

## CHAPTER IV

### RESEARCH FINDING

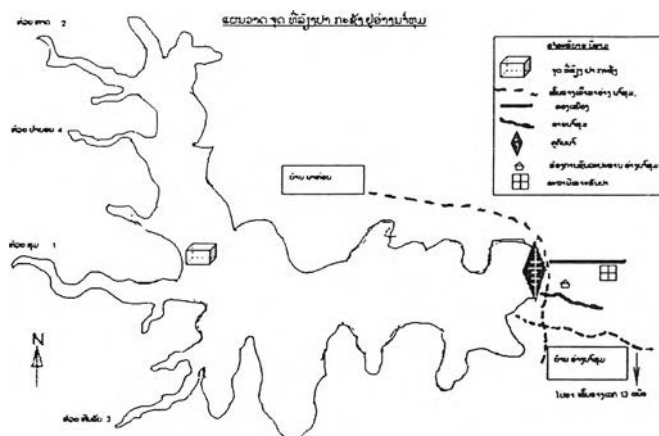
#### 4.1 Historical Background of Namhoum Reservoir

After Laos gained independence in 1975, the government decided to follow the socialist economic system, emphasizing nationalism and a commune farming system (Aimintham, Sukanya 2004: 14). Therefore, the government has attempted to stabilize the social and economic sectors. One of many important areas was to promote agriculture and irrigation to boost each community's self-sufficiency and efficiency. As a result, “*Angnamhoum*” or the Namhoum Dam project was started in 1976. The main purpose of Namhoum Reservoir was to accelerate irrigation for agricultural purposes. The reservoir is located in Naxaythong District<sup>1</sup>, Vientiane Capital<sup>2</sup>, Laos. It is 30km from Vientiane, on road number 13 northward. As far as its physical characteristics are concerned, Namhoum is an earth-filled dam which is 22m high and 870m long. Its water surface area is about 500ha. The reservoir has an average depth of approximately 5 to 10m. Its irrigation capacity for rice paddy in the wet season is up to 3,000ha and for the dry season it is about 1,500ha (LARReC, 2002: 17).

Map 4.1

#### Namhoum Reservoir

*Source:*  
LARReC, MRRF II 2002



<sup>1</sup> Naxaythong district is one out of the nine districts in Vientiane Capital.

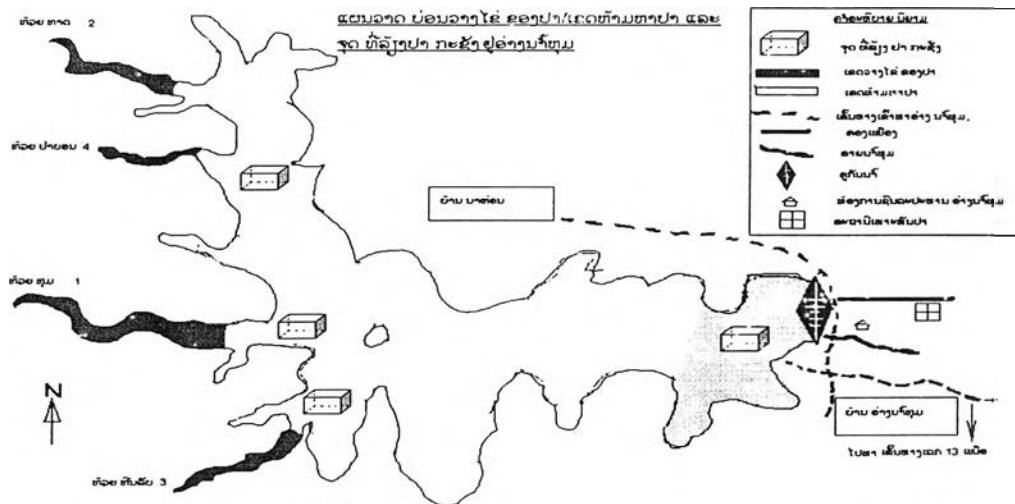
<sup>2</sup> Vientiane Capital, this name was originally called Vientiane Municipality. The transformation to “Vientiane Capital” was effected in early 2004.

**4.1.1 Fish Conservation Zones**

Namhoum Reservoir is an opened access, to ensure the effective management of the reservoir and better rule compliance and to an increased awareness regarding resource use and conservation by fishing community concerned, the Fish Conservation Zone is needed.

In June 1999 the district authority issued specific regulations for the management of fisheries and fish conservation zones which were established from the reservoir site and 1,500m outwards. Other fish conservation zones are inlet areas that are set up as seasonal conservation zones (LARReC 2002: 17).

**Map 4.1.1 Map of Fish Conservation Zone, Namhoum Reservoir**



Source: LARReC, MRRF II 2002

The responsibilities of the patrolling team is to check whether the fishermen follow the rules and regulations. These are as follows:

**The main purposes of Fish Conservation Zone (FCZ) are as follows:**

- To protect selected areas as spawning grounds, nursery and refuge areas.
- To increase the number of fish and other aquatic resources by increasing local people awareness of fisheries management.
- To protect threatened fish in the reservoir

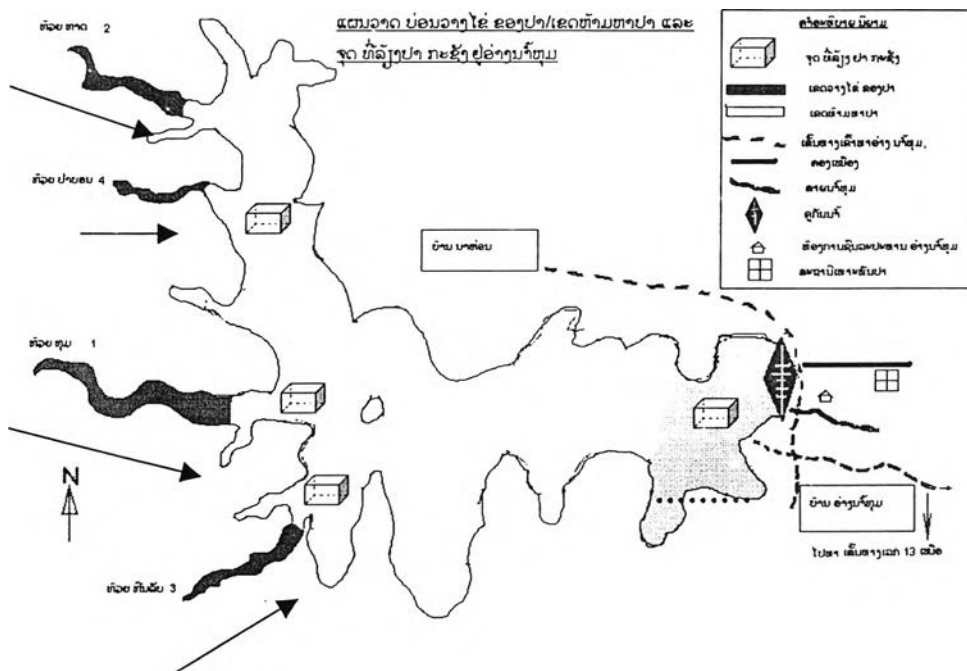
- To prohibit fishing from May to August
- To prohibit fishing in the area of 1,500m from the dam and outwards at all times

**4.1.2 Patrolling System**

In January 2003, the patrolling activities have been implemented. This is a warning system to keeping track on those fishermen who is practicing destructive method such as using illegal fishing gears; fishing net, fishing trap, electric batteries and spear guns. There have been 5 watch points, from where patrolling team members observe the reservoir and conservation zone. They patrol once a week, on which occasion they also receive the information from villagers (LARReC, 2003: 4). *“The patrolling team needs to monitor on the fishermen almost forty times a month”*.

