ່ວງ.

ເພື່ອປະຕິບັດໜ້າທີ່ວຽກງານການຄຸ້ມຄອງການປະມົງອ່າງນໍ້າຊ່ວງໃຫ້ສອດຄ່ອງກັບບັນດາ ໜ້າທີ່ວຽກງານ ແລະ ປະສານງານຄະນະຄຸ້ມຄອງການປະມົງ ດ້ານຕ່າງໆ.

ຫ້ອງການກະສິກໍາ ແລະປ່າໄມ້ເມືອງ (ຜູ້ປະສານງານ ໂຄງການ) ແຕ່ງຕັ້ງບັນດາສະມາຊິກ ຄຄປອ ນໍ້າຊ່ວງ ມີລາຍຊື່ລະອຽດລຸ່ມນີ້:

ມາດຕາ 01 : ແຕ່ງຕັ້ງ ຄຄປອ ນໍ້າຊ່ວງ ຕອນເທິງ ວຽກງານຊີ້ນຳລວມ.

1. ທ່ານ ນາງ ເຄືອຄໍາ ແສງພຸທອງ	ເປັນຫົວໜ້າ
2. ທ່ານ ບົວລຽນ ຂັນຕິໄຊ	ເປັນຮອງ
3. ທ່ານ ແງ້ຍມະນີ ແສນສີ	ເປັນຮອງ
II. ແຕ່ງຕັ້ງ ຄຄປອ ນໍ້າຊ່ວງວຽກງານການເງິນ	
1. ທ່ານ ນາງ ດວງເດືອນ ໄຊຍະວິງເພັດ	ເປັນຫົວໜ້າ
2. ທ່ານ ຄໍາໝູນ ແວ່ນວຽງທອງ	ເປັນຮອງ
III. ແຕ່ງຕັ້ງ ຄຄປອ ນໍ້າຊ່ວງວຽກງານແກ້ໄຂບັນຫາຕ່າງໆ	
1. ທ່ານ ສິນວນ ສິວິໄລ	ເປັນຫົວໜ້າ
2. ທ່ານ ບຸນມິ ສຸລິວິງ	ເປັນຮອງ
3. ທ່ານ ຈອນຄໍາ ສີປະເສີດ	ເປັນຄະນະ
IV. ແຕ່ງຕັ້ງ ຄຄປອ ນໍ້າຊ່ວງວຽກງານປ້ອງກັນ ແລະ ກວດກາລາດຕາເວັນ	
1. ທ່ານ ນ່ຽນ ຜາສ່ວນ	ເປັນຫົວໜ້າ
2. ທ່ານ ບຸນເຮືອງ ທໍາມະວິງ	ເປັນຮອງ
3. ທ່ານ ໄຈແກ້ວ ປະທຸມຊາດ	ເປັນຄະນະ

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|--|------------|
| 4. ທ່ານ ສີທິນ ສີທະນິນໄຊ | ເປັນຄະນະ |
| 5. ທ່ານ ກ້າ ພິມວິໄສ | ເປັນຄະນະ |
| 6. ທ່ານ ຕຸ້ຍ ແອນິພິນ | ເປັນຄະນະ |
| 7. ທ່ານ ບົວສະຫວັນ ຊາມຸນຕິ | ເປັນຄະນະ |
| V. ແຕ່ງຕັ້ງ ຄຸໂປອ ວຽກງານເກັບຊື້-ຂາຍປາ | |
| 1. ທ່ານ ສະໄຫວ ເບົາແດງ | ເປັນຫົວໜ້າ |
| 2. ທ່ານ ມອນສີ ສິບຸນເຮືອງ | ເປັນຮອງ |
| 3. ທ່ານ ແອັດ ພິມບິດາ | ເປັນຄະນະ |
| VI. ແຕ່ງຕັ້ງ ຄຸໂປອ ວຽກງານການປຸງແຕ່ງ | |
| 1. ທ່ານ ດາວວິ ແກ້ວມະນີວິງ | ເປັນຮອງ |
| 2. ທ່ານ ນ້ອຍ ສີວໍລະລາດ | ເປັນຄະນະ |

ມາດຕາ 02 : ຄຸໂປອ ນໍ້າຊ່ວງ ທີ່ຖືກແຕ່ງຕັ້ງມີສິດ ແລະ ໜ້າທີ່ ປະຕິບັດກ່ຽວກັບການຄຸ້ມຄອງ ອ່າງ ພ້ອມທັງຄວບຄຸມການກວດກາບັນດາຊາວຜູ້ຫາປາ,ທີ່ເຂົ້າມາຫາປາຢູ່ອ່າງນໍ້າ ຊ່ວງ ຕອນເທິງ.

ມາດຕາ 03 : ມອບໃຫ້ ຄຸໂປອ ນໍ້າຊ່ວງ ຄົ້ນຄວາມປະສານສົມທົບກັນຈັດຕັ້ງປະຕິບັດ ເນື້ອໃນ ຈົດໃຈຂໍ້ຕົກລົງສະບັບນີ້ໃຫ້ປະກົດຜົນເປັນຈິງ.

ມາດຕາ 04 : ຂໍ້ຕົກລົງສະບັບນີ້ມີຜົນສັກສິດ ແລະ ນໍາໃຊ້ໄດ້ນັບແຕ່ມີລົງລາຍເຊັນເປັນຕົ້ນໄປ .


ທີ່ອ່າງນໍ້າຊ່ວງຕອນເທິງ,ວັນທີ 16/6/2017

☞ ຫ້ອງການກະສິກໍາ ແລະ ປ່າໄມ້ເມືອງໂພນໂຮງ



ທິງທອງ ວົງສຸກ

The Rules and Regulations for Phone Hong District



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ

ແຂວງວຽງຈັນ
ເມືອງໂພນໂຮງ

ເລກທີ...106.../ຈມ,ພຮ
ລົງວັນທີ...21...2...2018

ຂໍ້ກຳນົດ
ວ່າດ້ວຍກົດລະບຽບການຫາປາ ສະເພາະ ອ່າງນໍ້າຊ່ວງຕອນເທິງ.

- ອີງຕາມ ກົດໝາຍວ່າດ້ວຍການປະມົງ ສະບັບເລກທີ 03/ສພຊ, ລົງວັນທີ 9 ກໍລະກົດ 2009.
- ອີງຕາມ ກົດໝາຍວ່າດ້ວຍສັດນໍ້າ ແລະ ສັດປ່າແຫ່ງ ສ ປປ ລາວ ສະບັບເລກທີ 07/ສພຊ, ລົງວັນທີ 14 ມັງກອນ 2008.
- ອີງຕາມ ກອງປະຊຸມຄົ້ນຄ້ວາຂອງຄະນະກຳມະການຄຸ້ມຄອງການປະມົງອ່າງຊ່ວງຕອນເທິງ ຄັ້ງວັນທີ 9 ມິຖຸນາ 2017 ກ່ຽວກັບການສ້າງລະບຽບຄຸ້ມຄອງການຫາປາ ສະເພາະອ່າງ.

