REGIONAL FISHERIES LIVELIHOODS PROGRAMME FOR SOUTH AND SOUTHEAST ASIA (RFLP) – VIET NAM

BASELINE SURVEY

VOLUME 3: BASELINE SURVEY RESULTS FOR THUA THIEN HUE PROVINCE

Activity 4.1.1: Survey of income and gender situation in target communes
Activity 4.1.2: Identification of needs and priorities

For the Regional Fisheries Livelihoods Programme for the South and Southeast Asia – Vietnam

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List of Acronyms

AgriBank	Bank for Agriculture and Rural Development
CBO	Community-based organizations
CC	Control commune
CCRD	Centre for Community Research and Development
CPC	Commune People's Committee
CSSH	Centre for Social Sciences and Humanities
DANIDA	Danish International Development Agency
DARD	Department of Agriculture and Rural Development
District DOLISA	District Department of Labour, Invalid and Social Affairs
DONRE	Department of Natural Resources and Environment
DPC	District People's Committee
DST	Department of Sciences and Technology
FA	Fishery Association
FAO	Food and Agriculture Organization
FCM	Fishery Co-Management
FSPS	Fisheries Sector Programme Support
GEF	Global Environment Facilities
HH	Household
HP	Horse Power
HUAF	Hue University of Agriculture and Forestry
IDRC	International Development and Research Centre
IMOLA	Integrated Management of Lagoon Activities Project
NAV	Nordic Assistance to Vietnam
NGO	Non-Government Organization
PC	People’s Committee
PPC	Province People's Committee
RFLP	Regional Fishers Livelihoods Programme
ROSCA	Rotating savings and credit associations
SAS	Safety at sea
SDECAFIREP	Sub-Department of Capture Fisheries and Resources Protection
SRDAFIQA	Sub-Department of Rural Development and Agro-Forestry-Fisheries Quality Assurance
TTH	Thua Thien Hue
VBSP	Vietnam Bank for Social Policy

Terminologies, Interpretation, and Definitions

Target communes	Refers to household survey respondents of five RFLP target communes in Thua Thien Hue.
Control commune	Refers to the communes that are not RFLP target communes, but selected to provide control data. It is Phu Hai Commune in Thua Thien Hue.
Fisher(s)	Refers to consulted / interviewed persons who work in fisheries sector including fishing and aquaculture.
Women	Female respondents of household survey.
Male	Male respondents of household survey.
Resource managers	Includes staff of SDECAFIREP, District DARD, District Extension Station, CPCs, and FAs who were consulted in this survey.
Off-shore fishing	Fishing in the sea further than 24 miles from the coast[1]. This fishing is normally conducted for periods longer than 24 hours.
Inshore fishing (inshore fishing)	Fishing in the sea within 24 miles from the coast[2]. This fishing is normally conducted in less than 24 hours
On-shore fishing	Fishing from the shore (coast)
Lagoon fishing	Fishing in lagoons
Formal services/systems	State owned / legally recognized services / systems
Informal services/systems	Community-based or private services / system without legal status.
Hui	*Hui* is a type of Rotating Savings and Credit Association or ROSCA where a group of individuals (normally 10 people) agree to meet for a defined period of time (normally 10 months) in order to save and borrow together.
Fisheries co-management	Co-management can be defined as a partnership arrangement in which the community of local resource users (fishers), government, other stakeholders (boat owners, fish traders, boat builders, businesspeople, etc.) and external agents (non-governmental organizations (NGOs), academic and research institutions) share the responsibility and authority for the management of the fishery. (IDRC, 2006).

[1] As defined by Thua Thien Hue SDECAFIREP
[2] As defined by Thua Thien Hue SDECAFIREP

Executive Summary

Fishery sector in Thua Thien Hue

Thua Thien Hue has great potential for fisheries development that provides livelihoods for about 100,000 people living in 31 coastal and lagoon communes. Annually, the province produces about 40,000 tons of fish, of which capture fisheries accounts for more than 70%. Most fishers are small scale fishers with more than 66% of the fishing boats being below 20 HP. Lack of investment for equipment and techniques, weak marketing and unstable markets have made fisheries products in Thua Thien Hue have low value.