Patrolling Team Leader, Angnamhoum Village.

**Map 4.1.2 The management of the reservoir .**



Source: LARReC 2002

### Fishing Rule and Regulation in Brief:

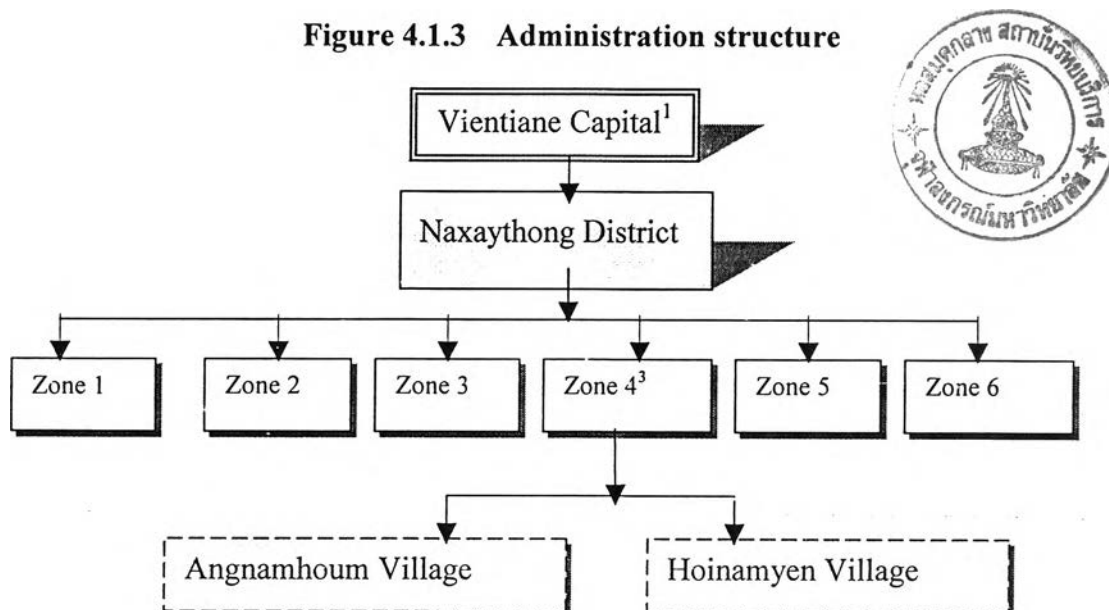
- 1..... Fishing is permanently prohibited from dam site and 1,500m outward
- 2.—————▶ Fishing is prohibited during May-August at spawning grounds:
  - 1/ from Hoihinlap upward,    2/ from Hoihoum upward
  - 3/ from Pabone upward,      4/ from Hoithat upward
3. Illegal fishing gears are prohibited: guns, bombs, poisoning, electric equipments.
4. Breaking the rules: 1<sup>st</sup> time a fine of 50,000 kip, 2<sup>nd</sup> time 10,000 kip and 3<sup>rd</sup> time sentence will be processed to the court. (Two main broads of fishing rules and regulation stated above are displayed at Angnamhoum and Nathone Villages).

Information for Education and Communication (IEC) materials are the most essentials for project advocacy as well as raising awareness of the programme and activities implemented. In order to make use of the message the materials provided need to be friendly approach and local language. Beside identifying the Fish Conservation Zone (FCZ), the fishing rule and regulation has also been set up by the District Fisheries Management Committee (DFMC) in February 2001. However, the official resolution on fishing rules and regulation for Namhoum and Namsuang Reservoir issued by the Vice District Governor of Naxaythong was taken into effect on 10 June 2002.

#### **4.1.3 Administrative Structure-Naxaythong District**

Laos consists of 18 provinces, one of which is Vientiane Capital. Naxaythong is one of the nine districts within Vientiane Capital. The Namhoum reservoir is administered and maintained by the District Agriculture and Forestry Office (DAFO) in Naxaythong District. The reservoir is expected to assist household production, in terms of rice farming, fisheries, and water utilization for other crops in Naxaythong District. The district is made up of 6 zones (*khóum*).

Figure 4.1.3 Administration structure



*Source:* Angnamhoum Village Authority 2004

Namhoum reservoir is located in Zone 4. This zone has 12 villages<sup>3</sup> as below:

- |                 |                     |                      |
|-----------------|---------------------|----------------------|
| 1. North Leelay | 5. <u>Hoinamyen</u> | 9. <u>Angnamhoum</u> |
| 2. South Leelay | 6. <u>Sisavath</u>  | 10. <u>Nathone</u>   |
| 3. Kuakangsane  | 7. North Songpuern  | 11. Namhoumyai       |
| 4. Sengsavang   | 8. South Songpuern  | 12. Houmbeng         |

However, there are only four villages- Angnamhoum, Hoinamyen, Nathone and Sisavath Villages - which are located close to the reservoir. These four villages are expected to take the role of closely monitoring the area and preventing potentially damaging fishing methods from being used. This study will focus on two of the villages in the area of the reservoir Angnamhoum and Hoinamyen.

## 4.2 Characteristics of the villages

To measure change there has to be some starting point. What was the situation like before? In theory, if a baseline study has been carried out at the beginning of work, a similar study can be carried out later to see what has changed. However, in practice, baseline data are

<sup>3</sup> From the interview with Mr. Leokham Vilaysanh, Chief of Reservoir Fisheries Management Committee, interview, Angnamhoum Village, 6 December, 2004.

quite rare, and where they have been carried out they have often looked at factors which seemed important initially but which have become less relevant as the programme has developed. (Gosling, Louisa with Edwards, Mike. 2003:140).

In this case study, baseline data was collected in the two villages of Angnamhoum and Hoinamyen in the first stage of the study. The data presented is information about the status before 2000; this means before the intervention of the MRC's Fisheries Programme. The data covers several aspects of development, and includes historical background, demography, health, education, the environment, and socio-economic factors and livelihood patterns of the villages. The historical background will show what these two villages were like in the past. This will help us to understand the existing potential and limitations of the two villages that might have had influence in the past and which may have important implications for the present and future.

#### **4.2.1 Baseline Data of Angnamhoum Village**

Angnamhoum village was named after the completion of Namhoum Dam in 1977. The majority of the people residing in this village were actually technicians and construction workers on Namhoum dam. The government has provided a large parcel of land 1,240,000m<sup>2</sup>, (see Table 4.2.1) to accommodate those who wish to reside in this village, and these people are responsible for operating and preserving the reservoir and its water-related system. (See Map of Angnamhoum village from Annex – C.1 ).