ເພື່ອຈັດຕັ້ງຜັນຂະຫຍາຍເນື້ອໃນຈິດໃຈ ດຳລັດ ດຳສັ່ງ ແລະ ຂໍ້ກຳນົດຊີ້ວ່າວ ໃຫ້ປະກົດຜົນເປັນຈິງ, ເພື່ອຄຸ້ມຄອງ ແລະ ນຳໃຊ້ໃຫ້ຍາວນານ ແລະ ຍົາຍິງຕະຫຼອດໄປ.

ມາດຕາ1 ວ່າດ້ວຍຫຼັກການລວມຂອງຄຸ້ມຄອງການປະມົງອ່າງ ນໍ້າຊ່ວງ.

- ຊັບພະຍາກອນແຫຼ່ງນໍ້າ ປ່າ ເປັນຊັບສິນບັດອັນລໍາຄ່າຂອງວົງຄະນະຍາດແຫ່ງຊາດ, ການຄຸ້ມຄອງ ແລະ ນຳໃຊ້ຂອງທົ່ວປວງຊົນ ແລະ ເພື່ອຜົນປະໂຫຍດຂອງໝົດທຸກຄົນ. ການຄຸ້ມຄອງ ແລະ ນຳໃຊ້ ຊັບພະຍາກອນແຫຼ່ງນໍ້າ ດັ່ງກ່າວຕ້ອງປະຕິບັດຕາມພັນທະ ແລະ ຂໍ້ກຳນົດກົດລະບຽບທີ່ໄດ້ກຳນົດໄວ້.

ມາດຕາ2 ວ່າດ້ວຍ ການລັກເຄື່ອນໄຫວຫາປາ ຢູ່ບໍລິເວນອ່າງ ນໍ້າຊ່ວງຕອນເທິງ.

- ໄດ້ວາງ ກົດລະບຽບຄຸ້ມຄອງການຫາປາ ອອກເປັນເອກະສານສະບັບໜຶ່ງ ເພື່ອຄຸ້ມຄອງສິດຜົນປະໂຫຍດຂອງຜູ້ທີ່ຫາປາ ໃຫ້ຖືກຕ້ອງຕາມລະບຽບຫຼັກການປະມົງ.
- ເປັນທິດເບື້ອງທາງໃຫ້ແກ່ບຸກຄົນ ແລະ ການຈັດຕັ້ງຕ່າງໆຮັບຮູ້ພ້ອມກັນປະຕິບັດຕາມ ຫຼັກການທີ່ໄດ້ກຳນົດໄວ້.
- ເປັນບ່ອນອີງໃຫ້ເຈົ້າໜ້າທີ່ກວດການປະມົງ ແລະ ເຈົ້າໜ້າທີ່ກ່ຽວຂ້ອງ ຈັດຕັ້ງປະຕິບັດ ຕັດສິນຄະດີຕ່າງໆ ຕໍ່ຜູ້ລະເມີດກົດລະບຽບສະບັບນີ້.

ມາດຕາ3 ວ່າດ້ວຍການນຳໃຊ້ເຄື່ອງມືໃນການຫາປາ.

3.1. ເຄື່ອງມືຫາປາທີ່ອະນຸຍາດໃຫ້ຊາວປະມົງ ຫຼື ບຸກຄົນ, ກຸ່ມຄົນ ນຳໃຊ້ເຄື່ອງມືເຂົ້າໃນການຫາປາດັ່ງນີ້:

- ເບັດທຸກຊະນິດ
- ແຫທຸກຊະນິດ
- ມອງທຸກຊະນິດ
- ດຸ້ມທຸກຊະນິດ
- ກະດູ່ງ(ຂະໜາດ 5ມX5ມ ລົງມາ),
- ໄລ່ປ່າໃສ່ມອງ(ຕີມອງ ຂະໜາດມອງ 3,5x3,5 ຊັງຕີແມັດຂຶ້ນໄປ).

3.2. ພັນທະໃນການລົງຫາປາໃນເຂດຄຸ້ມຄອງການປະມົງອ່າງນໍ້າຊ່ວງຕອນເທິງ.

- ລົງທະບຽນ 60.000 ກີບ/ປີ/ຄົນ.

- ຮູບ 2X2,5 ຈຳນວນ 2 ໃບ.
- ເລກລະຫັດເຮືອຫາປາ 20.000 ກີບ/ລ່າ.
- ບັດລົງຫາປາຊົ່ວຄາວ 20.000 ກີບ/ຄົນ/ມື້.
- ບັດເຮືອລົງຫາປາຊົ່ວຄາວ 20.000 ກີບ/ລ່າ/ມື້.

3.3. ສຸປະກອນເຄື່ອງມືທີ່ເກືອດຫ້າມບໍ່ໃຫ້ນຳໃຊ້ເຂົ້າໃນການຫາປາມີດັ່ງນີ້:

- ໝາກແຕກ, ໝາກຝາ ທຸກຊະນິດ.
- ປືນທຸກຊະນິດ (ຍິງຢູ່ໃນເຂດສະຫງວນເທິງໜ້ານ້ຳ ຫຼື ຍິງຢູ່ພື້ນນ້ຳ).
- ຢາເບື້ອ, ເຕມີຕ່າງໆ ຫຼື ເລືອກໄມ້ຕ່າງໆທີ່ມີທາດເບື້ອ.
- ຈັບປາ ແຫງແຫຼມ ດ້ວຍກະແສໄຟຟ້າ ຫຼື ໜໍ່ໄຟ(ດູດ, ຊອອັດ).
- ລີ້, ຮຸ້ມ(ປົກ), ຈັນວຽດ, ລ້ອບຊິງ, ດາງກວດ, ໂຕ່ງ, ກັດດາງ, ຕົ້ນເລືອກໃສ່ລອບ ຕາມສາຍຫ້ວຍທີ່ໂຫຼດົກໃສ່ອ່າງ.

ມາດຕາ 4 ວ່າດ້ວຍເຂດວັງສະຫງວນຫ້າມຫາປາຕະຫຼອດປີ.

- ເລີ່ມແຕ່ເຮືອນທ່ານ ຄຳຜິວ ຜາລີຂັນ(ໝໍ່າຢາ)ລັດຫາດອນຕູ້ລອດ ເລັ່ງໃສ່ແປະດອນນາງ ຂັນສິງ ແລ້ວລັດໄປໃສ່ສາຍແດນ ລະຫວ່າງ ເມືອງໂພນໂຮງກັບເມືອງນາຊາຍທອງ ຊຶ່ງມີຄວາມຍາວປະມານ 2000 ແມັດ ໄລຍະຄວາມກ້ວາງແຕ່ຝັ່ງຫາວັງ ປະມານ 100-200 ແມັດ.