Surveyed communes

Compared to district and provincial poverty rates, the target communes have higher poverty rates. Two out of the five communes namely Phu Thuan and Phong Hai can be considered as fishing communes. In each of the other three communes fishing households accounted for less than 20% of the total. Offshore, inshore and lagoon fishing were the main fishing activities of the fishers in the project area. Fisheries was one of the key economic sectors in the target communes, and especially in the fishing communes.

Fishery co-management

There are three systems of fishery resources management including community-based management, state management and co-management. Both state and community-based resources management systems are rated as very effective by about half of the surveyed fishers, while the same number of respondents had no idea about these systems.

Co-management was established by the creation of Fishery Associations (FA). Co-management has been proven to be effective and has been given attention by both the government and donors. However fishers and government staff still have low awareness of the concept “co-management”, despite the well developed FA network in the province. The poor understanding of co-management and inactive participation in resources management activities results in low perception of fishers on the effectiveness of co-management on livelihoods and resources management. Men had better awareness and understanding of co-management than women.

The perception of fishers of fish production over the last five years is variable. Some thought production had increased while others reported a decline in fish production. Fish diversification, pollution and fishing capacity were reported as being worse. The same trend was projected for the next five years by fishers.

To strengthen fisheries resources management, it is necessary to build the capacity of FAs, to pay attention to developing policies for long term and sustainable development of co-management and for balancing between the benefits and responsibilities for fishers to encourage them to participate in the management of fisheries resources.

Safety at sea and vulnerability reduction

Although some government and ministerial degrees and circulars on safety at sea (SAS) have been promulgated, the lack of detailed instructions on their use and the poor dissemination of these papers has limited fishers' awareness of safety at sea information. Very few women were fully aware of SAS information. Television and radio were the most common channels for fishers to access SAS information.

Basic safety equipment for fishing boats are regulated quite clearly in government papers, however, fishers' awareness of these regulations was very low, especially that of inshore fishing and lagoon fishing households. The majority of fishers were unaware that communication devices must be available for use on fishing boats. The compliance rate for fishers with the three basic safety equipment items, namely life vest, life buoy and radio for communication was very low. Almost no inshore and lagoon fishing households were compliant with these regulations.

While the registration of boat has been well implemented, boat inspection has not been carried out regularly or fully. Only 25% of the boat fleet was inspected in 2010.

Though one third of surveyed fishers rate rescue activities as "effective", most rescue effort comes from fishers' groups, and not government agencies. Fishers avoid and deal with accidents at sea based on their own experience. More than 70% of surveyed fishers ha never attended any training course on SAS. However, two thirds believed that they were confident to deal with accidents at sea.

Post harvest and marketing

Fisheries post-harvest and marketing in Thua Thien Hue are underdeveloped. Only 3% of fish production is exported. While export value in the province has increased steadily over the last few years, the export value from the fisheries sector has remained unchanged during the same period.

Despite the diversification of fishing products, the only fisheries products to be awarded trade-marks was limited to fish sauce and fish salted sauce only. Among hundreds processing households and enterprises, only 10 have qualified to have their trade-marks on their products registered. The poor skills and low capacity of staff in charge at district and commune level and untrained fishers were identified as some of the factors constraining the development of fisheries post harvest in Thua Thien Hue province.

Fishers have limited marketing options for the sale of their products. Approximately 90% of fishers' production was sold to middle traders who decide the sale price.

Livelihoods diversification and improvement

The diversification in fishers' livelihoods was very limited, though fishers have plenty of free time. Fishers can only fish for eight to ten months per year when the weather is good for fishing. Men were the main income earners while many women do housework and sell fish in the market.

About half of surveyed households (HHs) depend on only one livelihood, usually fishing, though their income was not high, especially for lagoon fishing households. There were significant differences in income among fisher groups. On average, the income of offshore fishing households was three times higher than other households.