The number of households increased from 32 in 1977 to 206 in 2004, influenced by the availability of natural resources and arable land. Village Elders reported that "*Formerly, the village site was on Hoinamyen village's boundary. Due to the completion of dam construction in 1977, this area was divided into two Villages: Angnamhoum and Hoinamyen*"<sup>4</sup>.

---

<sup>4</sup> From the interview with Mr. Thitoon Voravongsa, a member of the Lao Front for National Construction, Baseline Data Collection, Hoinamyen Village. 27 January 2005

**Table 4.2.1**

**Background of  
Angnamhoum  
Village in Brief**

| No. | Description             |              | Unit   |
|-----|-------------------------|--------------|--------|
| I   | Total Area              | 1,240,000    | (m2)   |
|     | - Agricultural Land     | 416,000      | (m2)   |
|     | - Wet Season Rice Field | -            | -      |
|     | - Irrigated Rice Field  | -            | -      |
|     | - Household Land        | 612,000      | (m2)   |
|     | - Grassland             | 220,000      | (m2)   |
|     | II                      | Population   | 1,018  |
|     | - Male                  | 567          | Person |
|     | - Female                | 451          | Person |
|     | - Families              | 218          | Family |
|     | - Density               | Person/601m2 |        |
| III | Occupation              |              |        |
|     | - Handicraft            | 95           | %      |
|     | - Workers               | 5            | %      |
|     | - Traders               | 0            | %      |
| IV  | Livestock               |              |        |
|     | - Buffalo               | 6            |        |
|     | - Cattle                | 159          |        |
|     | - Pigs                  | 12           |        |
|     | - Poultry               | 3,960        |        |

Source:

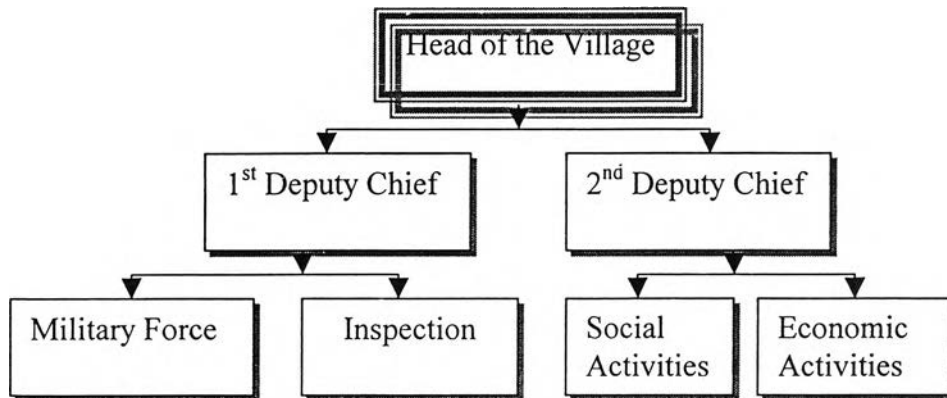
DAFO/LARReC 2005

*Demography:* There are three main ethnic groups: Lao Loum accounted for 90%, Lao Sueng 4% and Lao Thueng 6 %. It is obvious that the villages are rich in aquatic resources, and this has attracted people from elsewhere to come to permanently settle in this area. It was found that 15 families had migrated from the northern provinces, while only 3 families had moved out of this village (for social reasons).

*Social Structure:* The prevailing socio-political structure has been altered by government influence. Currently, the village is headed by an administrative chief and his committee and two deputies.

*Administration:* The Head of the Village is expected to maintain ideology and act as the culture-information messenger; the first deputy is in charge of security and the inspection; socio-economic activities are the responsibilities of the second deputy. This structure shows that the government is very concerned about political ideological correctness. The village head is expected to deliver the policies of the organizations above him to the villagers.

**Finger-4.2.1 Administrative Structure of Angnamhoum Village**



*Source:* Angnamhoum Village Authority, 2004-2005

Officially, mass organizations include the Lao Youth Unions, Lao Trade Union, the Lao Women's Union, which sometimes involved in development programmes, and the Lao Front For National Construction, which prepares certain traditional festivities and organizes some community work. The council of elders (*Neohom*) plays an informal and moral role as guarantor of traditions, and it advises the working population and youth on a very wide range of subjects such as social interaction and disputes mediation.

*Health and Education:* Angnamhoum is self-sufficient in food due to the small population and the reservoir which allows villagers to fish and grow crops. It was reported that "There were several cases of people living over 73 years of age"<sup>5</sup>. This shows that people normally have a long life. It is only 50m away from the military hospital which has 17 health staff. However, there is no dispensary. Few people are affected by malaria, and malnutrition is not a problem. In 1997, Angnamhoum village had a literacy campaign. There was 85% enrollment in 2004. As there is only one primary school, which can accommodate 200 students, the students are required to continue their secondary and higher education elsewhere such as a Naxaithong Secondary School, which is approximately 10km away.

*Economic activities:* Angnamhoum has a traditional system of land-use. Slash and burn agriculture was abolished in 2000. The main sources of income include fisheries, construction, handicrafts, and growing crops such as cucumber and tomato while secondary crops are mango and tamarind. In addition, the village keeps livestock: buffalo, cattle, pigs

---

<sup>5</sup> From the interview with Mr. Leokham Vilaysane, Chief of Fisheries Group, Angnamhoum Village, Baseline Data Collection. 27January 2005



and poultry. There is one cottage industry in the village, However, there is only one fresh market. Generally, poverty was officially eradicated in 2000.

*Livelihood patterns:* The calendar of activities includes productive activities as well as non-productive, administrative, social and religious activities. All these activities are linked and spread over the annual calendar depending upon a number of factors such as season and weather, family health, market opportunities, family capital and natural disasters. The calendar of activities comprises land-based activities, water-based activities, domestic animals, skillful/laboring activities and social work. (See Annex - D.1 Seasonal Calendar)

*Advantages:* The majority of the population are technicians and workers, and these people have skills for developing natural resources such as the reservoir and the fertile land for plantation. The villagers grow akgard wood, coconut, eucalyptus and rubber trees which all have high commercial value. The main disadvantages of this village is the shortage of land on which to cultivate rice.

#### **4.2.2 Baseline Data of Hoinamyen Village**

It was discovered that Hoinamyen Villages was traditionally called “*Thang-Koun*”, which means wealthy and devout. The elders explained that this village was located on level land. Since then “*For more than four generations, they have known that the village was located close to spring water, and that this water could cure many illnesses and diseases such as skin infections and other common diseases. This holy water was given the local “hoi-nam-yen”:* therefore, this village was later called Hoinamyen”<sup>6</sup>. (See Map on Annex – C.2)

*Settlement:* In the total area of 2,240,000m<sup>2</sup> (see Table 4.2.2) initially there were 13 or 14 households living in this village; however, in 1975, after Laos gained independence, the village comprised 87 households. Currently this village is a diversity of ethnic groups and nationalities because of the migrants from several northern provinces such as Luangnamtha, Houaphanh, Xiengkhouang, and Xayaboury. In 2000, the population increased to 334 families or 345 households.