- ເຂດວັງສະຫງວນຫ້າມຫາປາຕະຫຼອດປີ, ທີ່ໄດ້ກຳນົດ ຕາມຂໍ້ກຳນົດສະບັບນີ້ ແມ່ນມອບໃຫ້ອຳນາດການປົກຄອງບ້ານ ແຕ່ລະບ້ານ ແລະ ພາກສ່ວນສຳນັກງານອົງການທີ່ມີສ່ວນກ່ຽວຂ້ອງທັງໝົດເປັນຜູ້ຄຸ້ມຄອງ.
- ຫ້າມບຸກຄົນ ກຸ່ມຄົນ ຫາປາດ້ວຍເຄື່ອງມືທຸກຊະນິດຢູ່ໃນບໍລິເວນທີ່ໄດ້ກຳນົດໄວ້ຂ້າງເທິງ.

ມາດຕາ 5 ວ່າດ້ວຍ ເຂດຫ້າມຫາປາຕາມລະດູການ.

- ຫ້າມບຸກຄົນ, ກຸ່ມຄົນ ຫາປາດ້ວຍເຄື່ອງມືທຸກຊະນິດຢ່າງເດັດຂາດ ໃນລະດູປາຂຶ້ນໄຂ່ຕາມສາຍຫ້ວຍເຊັ່ນ: ອ່າງນ້ຳຊ່ວງ: ປາກຫ້ວຍຂຶ້ນໄປຫາຍອດຫ້ວຍ(ຫ້ວຍບິງ, ຫ້ວຍຂີ້ໜົມ, ຫ້ວຍບັກທອງ, ຫ້ວຍຕາດຮອມ, ຫ້ວຍອີເລີດ, ຫ້ວຍທັບແພ, ຫ້ວຍລັດຊ້າງ ແລະ ຫ້ວຍປຸງບອນທີ່ໂຫຼດົກຊ່ອ່າງໃນລະດູຝົນຄື: ແຕ່ວັນທີ 01/ 05-30 /08 ຂອງທຸກໆປີ, ການຫາປາແມ່ນເກືອດຫ້າມ ແຕ່ປາກຫ້ວຍຂຶ້ນເມື່ອຫາຍອດຫ້ວຍ ແລະ ບໍ່ໃຫ້ນຳໃຊ້ເຄື່ອງມືຫາປາທຸກຊະນິດ.

ມາດຕາ 6 ວ່າດ້ວຍການຫາປາປະເພດຫວງຫ້າມ ແລະ ຄຸ້ມຄອງ.

- ຫ້າມບຸກຄົນ, ກຸ່ມຄົນ ຫາປາປະເພດຫວງຫ້າມ ແລະ ຄຸ້ມຄອງເຊັ່ນ ປາບົກ, ປາຝາ, ເຕົ່າເປັນຕົ້ນ.

ມາດຕາ 7 ວ່າດ້ວຍການລະເມີດ ແລະ ປັບໃໝ

- ຖ້າບຸກຄົນ, ກຸ່ມຄົນ ຫາກລະເມີດຕໍ່ລະບຽບ ມາດຕາ 3 ຄັ້ງທີ່ໜຶ່ງ ເຄື່ອງມືຕ່າງໆ ຈະຖືກປິດເປັນຂອງລັດ ພ້ອມທັງປັບໃໝ 2.300.000 ກີບ ແລະ ຈະໄດ້ສຶກສາອົບຮົມຜູ້ກະທຳຜິດ
- ຄັ້ງທີສອງ ເຄື່ອງມືຕ່າງໆຈະຖືກປິດເປັນຂອງລັດ ພ້ອມທັງປັບໃໝ 2.300.000 ກີບ/ຄຸນສອງ ແລະ ຈະໄດ້ສຶກສາອົບຮົມຜູ້ກະທຳຜິດ,
- ຄັ້ງທີສາມແມ່ນສິ່ງຜູ້ກະທຳ ຜິດໄປດຳເນີນຄະດີຢູ່ກອງຄະດີເມືອງ.
- ຖ້າບຸກຄົນ, ກຸ່ມຄົນ ຫາກລະເມີດຕໍ່ກົດລະບຽບ ມາດຕາ 4 ແລະ ມາດຕາ 5 ຄັ້ງທີ່ໜຶ່ງເຄື່ອງມືຕ່າງໆຈະຖືກປິດເປັນຂອງລັດພ້ອມທັງປັບໃໝ 2.300.000 ກີບ ແລະ ຈະໄດ້ສຶກສາອົບຮົມຜູ້ກະທຳຜິດ ຄັ້ງທີສອງ ເຄື່ອງມືຕ່າງໆຈະຖືກປິດເປັນຂອງລັດ ພ້ອມທັງປັບໃໝ 2.300.000 ກີບ/ຄຸນສອງ ແລະ ຈະໄດ້ສຶກສາອົບຮົມຜູ້ກະທຳຜິດ, ຄັ້ງທີສາມ ແມ່ນສິ່ງຜູ້ກະທຳຜິດໄປດຳເນີນຄະດີຢູ່ກອງຄະດີເມືອງ.
- ຖ້າບຸກຄົນ, ກຸ່ມຄົນ ຫາກລະເມີດຕໍ່ກົດລະບຽບ ມາດຕາ 6 ຖ້າເປັນສັດປະເພດຫວງຫ້າມເຊັ່ນ: ປາບົກ ແມ່ນຈະຖືກປິດພ້ອມທັງປັບໃໝ 100% ຂອງມູນຄ່າດຳເນີນຄະດີ ຕາມກົດໝາຍ ການປະມິງ ເລກທີ 133/ສພຊ, ລົງວັນທີ 09/7/2007, ຖ້າເປັນສັດປະເພດຄຸ້ມຄອງເຊັ່ນ: ປາຝາ, ເຕົ່າ ແມ່ນຈະຖືກປິດ ພ້ອມທັງປັບໃໝ 2.300.000 ກີບ ແລະ ຈະໄດ້ສຶກສາອົບຮົມຜູ້ກະທຳຜິດຕາມສະຖານໜັກ ຫຼື ເປົ່າ.