Though about half of surveyed fishers reported improved HH livelihoods, the same number of fishes were dissatisfied with their current livelihoods and more than 80% of them wanted to change their livelihoods. Men were more likely to be satisfied with their current livelihoods than women. Fisher's awareness of the services to support livelihoods enhancement and diversification was very low and they found it difficult to access these services and supporting institutions. Low educational levels, the lack of skills, lack of confidence and lack of dynamism were identified as the key factors constraining fishing households from livelihood change.

Micro-finance

Vietnam Bank for Social Policy (VBSP) and Agribank were the two formal financial institutions operating in the surveyed communes. In addition, fishers borrow money from private money lenders and their relatives.

Access to formal credit schemes varies among the different sampled communes. In communes where both agriculture and fishing were conducted, very few fishers were granted loans.

Most fishers were aware of formal financial services, but they were not fully aware of the kind of services they offered. Most fishers cannot complete loan application themselves because they were not fully aware of bank regulations and / or they read and write poorly.

More than 40% surveyed HHs still found it difficult to access loans when in need, though formal financial services were preferred by both men and women. Less women use private financial services than formal financial services. There were a considerable number of women in *"Hui"* savings and borrowing groups.

Proposed RFLP output indicators

26 quantitative and qualitative indicators were proposed under the five RFLP programme outputs including seven for Fishery Co-Management, six for Safety At Sea and Vulnerability Reduction, six for Post Harvest and Marketing, four for Livelihoods Strengthening and Diversification, and three for Micro-finance services. The indicators were produced taking into account the results of baseline survey and available programme resources.

I. Profile of Surveyed Communes and Households

1. Fishery sector in Thua Thien Hue

Thua Thien Hue province has significant resources for fisheries development including more than 100 km of coast line, 22,000 ha of lagoon and about 4,000 ha of brackish water aquaculture (SRDAFIQA, 2009a). Total fish production in 2009 for the province was 39,926 tons, of which capture fisheries accounted for the majority or more than 72% of total production (SRDAFIQA, 2009a). Between 2005 and 2009, there was a slight increase in fish production in the province, with capture fisheries providing most of the increase (Figure 1)