---

<sup>6</sup> Interview, Mr. Thitoon Voravongsa, member of Lao Front for National Construction, Baseline Data Collection, Hoinamyen Village, 2 February 2005.

The population of Hoinamyen village is now 1,764 (866 are female). Since 2000, the village has been highly productive of fish at Namhoum Reservoir, this has encouraged people to move in and 20 households have chosen to reside permanently. Farmers account for 50% of the total population, 20% are businessmen, 15% are in employment and 15% are students. This shows that the village livelihood mainly depends on the existing resources, especially the natural resources such as land for rice cultivation and plantations.

**Table 4.2.2**

**Background of  
Hoinamyen  
Village in brief**

| No. | Description             |                          | Unit              |
|-----|-------------------------|--------------------------|-------------------|
| I   | Total Area              | 2,240,000                | (m <sup>2</sup> ) |
|     | - Agricultural Land     | 140,240                  | (m <sup>2</sup> ) |
|     | - Wet Season Rice Field | 735,377                  | (m <sup>2</sup> ) |
|     | - Irrigated Rice Field  | 510,150                  | (m <sup>2</sup> ) |
|     | - Household Land        | 137,077                  | (m <sup>2</sup> ) |
|     | -Grassland              | 717,583                  | (m <sup>2</sup> ) |
| II  | Population              | 1,988                    | Person            |
|     | - Male                  | 1,084                    | Person            |
|     | - Female                | 904                      | Person            |
|     | - Families              | 382                      | Family            |
|     | - Density               | Person/601m <sup>2</sup> |                   |
| III | Occupation              |                          |                   |
|     | - Rice Farmers          | 70                       | %                 |
|     | - Workers               | 20                       | %                 |
|     | - Traders               | 10                       | %                 |
| IV  | Livestock               |                          |                   |
|     | - Buffalo               | 62                       |                   |
|     | - Cattle                | 256                      |                   |
|     | - Pigs                  | 2,560                    |                   |
|     | - Poultry               | 12,674                   |                   |

*Source:*

DAFO/LARReC 2005

*Health and Education:* Health conditions are generally good. The main health care center is the district hospital, the only hospital that people usually use. In the cases of serious illness, people normally go to a hospital in the capital city, as the local hospital is not well equipped with medical facilities. However, the eight health care workers seem to be among the most active social workers in the village. Almost every household has a dug well and access to clean water. However, it appears that malaria and diarrhea are fairly common. Regarding education, Hoinamyen village began a literacy campaign in 1978 and the enrollment rate in 2004 was 95%.

*Social Structure:* This is similar to Angnamhoum Village; however, as Hoinamyen was established four generations before Angnamhoum, Hoinamyen has a better system, for example, the administrative structure has been well-established since 1983. The administration is led by the Head of the Village and his two deputies. Nevertheless, in the case of social gatherings, these ceremonies are usually organized at the temples. Hoinamyen

has two temples (north and south) and the temples are the centers and the most sacred places for the villagers and the community.

*Economic Activities:* The main source of income is agriculture, especially rice farming and fisheries. In addition, many households also grow cucumber, and cucumber is worth from US\$ 900-1,000 a year per household. The community raises domestic animals such as cattle, buffalo and poultry as supplementary activities. The average income is approximately US\$ 280 per year. Regarding markets, there is only one fresh market.

*Livelihood Pattern:* (See Annex-D.2 The seasonal calendar of Hoinamyen Village) is classified into five categories: 1/ Land Based Activities; 2/ Water Based Activities; 3/ Livestock; 4/ skillfull/manual work; and 5/ Social work. It is notable that, Hoinamyen is the biggest village; potentially the village has plenty of land for rice farming; from January to June the community is engaged with the irrigated rice season and from July to December is the wet season rice. In addition, the community also grows fruit (mango and tamarind), and some vegetables (cucumber and tomato). Water-based activities are similar to those of Angnamhoum village. Most of the livestock raised are for non-commercial purposes i.e they are for household consumption only. The skillful/manual work at Hoinamyen village are trading and weaving. The social work is parallel with Angnamhoum village.

*Advantages:* The large amount of land provides the agricultural potential of Hoinamyen Village. Thus, people can farm rice and plant vegetables. Therefore, rice farming and cucumber garden are the main sources of income. In addition, the well settled area of Hoinamyen has attracted investors.

### **4.3 Management of the River and Reservoir Fisheries (MRRF)**

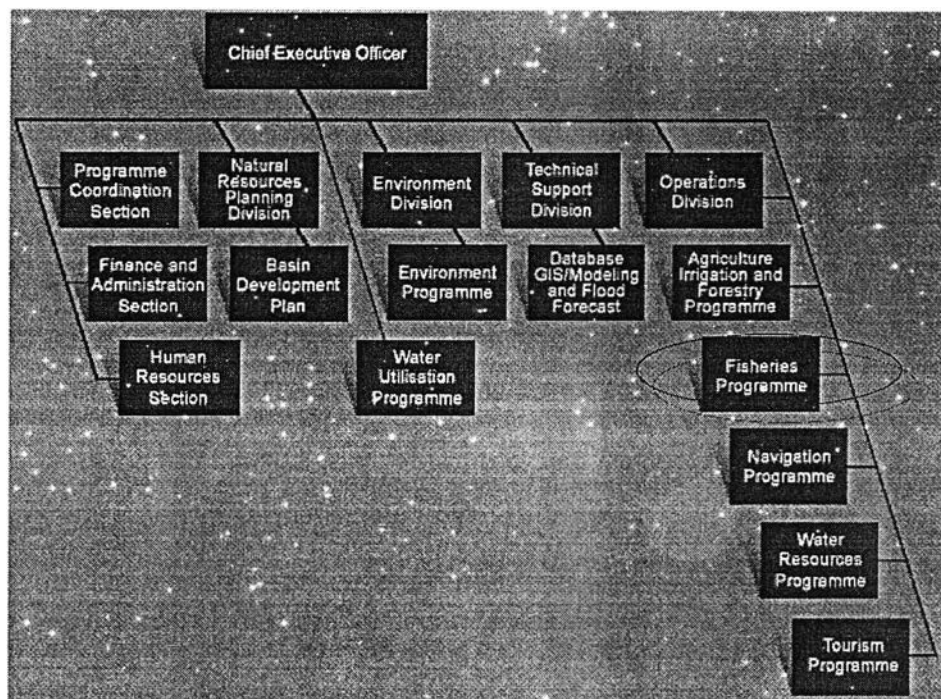
#### **4.3.1 Project Objectives and Mandate**

Following the signing of the 1995 agreement, the MRC has operated on a new mandate which is to coordinate river basin development in the key areas of agriculture, fisheries, navigation and flood management. These projects seem to be similar to the development projects of the 1960s. However, changes in 1995 meant that development was expanded to the Basin Development Plan in 2002. Importantly, the expansion of the number of stakeholders has become one of the norms. The MRC anticipates that regional strategies will eventually develop based on a strong understanding of issues at the grassroots level. A

trans-boundary approach to river basin management must include all stakeholders being involved in the decision making process (Mekong News, 2003.a:3).