- ໃນກໍລະນີອື່ນໆ: ໃຊ້ເຄື່ອງຊ້ອດປາຈະໄດ້ປັບໃໝເຄື່ອງລະ 2.300.000 ກີບ ແລະ ໃຊ້ຫາດເນື້ອເກມີລະເປີດ, ໝາກແຕກ, ໝາກຝາ ຈະໄດ້ປັບໃໝຕາມຈຳນວນປາທີ່ຖືກທຳລາຍ 2.300.000 ກີບ/1ກິໂລ(ປາ) ພ້ອມທັງສົ່ງຜູ້ກະທຳຜິດໄປກຳເນີນຄະດີຢູ່ກອງຄະດີເມືອງ.
 - ຖ້າບຸກຄົນ, ກຸ່ມຄົນ ຫາກພົບເຫັນສະພາບການຫາປາດ້ວຍເຄື່ອງມືຜິດລະບຽບຢູ່ໃນເຂດຫວງຫ້າມ ຫຼື ນອກເຂດຫວງຫ້າມດັ່ງກ່າວມາຂ້າງເທິງ ດ້ອງເປັນເຈົ້າການລາຍງານໃຫ້ການຈັດຕັ້ງ ແລະ ເຈົ້າໜ້າທີ່ກ່ຽວຂ້ອງໃຫ້ຕົນເວລາ.
- ມາດຕາ 8 ວ່າດ້ວຍ ການຈັດຕັ້ງປະຕິບັດ
- ມອບໃຫ້ຄະນະກຳມະການຄຸ້ມຄອງການປະມົງຂຶ້ນບ້ານ ການຈັດຕັ້ງບ້ານນຳໄປເຜີຍແຜ່ໃຫ້ທົ່ວເຖິງ, ຈັດຕັ້ງປະຕິບັດ ຕິດຕາມກວດກາ ສຶກສາອົບຮົມ ພໍ່ແມ່ປະຊາຊົນພາຍໃນບ້ານຂອງຕົນໃຫ້ປະຕິບັດຕາມກົດລະບຽບສະບັບນີ້ຢ່າງເຂັ້ມງວດ.
 - ຕື່ມປັບໃໝແມ່ນແບ່ງປັນຄື: ຫ່ວຍກວດຫາລາດຕາເວັນ 22%, ຫ່ວຍໄກ່ເກ່ຍ 13%, ມອບໃຫ້ຄະນະກຳມະການຄຸ້ມຄອງ ການປະມົງອ່າງຂຶ້ນບ້ານ 65%, ເພື່ອເປັນກອງທຶນໃນການ ພັດທະນາອ່າງ ຫຼື ເພື່ອໄປໝູນໃຊ້ໃນວຽກງານຕິດຕາມກວດກາ ຕາມພາລະບົດບາດ, ສິດໜ້າທີ່ໃນເຂດອົບຮົມຊອບຂອງຕົນ.
- ມາດຕາ 9 ຂໍ້ກຳນົດສະບັບນີ້ມີຜົນສັກສິດນັບແຕ່ວັນລາຍເຊັນເປັນຕົ້ນໄປ.

ເຊັນແກນ ເຈົ້າເມືອງ



ອຸດອນ ກິ່ງຈັນທະວົງ

The Rules and Regulations for Naxaythong District


ສາທາລະນະລັດ ປະຊາທິປະໄຕ ມະຊາທິປະໄຕ
ສັນຕິພາບ ເອກະລາດ ມະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ

ນະຄອນຫລວງວຽງຈັນ
ອົງການປົກຄອງເມືອງນາຊາຍທອງ

ເລກທີ 599/ ຈ.ມ.ນທ
ວັນທີ 15 / 6 / 2016

ຂໍ້ກຳນົດ
ວ່າດ້ວຍກົດລະບຽບການຫາປາ ສະເພາະອ່າງນ້ຳຫຸມ ແລະ ອ່າງນ້ຳຊ່ວງ

- ອີງຕາມກົດໝາຍວ່າດ້ວຍການປົກຄອງທ້ອງຖິ່ນ (ສະບັບປັບປຸງ) ເລກທີ 68/ສພຊ, ລົງວັນທີ 14/12/2015 ໃນໝວດ IV, ມາດຕາ 39, 40 ວ່າດ້ວຍພາລະບົດບາດ, ສິດ ແລະ ຜົນທີ່ຂອງເຈົ້າເມືອງ.
- ອີງຕາມກົດໝາຍວ່າດ້ວຍສັດນ້ຳ ແລະ ສັດປ່າ ສະບັບເລກທີ 07/ ສພຊ, ລົງວັນທີ 24 ທັນວາ 2007.
- ອີງຕາມກົດໝາຍວ່າດ້ວຍການປະມົງສະບັບເລກທີ 03/ສພຊ, ລົງວັນທີ 9 ກໍລະກົດ 2009.
- ອີງຕາມຂໍ້ກຳນົດວ່າດ້ວຍກົດລະບຽບການຫາປາສະເພາະອ່າງນ້ຳຫຸມ ແລະ ອ່າງນ້ຳຊ່ວງ ສະບັບເລກທີ 641/ຈ.ມ.ນທ, ລົງວັນທີ 10/6/2002.
- ອີງຕາມແຈ້ງການຂອງອົງການປົກຄອງເມືອງນາຊາຍທອງສະບັບເລກທີ 018/ຈ.ມ.ນທ, ລົງວັນທີ 07/07/2017.

ເພື່ອຈັດຕັ້ງປະຕິບັດ ບັນດາກົດໝາຍ, ເນື້ອໃນຈິດໃຈດຳລັດ, ຕຳສັ່ງ ແລະ ແຈ້ງການໃຫ້ປະກົດຜົນເປັນຈິງ, ເປັນການກຳນົດຫຼັກການ, ປັບປຸງລະບຽບການ ແລະ ມາດຕະການກ່ຽວກັບການຈັດຕັ້ງ, ການເຄື່ອນໄຫວ, ການຄຸ້ມຄອງ, ການກວດກາວຽກງານການປະມົງໃນພື້ນທີ່ແຫຼ່ງນ້ຳ ເພື່ອສ້າງເສີມການລ້ຽງ, ການອະນຸລັກ, ການປົກປັກຮັກສາ, ການພັດທະນາ ແລະ ນຳໃຊ້ຊັບພະຍາກອນການປະມົງໃຫ້ມີຄວາມອຸດົມສົມບູນ, ມີຄວາມຍືນຍົງຕະຫຼອດໄປ ແນໃສ່ຮັບປະກັນການຕອບສະໜອງປາ ແລະ ສັດນ້ຳອື່ນໆເພື່ອເປັນອາຫານໃຫ້ປະຊາຊົນລາວບັນດາເຜົ່າ ຕິດພັນກັບການປົກປັກຮັກສາສິ່ງແວດລ້ອມ ປະກອບສ່ວນເຂົ້າໃນການພັດທະນາເສດຖະກິດຂອງເມືອງນາຊາຍທອງ ກໍຄືນະຄອນຫຼວງວຽງຈັນໃຫ້ນັບມື້ຂະຫຍາຍຕົວໃ້ຂຶ້ນເທື່ອລະກ້າວ.