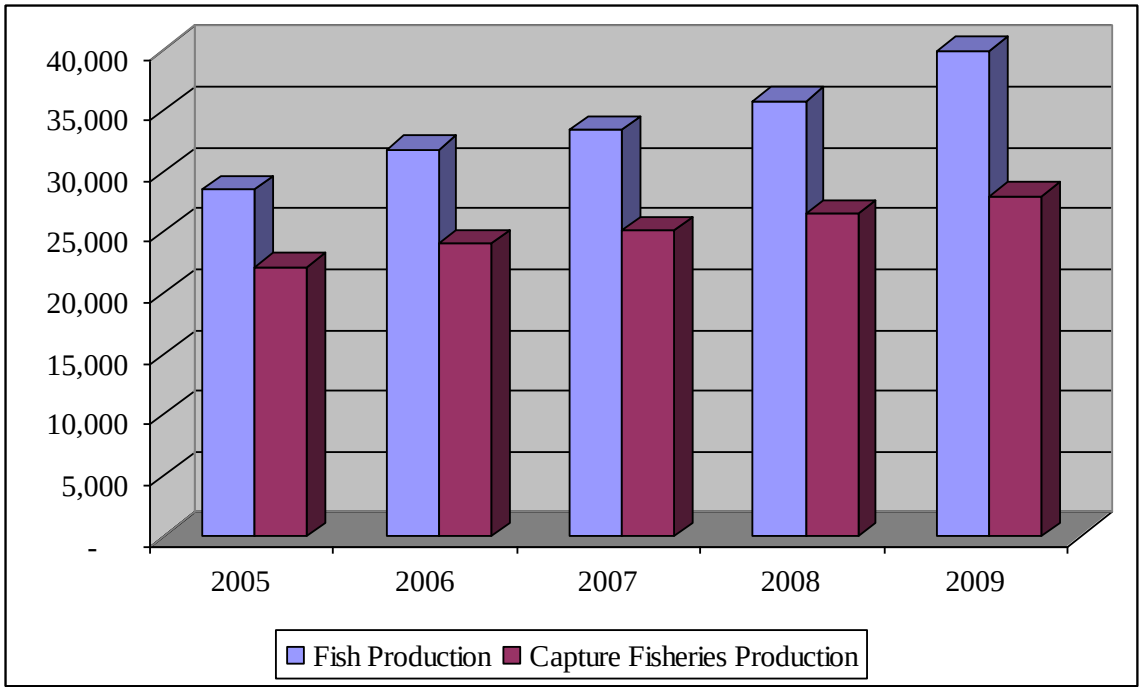


Figure 1: Fish production in Thua Thien Hue province 2005-2009
(Source: General Statistics Office, 2010)

Though capture fisheries makes a significant contribution to fish production in the province, most capture fisheries is small scale. The province has a fleet of 1,971 boats with a total capacity of 66,505 HP - e.g. an average of 33.7 HP per boat (SDECAFIREP, 2010a). Only 10% of the boats are above 90 HP, while 66% of the boat fleet are under 20 HP (SDECAFIREP, 2010a).

Despite its current limited development, fisheries used to be one of the key economic sectors in the province. Between the period 2000 to 2005 the GDP contribution of fisheries increased from nearly 19% to 22%. However, the contribution of fisheries to province GDP declined dramatically after 2006, due to large scale disease outbreaks which cause significant losses in shrimp culture (Figure 2).

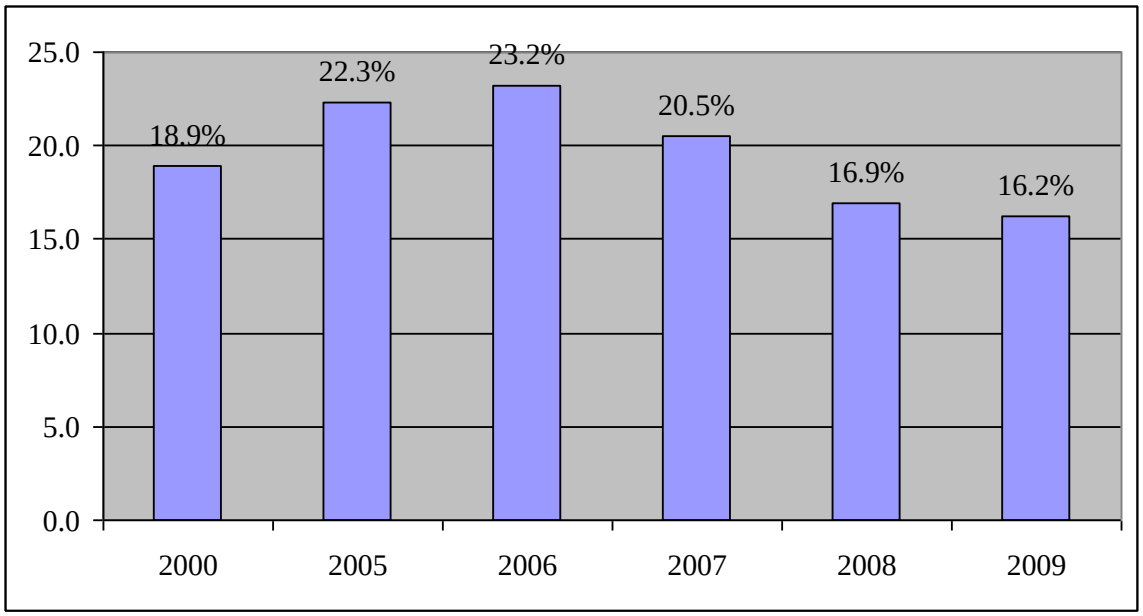


Figure 2: GDP share of fisheries in Thua Thien Hue Province
(Source: TTH Statistics Book, 2010).