This implies constant effort on the part of the MRC to boost local initiatives and sustainability, the closer access there is to the community, the better. We see that today the MRC can provide financial support for several programmes. Since 1995, MRC has invested more than US\$ 10 millions annually in agriculture, fisheries, navigation and the environment. The MRC can do all this, but if the recipients (beneficiary groups) do not have an effective management system, adequate regulation or adequate monitoring and supervision, effective competence, initiative, leadership and ownership of the projects, their development will be endangered and will not last.

**Figure 4.3.1 Programme Structure of Mekong River Commission**



*Source:* <http://www.mrcmekong.org>

Therefore, the MRC Fisheries Programme, particularly the Management of River and Reservoir Fisheries (MRRF), is aimed at achieving the co-management and participation of all sectors in the projects. In order to ensure the effectiveness and sustainability of the projects, every sector will be taking a part in the project; Both top-down and bottom-up policies are essential; the regional, national, provincial, district and village levels are all playing important roles and are aware of their rights and responsibilities.

### ***Co-management Approach***

MRC identifies the co-management as a formalized process of sharing of rights and responsibilities by government and by organized user-groups in decentralized decision making is aimed at sustainable resource management. Co-management is a management system to be practiced by those who fish and/or fisheries organizations and government together. Generally, most reservoir fisheries are under centralized government management, which is represented by the fishery or local authorities. Implementation of a co-management system is the most common way of involving the local communities in the management of the fisheries resources. (Phousavath, Sommano. 1998: 7)

Co-Management is not a new concept in the Lower Mekong Basin. Though not necessarily known under the name of “co-management”, the concept of user-involvement in management is quite common in the LMB and, in some cases, goes back many decades. National governments in all the four riparian countries of the LMB have policies and legislation that aim at strengthening shared decision-making of natural resources and thus “co-management”. (MRC, 2002.d: 49).

### ***Programme Objectives and Mandate***

The management of the Reservoir Fisheries in the Mekong Basin II (MRF II) is a four-year regional project of the Mekong River Commission. It is one component of the programme for fisheries management and development cooperation. The MRF II covers MRC’s four member countries: Cambodia, Laos, Thailand and Vietnam. The component was designed to be implemented in two phases: Phase I from 1995-2000 and Phase II from 2000-2005.

Phase I focused on institutional strengthening through training to increase the capabilities of government agencies to undertake fisheries assessment and to formulate management strategies.

Phase II aimed to implement such strategies in close collaboration with local users and other stakeholders by establishing models of participatory aquatic resource management at selected reservoirs, with the possibility of replication within the entire Mekong Basin.

### ***Project Objectives***

- Coordinate and sustainable management, use and development of the economic and nutritional potential of the inland living aquatic resources in the Mekong Basin.

- Fishing communities and concerned authorities jointly develop, implement and disseminate sustainable reservoir co-management models.

#### 4.3.2 Who are the Stakeholders?

The project stakeholders of the MRC/MRRF II 2000-2005 at Namhoum Reservoir are composed of the following sectors:

Regional Level: **MRC/MRRF II:** the Mekong River Commission has been supporting the Management of River and Reservoir Fisheries Programme(MRRF) phase II from 2000-2005. in this case MRC is taking donor and leading roles on providing financial and technical support to the programme.

National Level: **LARReC/NAFRI/MoAF:** the Living Aquatic Resource Research Center (LARReC) was first established in 1999 (LARReC 2000: 2). In this case LARReC was assigned by the Ministry of Agriculture and Forestry (MoAF), Lao PDR to play the technical role as the closest government counterpart to the MRC/MRRF II as well as to act as the project coordinator between donor and the local community.

As part of the decentralization advocated by the Government of Lao PDR in early 2000s. it was clearly defined roles and responsibility of the authority into three levels: the provincial level is in charge of providing strategies, district level is taking the planning process and the implementation is conducted at the village level.

Provincial Level: **PAFO/PLFO:** Provincial Agriculture and Forestry Organization/Provincial Livestock and Forestry Office.

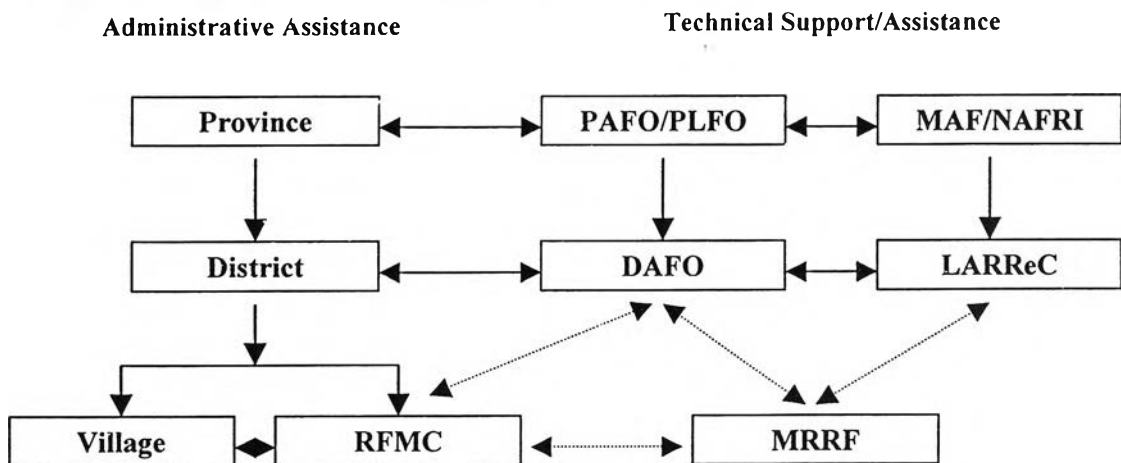
District Level: **DAFO:** District Agriculture and Forestry Office, Naxaythong District, acting as the Project Coordinator of the MRRF II. **DFMC:** District Fisheries Management Committee established under District Governor's decree number 175/District Naxaythong, 26 February 2001 (LARReC 2005.a:1). DFMC is composed of 7 members (one of which is DAFO officer). The main tasks of DFMC is to support extension of aquaculture in entire district, with special focus of raising indigenous fish in reservoir; control illegal fishing in reservoir; establishing fishing regulation, including permanent and semi-permanent conservation/non-fishing zones; setting-up fisher group; collecting and buying fish; stimulate people to establish develop fund mainly directed at stocking.

Local Level: **RFMC:** Reservoir Fisheries Management Committee, a local committee formed by the community to support MRRF II Programme. In addition, village authority, the fisher group and water users are also considered stakeholder in this regards.

### 4.3.3 Project Structure and Coordination System

The organizational set-up was designed to facilitate and ensure the project implementation from central to local levels. The organization graph is divided into two main components, Administrative and Technical Support. (See Figure 4.3.1 below). The MRC first approached the technical support component on the right hand side, which includes the Ministry of Agriculture and Forestry (MAF), and the National Agriculture and Forestry Research Institute (NAFRI) at the central level. The MAF has assigned the Living Aquatic Research Resource Centre (LARReC) to be the focal point and to work directly with the MRC on the Management of River and Reservoir Fisheries (MRRF) from 1995 up to the present.