ເຈົ້າເມືອງນາຊາຍທອງ ອອກຂໍ້ກຳນົດ
ວ່າດ້ວຍການຫາປາສະເພາະອ່າງນ້ຳຫຸມ ແລະ ອ່າງນ້ຳຊ່ວງດັ່ງນີ້:

ມາດຕາ 1: ວ່າດ້ວຍຫຼັກການລວມຂອງການຄຸ້ມຄອງການປະມົງອ່າງນ້ຳຫຸມ ແລະ ອ່າງນ້ຳຊ່ວງ.
ປາ ແລະ ສັດນ້ຳອື່ນໆທຸກປະເພດຢູ່ບໍລິເວນອ່າງນ້ຳຫຸມ ແລະ ອ່າງນ້ຳຊ່ວງທີ່ບໍ່ເປັນກຳມະສິດຂອງບຸກຄົນ ຫຼື ການຈັດ ຕັ້ງ ເປັນຊັບສິມບັດອັນລ້ຳຄ່າຂອງວົງສາຄະນະຍາດແຫ່ງຊາດ, ສະເພາະການຄຸ້ມຄອງການປະມົງປະຈຳອ່າງນ້ຳຫຸມ ແລະ ອ່າງນ້ຳຊ່ວງ ແມ່ນມອບສິດໃຫ້ຄະນະກຳມະການຄຸ້ມຄອງການປະມົງປະຈຳພື້ນທີ່ແຫຼ່ງນ້ຳເປັນຜູ້ຄຸ້ມຄອງ, ການຄຸ້ມຄອງ ແລະ ນຳໃຊ້ຊັບພະຍາກອນແຫຼ່ງນ້ຳດັ່ງກ່າວຕ້ອງປະຕິບັດຕາມພື້ນທະ ແລະ ຂໍ້ກຳນົດກົດລະບຽບທີ່ໄດ້ກຳນົດໄວ້.

ບຸກຄົນ, ກຸ່ມຄົນທີ່ມີຈຸດປະສົງຢາກລ້ຽງປາ, ຫາປາ ແລະ ເກັບຊີ້ປາຢູ່ໃນເຂດອ່າງນ້ຳຈະເປັນອາຊີບ ຫຼື ບາງຄັ້ງຄາວຕ້ອງໄດ້ຮັບສະນຸຍາດຜ່ານຄະນະກຳມະການຄຸ້ມຄອງການປະມົງອ່າງທີ່ປະຈຳຢູ່ແຕ່

ລະອາງນໍ້າແບບກ່ອນ,ແຕ່ການຫາປາດັ່ງກ່າວຕ້ອງປຸງອອກເຂດທີ່ຫວງຫ້າມຫາປາຖອນ ແລະ ເສຍຫວງ ຫ້າມຫາປາຜິວຕາວ.

ມາດຕາ 2: ວ່າດ້ວຍຫຼັກການເຄື່ອນໄຫວຫາປາ ຢູ່ບໍລິເວນອ່າງນໍ້າຫຸມ ແລະ ອ່າງນໍ້າຊ່ວງ.

- ກິດລະບຽບການຫາປາລະເພາະອ່າງ ເປັນແອກະສານສະບັບໜຶ່ງວາງອອກ
- ເພື່ອດຸ້ມຄອງສິດຜົນປະໂຫຍດຂອງຜູ້ທີ່ເຄື່ອນໄຫວຫາປາໃຫ້ຖືກຕ້ອງຕາມລະບຽບຫຼັກການ ວິຊາການປະມົງ.
- ໃຫ້ແກ່ບຸກຄົນ, ນິຕິບຸກຄົນ, ການຈັດຕັ້ງຕ່າງໆຮັບຮູ້ ແລະ ຈຳນວນຈັດຕັ້ງປະຕິບັດກິດລະ ບຽບຫຼັກການທີ່ໄດ້ກຳນົດອອກຢ່າງເຂັ້ມງວດ.
- ເປັນບ່ອນສົ່ງໃຫ້ເຈົ້າໜ້າທີ່ກວດກາປະມົງ ແລະ ເຈົ້າໜ້າທີ່ກ່ຽວຂ້ອງຈັດຕັ້ງປະຕິບັດ ແກ້ໄຂ ບັນຫາຕ່າງໆທີ່ຜູ້ລະເມີດກິດລະບຽບສະບັບນີ້.

ມາດຕາ 3: ວ່າດ້ວຍການນໍາໃຊ້ເຄື່ອງມືໃນການຫາປາ.

- ອະນຸຍາດໃຫ້ຊາວປະມົງ ຫຼື ບຸກຄົນ, ກຸ່ມຄົນ ນໍາໃຊ້ເຄື່ອງມື ເຂົ້າໃນການຫາປາມີດັ່ງນີ້:
 - ເບັດທຸກຊະນິດ
 - ແຫທຸກຊະນິດ (ຂະໜາດຕາ 3 ຊມ ຂຶ້ນໄປ)
 - ມອງທຸກຊະນິດ (ຂະໜາດຕາ 3 ຊມ ຂຶ້ນໄປ)
 - ດຸ້ມທຸກຊະນິດ
 - ກະດູງ (ຂະໜາດ 5ມ x 5ມ ລົງມາ)

➢ ອຸປະກອນເຄື່ອງມື ທີ່ເກືອດຫ້າມບໍ່ໃຫ້ໃຊ້ເຂົ້າໃນການຫາປາມີດັ່ງນີ້:

- ໝາກແຕກ, ໝາກຝາ ທຸກຊະນິດ
- ບິນບິງທຸກຊະນິດ (ບິງຢູ່ເທິງໜ້ານໍ້າ ຫຼື ບິງຢູ່ພື້ນນໍ້າ)
- ຢາເບືອ, ເຄມີຕ່າງໆ ຫຼື ເບືອກໄມ້ຕ່າງໆທີ່ມີໜາດເບືອ
- ຈັບປາດ້ວຍກະແສໄຟຟ້າຊ່ອດ ຫຼື ໜໍ່ໄຟ
- ແທງແຫຼມ, ໄລ່ປາໃສ່ມອງ, ດີມອງ
- ກັດດາງ ຫຼື ຕັນເວືອກໃສ່ຕ້ອນ,ເຮັດລີ້, ໃສ່ໂຕ່ງ ຕາມສາຍຫ້ວຍທີ່ໄຫຼຕົກໃສ່ອ່າງ.

ມາດຕາ 4: ວ່າດ້ວຍ ເຂດຫ້າມຫາປາຕະຫຼອດປີ.

- ຫ້າມບຸກຄົນໃດ, ກຸ່ມຄົນໃດ ຫາປາດ້ວຍເຄື່ອງມື ທຸກຊະນິດຢູ່ບໍລິເວນໜ້າເຂື່ອນໃນວົງລັດສະ ໜີ 1500 ແມັດ ນັບແຕ່ສັນເຂື່ອນອອກໄປຮອດເຂດຫ້າມຫາປາຢູ່ອ່າງນໍ້າຫຸມ ແລະ ອ່າງນໍ້າຊ່ວງ.
- ຫ້າມບຸກຄົນໃດ, ກຸ່ມຄົນໃດ ຫາປາດ້ວຍເຄື່ອງມືທຸກຊະນິດຢູ່ວັງເຂດໃສກປ່າເບືອຍ ໃນວົງລັດ ສະໜີ 500 ແມັດ ນັບແຕ່ປາກຫ້ວຍຊາຍ (ຫ້ວຍຊ້າງສີ, ຫ້ວຍຕູບຖ່ານ) ຫາເຂດຫ້າມຫາປາ (ອ່າງນໍ້າຊ່ວງ)

ມາດຕາ 5: ວ່າດ້ວຍເຂດຫ້າມຫາປາບາງລະດູການ.