Fisheries provides livelihoods for about 100,000 people living in 31 communes of the five coastal / lagoon districts in the province (Tuyen, 2010). Capture fisheries has been a traditional livelihood of many coastal villages. Fishers earned their living from offshore, inshore, onshore and lagoon fishing. Following the failure of shrimp aquaculture after 2006, many households became capture fisheries-dependant households and fishing was the only livelihood of many fisher households (HUAF, 2009).

In general, fisheries industries in Thua Thien Hue are not well developed. Most fish production is sold as raw material without any processing. The aquatic product markets have been unstable, with fishers having minimal control over markets and/or market prices. Fish processing is small scale and uses very basic technologies. Lack of investment for equipment and techniques, weak marketing and unstable markets have devalued fisheries products in Thua Thien Hue province.

2. Characteristics of the surveyed communes

Among the 32 villages of the five RFLP target communes in Thua Thua Thien province, 19 villages accounting for about 60% were engaged in fishing. All villages in Phong Hai and Phu Thuan were fishing villages and five out of six villages in Vinh Thanh had fishing households (Table 1).

Table 1: Number of fishing villages and the poverty rate in surveyed communes

Commune	No of villages	No of fishing village	No of HHs	No of poor HHs	% of poor HHs[3]
Phu Loc Town	10	5	2,550	218	8.6
Loc Tri	9	2	1,704	161	9.5
Vinh Thanh	6	5	2,094	200	9.6
Phu Thuan	2	2	1,907	162	8.5
Phong Hai	5	5	1,158	114	9.9
Target communes	**32**	**19 *(59.37%)***	**9,413**	**855**	**9.0**
Phu Hai (CC)	**4**	**4**	**1,456**	**105**	**7.0**

(Source: Loc Tri CPC, 2009a; Phong Hai CPC, 2009a; Phu Hai CPC, 2009a; Phu Loc Town PC, 2009a; Phu Thuan CPC, 2009a; Vinh Thanh CPC, 2009a)

The average poverty rate of the target communes was 9%. The poverty rate was not significantly different from commune to commune, and ranged from 8.5% in Phu Thuan to 9.9% in Phong Hai commune (Table 1). In general, the poverty rate in the target communes was higher than that of district and provincial poverty rate. According to report No. 125/BC-UBND dated 06 December 2010 of Thua Thien Hue People's Committee, the provincial poverty rate in 2009 was only 7% (Phu Vang District DOLISA, 2009).

In general the households in the target communes were engaged in three main economic activities almost equally. These were farming with 24.5%, fisheries with 21.8% and services with nearly 31%. In the fishing communes of Phu Thuan and Phong Hai, the proportion of households dependent on fisheries was 35% and 55% respectively (Table 2).

Table 2: Household livelihood categories

Commune	Farming HH (%)	Fishery HH (%)	Service HHs (%)	Other (%)
Phu Loc Town	25.8	9.9	44.2	20.1
Loc Tri	44.0	17.6	25.0	13.4
Vinh Thanh	30.0	10.0	30.0	30.0
Phu Thuan	0.2	35.0	30.9	34.4
Phong Hai	23.0	55.0	12.0	10.0
Target communes	**24.5**	**21.8**	**30.9**	**22.7**

(Source: Loc Tri CPC, 2009b; Phong Hai CPC, 2009b; Phu Loc Town PC, 2009b; Phu Thuan CPC, 2009b; Vinh Thanh CPC, 2009b)

In the target communes, fishing households were those conducting: Offshore fishing (further than 24 miles from the coast[4]), inshore fishing (less than 24 miles from the coast[5]), on-shore fishing (from the shore / coast), lagoon fishing (fishing in Tam Giang - Cau Hai Lagoon system), aquaculture and fish processing. In addition, a considerable number of households were engaged in providing services for fishers, but these households were not recorded separately under the commune statistics system.