**Figure 4.3.3 Organizational Set-up**



Source: LARReC/RTC, September 2003

The Provincial Agriculture and Forestry Office (PAFO) serves as the technical body at the provincial level and supervises the District Agriculture and Forestry Office (DAFO). DAFO plays a very important role in monitoring the Fisheries Programme as a key counterpart of the MRC. The Reservoir Fisheries Management Committee (RFMC) was

established by the MRC, LARReC and DAFO. This committee is the result of the continuous efforts of the MRRF programme. The RFMC also plays a significant role in closely monitoring the project. The committee has many advantages for working with the local people as they are indigenous people who are experienced in the fisheries area and who have a willingness to dedicate themselves to social work.

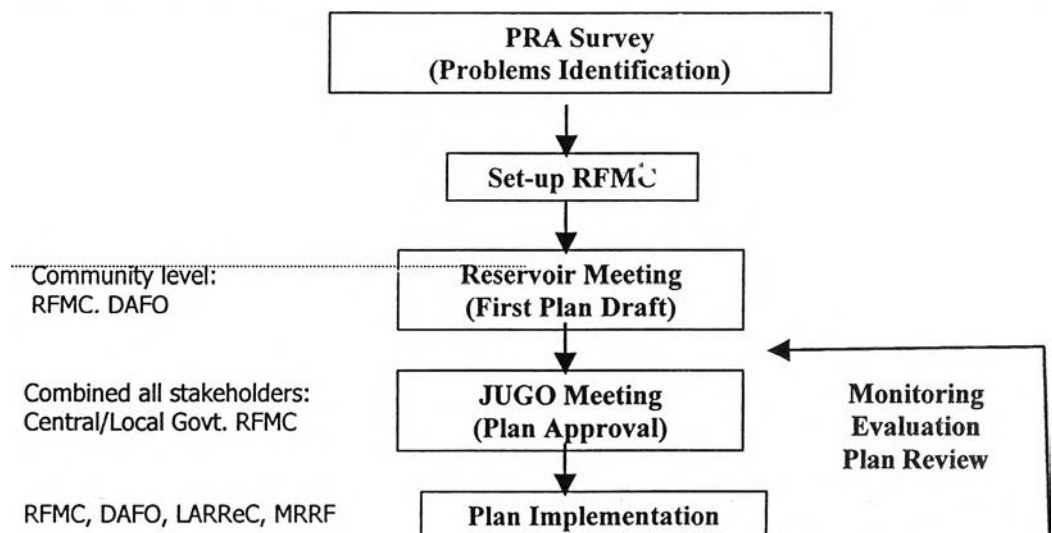
#### 4.3.4 Project Intervention 2000-2005

Generally, the project activities and/or the main task of the project of MRC is to help ensure that the stakeholders jointly forge reservoir co-management plans as the springboard that will set them on a course to co-management. For this to happen, the project conducts the following activities:

- Helps organize and strengthen stakeholders groups who will become partners in the co-management process
- Organizes and implements various activities that will increase the capacity of project partners in effecting reservoir fishery co-management such as training, study tours, and other related undertakings
- Documents, packages and disseminates experience in reservoir fisheries co-management among concerned institutions and individuals (see Annex 4.3.2)

Figure 4.3.4 MRRF II Project Cycle

#### Process for the Formulation of the Reservoir Fisheries Management Plan



Source: LARReC/RTC, September 2003



### ***Partnership and Management***

From the beginning of technical cooperation, MRC and LARReC conducted the Participatory Rural Appraisal (PRA) in June 2000. This was conducted in four reservoirs, one of which was Namhoum Reservoir

#### *Criteria for village selection to participate in PRA workshop*

- Those situated nearby the reservoir
- The livelihoods of their villagers are largely concerned with the existence of the reservoir
- Their villagers utilize the reservoir in a much more routine manner than the other village
- They have potentials in co-managing the reservoir with other higher authority level in the future

The village leaders and their deputies randomly gathered 216 people from four villages. (Anghamhoum 83, Hoinamyen 44, Sisavath 32, and Nathone 57). There were 62% female and 38% male participated the PRA workshop. The participants were from all walks-of-life such as farmers, gardeners, fishers, merchants, workers, officials, soldiers, police. A presence of village authority was highly required.

PAR conducted by problem identifications, the problems and objective analysis, activities prioritized by the participants and the participation analysis, the social map, seasonal calendar, and proposed potential representatives from Namhoum reservoir who possibly join the proceeding workshop. (LARReC, 2000: 32-33). There were more than 27 problems raised by the participants concerning the specific question of “what are the problems relevant to the using and management of this reservoir?”. Here are the most common problems identified by the villagers.

1. The number of fishes in the reservoir decreased
2. Many fishes got diseases and died
3. Practicing of illegal fishing gears
4. Lack of an appropriate fishery management approach
5. No common rules for fish

*The villagers also prioritized activities to be achieved, details are as follows:*

1. Cooperate with the neighboring village and other concerned parties more often
2. Appoint the co-management committee who would be responsible for management of this reservoir in the future.

3. Revise and formulate the fishing regulation, including clear and specific conservation zones for the fish spawning ground, restriction in using fishing gears, regulation for fishers who come from outside the surrounded villages, and strict enforcement and mitigation measure against the violators.
4. Organize the fish trading committee and issue the rules for selling and buying fish in this area
5. The department and other organizations concerned (military camps) must control their officers properly who do not follow the fishing rules and regulations when they come for fishing in Namhoum reservoir.

The outcome of PRA workshop has been carefully considered by MRC, LARReC, DAFO to seek for better solutions in co-management manner. Eventually, the above mentioned common problems were adapted to workplan and project implementation of 11 activities which are wished to be implemented by local people

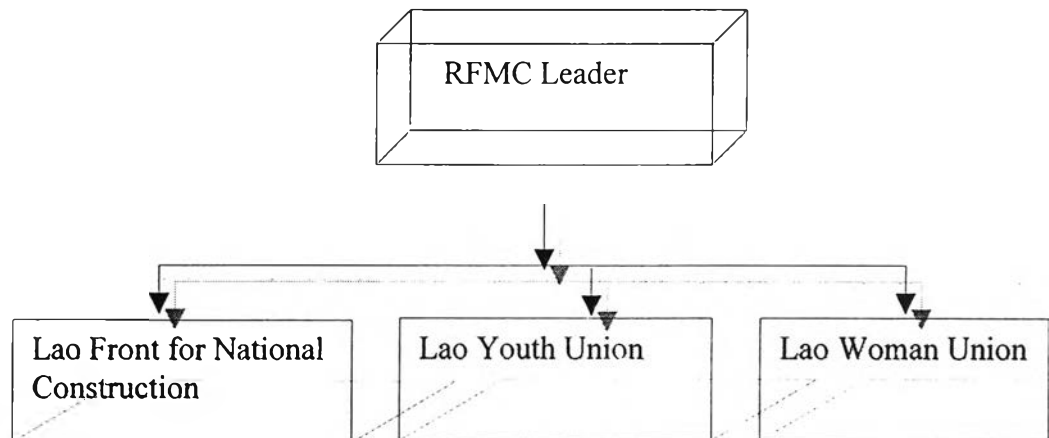
Consequently, to minimize the above constraints, there was a real need to establish a committee acting at the community level to provide technical and administrative support to the villages as well as to the fishermen. The District Fisheries Management Committee (DAFC) was first appointed. However, the DAFC only consisted of government staff and most of them were committed to routine and were overloaded. As a result, the DAFC could not work effectively. Eventually, it was realized that it was desirable to establish a committee which was actually based at the village level and would be committed and dedicated to the programme. Therefore, the Reservoir Fisheries Management Committee (RFMC) was established in 2001, and all tasks of the DAFC have now been transferred to the RFMC.