- ຫ້າມບຸກຄົນໃດ, ກຸ່ມຄົນໃດ, ຫາປາດ້ວຍເຄື່ອງມືທຸກຊະນິດຢ່າງເດັດຂາດ ໃນລະດູປາຂຶ້ນໄຂ່ ຕາມສາຍຫ້ວຍ ເຊັ່ນ:
 - ອ່າງນໍ້າຫຸມ: ຫ້ວຍຫຸມ, ຫ້ວຍຫາດ, ຫ້ວຍຫິນລັບ ແລະ ຫ້ວຍປ່າບອນ.
 - ອ່າງນໍ້າຊ່ວງ: ຫ້ວຍຊາຍ(ຫ້ວຍຊ້າງສີ,ຫ້ວຍຕູບຖ່ານ), ຫ້ວຍຄານໄກ່ແມ່(ຫ້ວຍຖໍ້າ), ຫ້ວຍຍູ ເຫລືອມ ແລະ ຫ້ວຍທົ່ງໝາກເຕືອຍ ທີ່ໄຫຼຕົກໃສ່ອ່າງ ໃນຊ່ວງລະດູຝົນຕົ້ນ ແຕ່ວັນທີ 01 / 05 - 30/08 ຂອງທຸກປີ. ການຫາປາແມ່ນເກືອດຫ້າມແຕ່ປາກຫ້ວຍຂຶ້ນເມື່ອ ຫາ ຍອດຫ້ວຍ ແລະ ບໍ່ໃຫ້ນໍາໃຊ້ເຄື່ອງມືຫາປາທຸກຊະນິດຢູ່ໃນວົງລັດສະໜີທີ່ວາງຫຼໍ່ 300 ແມັດ.

ມາດຕາ 6: ວ່າດ້ວຍການຫາປາປະເພດຫວງຫ້າມ ແລະ ຄຸ້ມຄອງ

- ຫ້າມບຸກຄົນໃດ, ກຸ່ມຄົນໃດ ຫາປາປະເພດຫວງຫ້າມ ແລະ ຄຸ້ມຄອງເຊັ່ນ: ປາບົກ, ປາຝາ, ເຕົ້າ ເປັນຕົ້ນ.

ມາດຕາ 7: ວ່າດ້ວຍການລະເມີດ ແລະ ປັບໃໝ

- ຖ້າບຸກຄົນໃດ, ກຸ່ມຄົນໃດຫາກລະເມີດຕໍ່ກົດລະບຽບ ມາດຕາ 3 ດັ່ງທີ່ໜຶ່ງຈະໄດ້ເຮັດບົດບັນທຶກກ່າວເດືອນ, ສຶກສາອົບອົມ, ອາບົດ, ບົດຂອງກາງເປັນຂອງລັດພ້ອມທັງປັບໃໝຜູ້ລະ 50.000 ກີບ ແລະ ປັບໃໝ 10 ເທົ່າຂອງມູນຄ່າເສຍຫາຍ; ດັ່ງທີ່ສອງເຄື່ອງມືຕ່າງໆ ແລະ ຂອງກາງຈະຖືກຍຶດເປັນຂອງລັດ ພ້ອມທັງປັບໃໝ 2.000.000 ກີບ/ຄົນ ແລະ ຈະໄດ້ເຮັດບົດບັນທຶກສຶກສາອົບອົມຜູ້ກະທຳຜິດ; ດັ່ງທີ່ສາມແມ່ນເຄື່ອງມືຕ່າງໆ ແລະ ຂອງກາງຈະຖືກຍຶດເປັນຂອງລັດ ພ້ອມທັງປັບໃໝ 2.000.000 ກີບ/ຄົນ ແລ້ວສົ່ງຜູ້ກະທຳຜິດໄປດຳເນີນຄະດີຕາມລະບຽບກົດໝາຍ.

- ຖ້າບຸກຄົນໃດ, ກຸ່ມຄົນໃດຫາກລະເມີດຕໍ່ກົດລະບຽບ ມາດຕາ 4 ແລະ ມາດຕາ 5 ດັ່ງທີ່ໜຶ່ງຈະໄດ້ເຮັດບົດບັນທຶກສຶກສາອົບອົມຜູ້ກະທຳຜິດ, ເຄື່ອງມືຕ່າງໆ ແລະ ຂອງກາງຈະຖືກຍຶດເປັນຂອງລັດ ພ້ອມທັງປັບໃໝ 500.000 ກີບ/ຄົນ ແລະ ປັບໃໝ 10 ເທົ່າຂອງມູນຄ່າເສຍຫາຍ, ດັ່ງທີ່ສອງຈະໄດ້ເຮັດບົດບັນທຶກສຶກສາອົບອົມຜູ້ກະທຳຜິດ, ເຄື່ອງມືຕ່າງໆຈະຖືກຍຶດເປັນຂອງລັດ ພ້ອມທັງປັບໃໝ 3.000.000 ກີບ/ຄົນ ແລະ ປັບໃໝ 10 ເທົ່າຂອງມູນຄ່າເສຍຫາຍ, ດັ່ງທີ່ສາມເຄື່ອງມືຕ່າງໆຈະຖືກຍຶດເປັນຂອງລັດ ພ້ອມທັງປັບໃໝ 3.000.000 ກີບ/ຄົນ ແລະ ປັບໃໝ 10 ເທົ່າຂອງມູນຄ່າເສຍຫາຍ ແລະ ສົ່ງຜູ້ກະທຳຜິດໄປດຳເນີນຄະດີຕາມລະບຽບກົດໝາຍ.

- ຖ້າບຸກຄົນໃດ, ກຸ່ມຄົນໃດຫາກລະເມີດຕໍ່ກົດລະບຽບ ມາດຕາ 6 ຖ້າສັດປະເພດຫວງຫ້າມເຊັ່ນ: ປາບົກ ແມ່ນຈະຖືກຍຶດພ້ອມທັງປັບໃໝ 100% ຂອງມູນຄ່າປາ ແລະ ດຳເນີນຄະດີ ຕາມກົດໝາຍປາໄມ້ເລກທີ 01/11/1996, ຖ້າສັດປະເພດຄຸ້ມຄອງເຊັ່ນ: ປາຝາ, ເຕົ້າ ແມ່ນຈະຖືກຍຶດພ້ອມທັງປັບໃໝ 1.500.000 ກີບ ແລະ ຈະໄດ້ສຶກສາອົບອົມຜູ້ກະທຳຜິດຕາມສະຖານໜັກ ຫຼື ເຍົາ.

- ໃນກໍລະນີຮ້າຍແຮງເຊັ່ນ: ໃຊ້ເຄື່ອງຊ່ອດໄຟຟ້າ, ດາງດັກປາຈະໄດ້ປັບໃໝ ຢ່າງລະ 3.000.000 ກີບ ແລະ ປັບໃໝ 10 ເທົ່າຂອງມູນຄ່າເສຍຫາຍ, ຖ້າໃຊ້ທາດເບື້ອເຄມີ, ລະເບີດ, ໝາກແຕກ, ໝາກຝາຈະໄດ້ປັບໃໝປາ ກິໂລລະ 2.000.000 ກີບ, ບົດຂອງກາງ ພ້ອມທັງດຳເນີນຄະດີຕາມລະບຽບກົດໝາຍ.

- ຖ້າບຸກຄົນໃດ, ກຸ່ມຄົນໃດ ຫາກພົບເຫັນສະພາບການຫາປາດ້ວຍເຄື່ອງມືຜິດລະບຽບຢູ່ໃນເຂດຫວງຫ້າມ ຫຼື ນອກເຂດຫວງຫ້າມດັ່ງກ່າວມາຂ້າງເທິງ ດ້ອງເປັນເຈົ້າການລາຍງານ ໃຫ້ການຈັດຕັ້ງ ແລະ ເຈົ້າໜ້າທີ່ກ່ຽວຂ້ອງໃຫ້ທັນເວລາ.

ມາດຕາ 8 : ວ່າດ້ວຍການເສຍຄ່າພັນທະ

ສ່ວນບຸກຄົນ ລວມທັງຫົວໜ່ວຍທຸລະກິດຕ່າງໆຂອງລັດ, ເອກະຊົນ ຫຼື ລວມໝູ່ ທີ່ດຳເນີນການລ້ຽງປາ, ຫາປາຢູ່ໃນເຂດອ່າງຕ່າງໆຕ້ອງເສຍຄ່າພັນທະດັ່ງນີ້:

ເສຍພັນທະໃຫ້ບົບປະມານ:

- ລ້ຽງປາໃສ່ກະຊັງ 100.000 ກີບ / ກະຊັງ / ບິ(ຂະໜາດກະຊັງ 4x6ແມັດ)

ເສຍພັນທະໃຫ້ແກ່ກຸ່ມເກັບຊື້ປາ:

- ຜູ້ຫາປາເປັນອາຊີບ 100.000 ກີບ / 1ຄົນ / ບິ.

- ຜູ້ຫາປາເປັນບາງຄັ້ງຄາວ 10.000 ກີບ / ຄົນ / ມື້.

ມາດຕາ 9: ວ່າດ້ວຍການຈັດຕັ້ງປະຕິບັດ

- ມອບໃຫ້ຄະນະກຳມະການຄຸ້ມຄອງການປະມົງຂົນເມືອງ, ຂົນບ້ານ, ການຈັດຕັ້ງບ້ານ 54 ບ້ານ ນຳໄປເຜີຍແຜ່ໃຫ້ທົ່ວເຖິງ, ຈັດຕັ້ງປະຕິບັດ ຕິດຕາມກວດກາ ສຶກສາອົບຮົມ ບໍ່ແມ່ນປະຊາຊົນພາຍ ໃນບ້ານຂອງຕົນໃຫ້ຮັບຮູ້ຢ່າງທົ່ວເຖິງ ແລະ ຈັດຕັ້ງປະຕິບັດກົດລະບຽບສະບັບນີ້ຢ່າງເຂັ້ມງວດ, ສ່ວນເງິນປັບໃໝພາຍຫຼັງທີ່ກຳລັງເລີ່ມເລື່ອງຂອງຄະນະກຳມະການລົງວຽກ ແມ່ນມອບໃຫ້ຄະນະ ກຳມະການຄຸ້ມຄອງການປະມົງອ່າງຂົນບ້ານ ເພື່ອເປັນກອງທຶນໃນການພັດທະນາອ່າງ ຫຼື ໄປໝູນ ໃຊ້ວຽກງານຕິດຕາມການກວດກາຕາມພາລະບົດບາດ, ສິດ ແລະ ໜ້າທີ່ໃນເຂດຮັບຜິດຊອບຂອງ ຕົນ.

ມາດຕາ 10: ຂໍ້ກຳນົດກົດລະບຽບສະບັບນີ້ມີຜົນສັກສິດແຕ່ມີລົງລາຍເຊັນເປັນຕົ້ນໄປ ຈົນກວ່າຈະມີການປ່ຽນ ແປງໃໝ່.

ສື່ ມີອຸນາຊາຍທອງ

ວິລະສັກ ນາມມຸນຕີ

Questionnaire for fisheries and socio-economic data in fishery village, Nam Xouang Reservoir, after three years of Project implementation

No. of questionnaire.....
Interview date...../...../.....

Interviewer's name _____	Office _____	Tel: _____
Auditor Date: ____/____/____ Name of auditor: _____		

Part 1: General Information

(1) Name of interviewee	(2) Sex	(3) Age	(4) Religion	(5) Education
	<input type="checkbox"/> Male <input type="checkbox"/> Female		<input type="checkbox"/> 1 Buddhism <input type="checkbox"/> 2 Christ <input type="checkbox"/> 3 Islam <input type="checkbox"/> 4 Other	<input type="checkbox"/> 1 Primary school <input type="checkbox"/> 2 Junior high school <input type="checkbox"/> 3 Senior high school <input type="checkbox"/> 4 Bachelor's degree <input type="checkbox"/> 5 Other

(6) Hometown province.....

(7) How many year, you have been in this village.....

(8) Why you moved to this village.....

(9) Average income per month..... KIP (หักค่าใช้จ่ายแล้ว)

Part 2: About household members

Relationship sex	Age	Educational					Main occupation						
1 <input type="checkbox"/> M <input type="checkbox"/> F		1Pri	2High	3Voc	4Bac	5Oth	1Fis	2Aqu	3Agr	4Lab	5Bus	6Gov	7Oth
2 <input type="checkbox"/> M <input type="checkbox"/> F		1Pri	2High	3Voc	4Bac	5Oth	1Fis	2Aqu	3Agr	4Lab	5Bus	6Gov	7Oth
3 <input type="checkbox"/> M <input type="checkbox"/> F		1Pri	2High	3Voc	4Bac	5Oth	1Fis	2Aqu	3Agr	4Lab	5Bus	6Gov	7Oth
4 <input type="checkbox"/> M <input type="checkbox"/> F		1Pri	2High	3Voc	4Bac	5Oth	1Fis	2Aqu	3Agr	4Lab	5Bus	6Gov	7Oth
5 <input type="checkbox"/> M <input type="checkbox"/> F		1Pri	2High	3Voc	4Bac	5Oth	1Fis	2Aqu	3Agr	4Lab	5Bus	6Gov	7Oth
6 <input type="checkbox"/> M <input type="checkbox"/> F		1Pri	2High	3Voc	4Bac	5Oth	1Fis	2Aqu	3Agr	4Lab	5Bus	6Gov	7Oth
7 <input type="checkbox"/> M <input type="checkbox"/> F		1Pri	2High	3Voc	4Bac	5Oth	1Fis	2Aqu	3Agr	4Lab	5Bus	6Gov	7Oth
<input type="checkbox"/> M <input type="checkbox"/> F		1Pri	2High	3Voc	4Bac	5Oth	1Fis	2Aqu	3Agr	4Lab	5Bus	6Gov	7Oth