#### **4.3.5 Leadership - Establishment of RFMC**

The 17 RFMC members were established under District Governor's decree number 794/District of Naxaythong, 19 September 2001 (LARReC 2005.b:1). Each village has four RFMC members who are representatives of village committees and the mass organizations such as the Lao Front for National Construction, the Lao Youth Union and the Lao Women's Union. (As the MRC has strongly emphasized the gender issue, involvement of female members is compulsory). *"The RFMC has the role and responsibility to manage the fisheries*

*in the reservoir. So far, there is no time limit set for this function. The location is the Namhoum Reservoir, Naxaythong District, Vientiane, Lao PDR<sup>7</sup>". (See Figure 4.3.5)*

**Figure 4.3.5 The Composition of RFMC**



The RFMC is led by the Village Head (in some cases the deputy to the Head of the village is the member). The leader is in charge of general management and monitoring, while the member from the Lao Front for National Construction is responsible for fishing disputes mediation (if available). The member from the Lao Youth Union acts mainly in the role of the patrolling system. Financial matters are taken care of by the member from the Lao Women's Union.

Once the RFMC was established, the annual work plan was based on the priorities requested by the RFMC. This called the Joint Users and Government Officers (JUGO) Meeting. This is a combination of all the stakeholders of the MRRF programme namely: the fishermen, the staff from the irrigation district office, the MRC, the LARReC, DAFO and the RFMC. They are co-planning and working in co-management to approve the Reservoir Annual Workplan which is agreed by all sectors. The following 11 activities are set for ordinary plans.

1. Organize the Reservoir Fisheries Management Committee (RFMC)
2. Identify fishing regulations

---

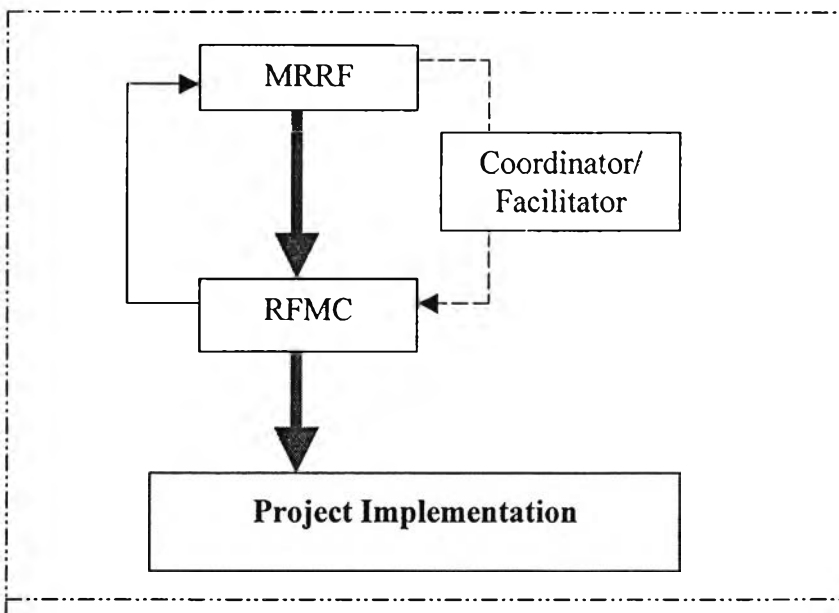
<sup>7</sup> Interviewed with Mr. Sommano Phouisavath, Management of River and Reservoir Fisheries (MRRF) Project Officer, Living Aquatic Research Resource Centre (LARReC), Feasibility Study, Vientiane, November 2004

3. Develop the capacity of the RFMC
4. Strengthen awareness of fishing regulations
5. Identify the Fish Conservation Zones
6. Organize Fish Stocking
7. Develop Cage-Culture (pen-culture)
8. Establish the Reservoir Development Fund
9. Monitor the project and collect data
10. Organize fish processing
11. Organize fishermen's groups.(LARReC, 2005.c: 6)

#### 4.3.6 Project Financial Aid System

The activities above mentioned on 4.3.4 are directly implemented by the RFMC and the fishermen at the community level. However, this project is technically and financially supported by the MRC and LARReC. Mostly the funds are solely from the MRC. Details of financial assistance procedures are as follows (see Figure 4.3.6)

**Figure 4.3.6 Procedure of Cash Flows**



*Source:* LARReC/MRRF II, December 2003

**Remark:**

|         |                            |
|---------|----------------------------|
| →       | Direct financial support   |
| - - - → | Indirect financial support |
| — →     | Reporting system           |

The MRC has allowed the RFMC to open its own account specifically for the MRRF programme. The support can be classified into two types: financial support (directly to the RFMC is US\$ 200 per quarter or US\$ 800 per year), and non-financial support (which is capacity building, workshops, study tours and other technical support related to aquatic research). The cost of technical support is much higher than the cash support, and these funds are allocated and supervised by the LARReC as the RFMC is newly-established and is operated by only four members from each village. Supporting the small amount of money is much more manageable for the RFMC.

This procedure of cash flow model was presented and accepted during the Review of the Reservoir Management Plan, at Namhoum Reservoir, Vientiane, Lao PDR from 11-12 December 2003. (LARReC, 2003:15). The MRRF (MRC) supplies funds directly to the RFMC, and the RFMC then utilizes them for management and implementation of the agreed annual workplan. In addition, the MRRF also distributes some funds for capacity building and other technical purposes; these are kept at LARReC as the Coordinator/Facilitators of the programme. The reports on expenditure of the funds (financial and technical reports) must be submitted to MRRF(MRC Head Quarter) as the donor. Furthermore, a technical report has also to be sent to the LARReC in order to keep track of the programme and provide appropriate technical advice.