*Education: 1.Primary School 2.High School 3.Vocational school 4. Bachelor and higher 5. Other (Illiterate)

* Occupation: 1. Fisheries, 2 Aquaculture, 3 Agriculture, 4 Labor, 5 Businesses, 6 Governments 7. Others

Part 3: Livelihood

					if unavailable↓
		Percentage of self-consumption weight of products (%)	Amount of estimated annual income and cost*2(KIP) Income Cost		Percentage of income in family budget (%)
Fishing		X			
Aquaculture		X			
Agriculture					
Livestock					
Trading		X			
Laboring		X		X	
Marine Product Processing					
Other Processing					
Government		X		X	
Others	Income from remittances	X		X	
	Income from lending money	X		X	
	Saving	Amount.....KIP			
Other sources not listed above					

Part 4: Fisheries

(1) Fisheries experienceyear

(2) How many fishing boat do you have?

No. of boat	Length (m)	Boat material	Power	Engine	Engine Power (HP)
1		<input type="checkbox"/> Wood <input type="checkbox"/> Iron	<input type="checkbox"/> non-power <input type="checkbox"/> power (<input type="checkbox"/> out-board <input type="checkbox"/> In-board)	<input type="checkbox"/> Diesel <input type="checkbox"/> Gasoline/benzene	
2		<input type="checkbox"/> Wood <input type="checkbox"/> Iron	<input type="checkbox"/> non-power <input type="checkbox"/> power (<input type="checkbox"/> out-board <input type="checkbox"/> In-board)	<input type="checkbox"/> Diesel <input type="checkbox"/> Gasoline/benzene	

(3) Fisheries production

Name and number of fishing gear	High season	Mark X in operation months												Major target Species (local name)	Estimated catch (kg/trip)	Estimated amount of consumption out of catch (kg/trip)	Estimated volume sold (kg/trip)	Average price received (KIP/kg)	Average Cost incurred (KIP/trip)	No. of fishing trips/day	No of fishing days/month
		1 2 3 4 5 6 7 8 9 10 11 12																			
		1	2	3	4	5	6	7	8	9	10	11	12								
Gear1 Name; Number;	High season																				
	Low season																				
Gear 2 Name; Number;	High season																				
	Low season																				
Gear3 Name; Number;	High season																				
	Low season																				

(4) Do you have a problem on fishing operation in fishing ground and/or fisheries resources? NO YES

What problem?.....

.....

Less serious 1 2 3 4 5 Very serious (SA)

(5) Whom do you sell your catch? (MA)

- Middleman: Male Female
- Fish retailer Restaurant
- End customer (Home use, Local market) others.....

(6) How do you carry them? (MA)

- By motorcycle By Car By boat Human power Middleman comes to pick up

Part 5: Aquaculture

(1) Do you operate aquaculture? NO YES

Species	Type of facility 1 – pond 2 – cage 3–others, specify	What year did you start?	How many production cycle do you have in a year? (stock to harvest)	Based on last production cycle			
				What % of the total harvest was sold and equivalent in kg?		Price/kg received	Operation Cost
				in %	in kg		

(2) Do you have any problem on aquaculture operation and/or environmental problem? NO YES

What problem?

.....

Less serious 1 2 3 4 5 Very serious (SA)

(3) Whom do you sell your aquaculture products to? (MA)

Middleman Fish retailer Restaurant End customer (Home use, Local market)

Processing factory others.....

(4) How do you carry them? (MA)

By motorcycle By Car By boat Human power Middleman comes to pick up

Factory come to pick up

Part 6: Agriculture

(1) Do you have agriculture farm? NO YES

Crop name	How many production cycle do you have in a year? (stock to harvest)	Based on last production cycle				
		Volume of product per one cycle (kg)	What % of the total harvest was sold and equivalent in kg?		Average price/kg received (KIP/kg)	Total Cost (KIP per cycle)
			in %	in kg		

(2) Do you have any problem on agriculture operation and/or environmental problem? NO YES

What problem?

.....

(3) Do you sell agriculture products? NO YES

(4) Who decided the price of product

(5) Whom do you sell your agriculture products to? (MA)

- Middleman Retailer End customer (Home use, Local market) Processing factory
 others.....

(6) How do you carry them? (MA)

- By motorcycle By Car By boat Human power Middleman comes to pick up
 Factory come to pick up

(7) Do you have a fixed selling space? How much is the rent of the selling space?

- NO YES, How much?.....KIP/month

Part 7: Main livestock

(1) Do you have livestock? NO YES

Livestock name	How many months do you raise livestock? (stock to harvest)	Based on last production cycle				
		Volume of product per one cycle (kg)	What % of the total harvest wassold and equivalent in kg?		Average price/kg received (KIP/kg)	Total Cost (KIP per cycle)
			in %	in kg		

(2) Do you have any problem on livestock operation and/or environmental problem? NO YES

What problem?

.....

(3) Do you sell livestock? NO YES

(4) Who decided the price of product

(5) Whom do you sell your agriculture products to? (MA)

- Middleman Retailer End customer (Home use, Local market) Processing factory
 Others.....

(6) How do you carry them? (MA)

- By motorcycle By Car By boat Human power Middleman comes to pick up
 Factory come to pick up

(7) Do you have a fixed selling space? How much is the rent of the selling space?

- NO YES, How much?.....KIP/month

Part 8: Fishery management in Nam Xouang Reservoir

(1) Do you know about the fishery rules and regulations in Nam Xouang reservoir? NO YES

If yes, how did you know?

Please give example of rules.....

.....

(2) Do you think the rules and regulations are useful **for fisheries resources**? NO YES

How (specific)

(3) Do you think the rules and regulations are useful **for you**? NO YES

If yes, How (specific)

(4) Is the fish increase?

NO, it is the same reduce because.....

YES what kind of fish increase.....

(5) Is the illegal fishing reduce?

NO, it is the same reduce because.....

YES because

(6) Do you know the fishery co-management project in Nam Xouang reservoir? NO YES

(7) Did you participate in the project? NO YES

If yes, what activities

(8) How the project help/support the community?

.....

(9) What kind of benefits you gain from the project?

.....

(10) In your opinion, what should be improved/changed for the resources in the reservoir?

.....

.....

(11) In your opinion, what should be improved/changed for the human well-being in the reservoir?

.....

.....

*****Thank you very *****

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