#### **4.3.7 Capacity Building**

MRC/MRRF's project main objective is to invest on capacity building, annex 4.3 shows that in the five-year programme, MRC has supported more than twenty workshops and trainings to national project staff and RFMC. The training could be classified into two categories: *Management*: in March 2003, RFMC Training on Planning, Monitoring and Evaluation (PME); Reservoir Development Fund; *Technical* training: in April 2004, Fish breeding and operation of fish hatchery, recently, in December 2004, the RFMC Training study tour on fish-food processing in Thailand. (See annex-E.1)

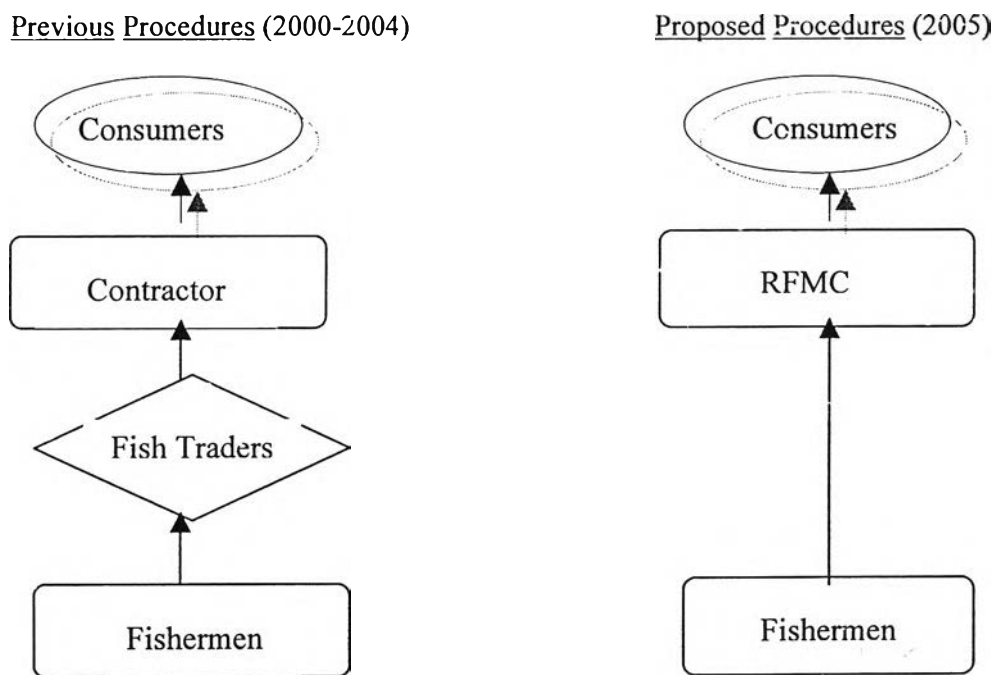
#### **4.3.8 Fish Marketing System**

Fish marketing system was first initiated in 2000 by the District Governor (LARReC, 2005.a: 1), with the consultation of the stakeholders such as: the DAFO, DFMC, RFMC which is aimed at achieving better reservoir fisheries management, ensure food security,

effective fish marketing system and consequently to create jobs and distribute income to the fishermen and community.

The fish marketing system is operated on the yearly base starting from 2000-2001, to 2004. The bidding process was carried out by the DAFO, invitations for bidding is opened for contractors. The Food stuff and Cereal company, one of the contractors was selected for operating fish marketing in Namhoum Reservoir(DAFO 2002.a: 1) and signing the Contract on Fish Purchasing Concession in Namhoum Basin. (DAFO 2002.b: 1). This process was comprised of middle men or fish traders, who collected fishes from fishermen before sending to the markets, this caused fish price cheaper and un-fair to fishermen (see figure 5.3).

**Figure 4.3.8 Fish Marketing System**



*Source:* Individual Interview – LARReC

After observation of this process and profit distribution, RFMC realized that, most of the benefit goes to the private sector/contractor and fish traders, while the fishermen and community were still un-self sufficient. Finally, the RFMC has proposed this issue to DAFO, LARReC and MRRF II to re-consider this process and requested to be involved in fish marketing at Namhoum Reservoir.

Therefore, The Naxaythong District Administrative Office issued a notice mentioning that from now on this responsibility will be transferred to the DAFO (DAFO, 2005: 1). The proposed procedure is expected to fulfill gaps with local participation, satisfaction and justice manner. The total production of fish was between 55-77 tons a year.

#### **4.3.9 Reservoir Development Fund**

Although Reservoir Development Fund was proposed in 2003, so far there is no activity implemented under this. However, it is significant to discuss what are fund raising potentials and how they could be made in order to boost local income and strengthen reservoir development fund in the near future (Details are discussed in chapter V/ 5.4 Financial capital/ Fund raising Potentials).

#### **4.3.10 Fishing Enforcement**

There are totally four official agreements. Which were used as the legal document.

1. Agreement on Concession for the Purchase of Fish in the Namhoum Basin. Reference No. 735/ dated 27 June 2002, Vientiane Municipality, Naxaythong District.
2. Contract on Fish Purchasing Concession in Namhoum Basin. Reference No. 734/ dated 26 June 2002, Vientiane Municipality, Naxaythong District.
3. Notification on Fish Marketing Handover. Reference No. 039/ dated 27<sup>th</sup> January 2005, Naxaythong District, Administration Office.
4. Resolutions on fishing Rules and Regulation at Namhoum and Namsuang Reservoirs. Reference No. 641/ dated 10 June 2002, Vientiane Municipality, Naxaythong District.

However, only two of them are currently effective which are number. 3 and 4. These official documents need to be comprehended by the project stakeholders and the community.



**Table 4.3 Summary of MRRF II – Lao PDR 2000-2005  
at Namhoum Reservoir – Project Initiatives**

| No.                              | Description  | Proposed Year | Achieved Year | Status       |
|----------------------------------|--|---------------|---------------|--------------|
| <b>I Management Arrangement</b>  |  |               |               |              |
| 1                                | Fish Conservation Zone   | 1999          | 2000          | Implementing |
| 2                                | Fishing Rule and Regulation  | 2001          | 2001          | Implementing |
| 3                                | DFMC established   | 2001          | 2001          | completed    |
| <b>II Personnel Arrangement</b>  |  |               |               |              |
| 1                                | 6 Fisher Groups  | 2000          | 2001          | Implementing |
| 2                                | 17 RFMC members  | 2001          | 2001          | Implementing |
| 3                                | Patrolling Team  | 2003          | 2003          | Implementing |
| <b>III Technical Arrangement</b> |  |               |               |              |
| 1                                | Training on PME, Development of Fund   | -             | 2003          | completed    |
| 2                                | Workshop on Fish Stocking in reservoir, demonstration of mobile fish hatchery          | -             | 2003          | completed    |
| 3                                | Awareness Campaign on reservoir management drawing competition for Naxaythong schools. | -             | 2003          | completed    |
| 4                                | Food Processing Training, Thailand   | 2003          | 2004          | completed    |
| <b>IV Financial Arrangement</b>  |  |               |               |              |
| 1                                | Cash Flow model Presented  | 2003          | 2003          | Implementing |
| 2                                | Reservoir Development Fund   | 2003          | N/A           | N/A          |
| 3                                | Fish Marketing by private sector   | 2000          | 2000          | Completed    |
| 4                                | Fish Marketing RFMC involved   | 2004          | 2005          | Implementing |
| 5                                | Food Processing  | 2005          | 2005          | Implementing |
| <b>V Physical Arrangement</b>    |  |               |               |              |
| 1                                | 1 motor boat for patrolling team   | N/A           | N/A           | Local Asset  |
| 2                                | 2 main boards of fishing regulation  | N/A           | N/A           | completed    |

*Source:* Feasibility Study 2004

Most of the activities proposed and initiated by the project as well as the RFMC were totally implemented except the reservoir development fund which remains un-finished business due to shortage of fund.