[3] The MOLISA definition of 'poor households' are household with incomes of less than VND 200,000/person/month.
[4] As classified by Thua Thien Hue SDECAFIREP
[5] As classified by Thua Thien Hue SDECAFIREP

Most of the fishing households in Vinh Thanh and Phu Thuan communes were involved in inshore and offshore fishing respectively, while most of the fishers in Phu Loc Town and Loc Tri communes relied fished in the lagoon (Table 3).

Table 3 shows that there were a small number of fish processing households in the target communes. Phu Thuan had the greatest number of fish processing households with 74 households, while Vinh Thanh, Loc Tri and Phu Loc Town had 15, 4 and none respectively.

Table 3: Types of fisheries - based households in surveyed communes

	Phu Loc Town	Loc Tri	Vinh Thanh	Phu Thuan
Offshore fishing	32	35	140	560
Inshore fishing	0	0	380	187
Lagoon fishing	213	105	40	148
Aquaculture	32	27	40	180
Fish processing	0	4	15	74

(Source: Loc Tri CPC, 2009b; Phu Loc Town PC, 2009b; Phu Thuan CPC, 2009b; Vinh Thanh CPC, 2009b)[6]

There was a significant difference in production value among the target communes. While most of production value (about 73%) of Phu Loc was obtained from services and small scale industry sectors, Loc Tri was still heavily depended on agriculture which accounted for nearly 64% of the commune production value. Fisheries contributed an important 42.4% of production value in Phu Thuan commune (Table 4). In addition, of the about 27 billion Vietnamese Dong from small scale industry in Phu Thuan in 2010, 84% of the production value was from fish sauce processing.

Table 4: Production value structure of the surveyed communities *Unit: Billion dong*

Commune	Services (%)	Small scale industry (%)	Agri (%)	Forestry (%)	Fishery (%)		
					Total	Aqua.	Capture Fisheries
Phu Loc Town	41.9	30.9	9.8	5.4	12.0	Data not available	
Loc Tri	16.4	19.9	63.64 (data is not separated)				
Vinh Thanh	Data not available						
Phu Thuan	42.4	15.1	1.0	0.0	41.5	2.7	97.3
Phong Hai	Data not available						
Phu Hai (CC)	Data not available						

(Source: Loc Tri CPC, 2010; Phu Loc Town PC, 2010; Phu Thuan CPC, 2010;)

In summary, the target RFLP communes had a slightly higher proportion of poor households than the average provincial rate. Two out of the five communes including Phu Thuan and Phong Hai were categorized as fishing communes, though a considerable number of households in these communes earned their living from services. The other three communes had both fishing and agriculture communities, and fisheries households accounted for less than 20% of the total number of households. Offshore, inshore and lagoon fishing were the main fishing activities of the fishers in the project communes. Fisheries was one of the key economic sectors in the target communes, especially in the fishing communes.

[6] Data was unavailable for Phong Hai commune,

3. Characteristics of household respondents[7]

Among 161 surveyed households in five target communes, most of the respondents (more than 90%) were between the ages of 31 to 60. 68 of the respondents were women, accounting for 42.2%. Of the target communes, about 25% of the surveyed households were either poor or upper poor households. More than 93% of the surveyed households were fishing households and the other 3% classified themselves as aquaculture households (Table 5). Some of the surveyed households were engaged in two different types of fishing activities including offshore fishing and inshore fishing, or inshore and lagoon fishing or lagoon fishing and aquaculture.

Table 5: Types of surveyed households

	By main career[8]				By fishery-based career[9]					
	N	Offshore fishing	Inshore fishing	Lagoon fishing	N	Offshore fishing	Inshore fishing	Lagoon fishing	Aqua.	Proces -sing
Target communes	161	40	63	58	195	40	69	63	10	13

The average surveyed household size was six people, ranging from a minimum of two to a maximum of ten people per household. 34% of the sampled households had seven people. The average number of wage earning people per surveyed household was 3.3, of which two of the three were involved in fisheries, while the others were working either in factories in other provinces, or were self-employed and operating small businesses.

[7] Unless mentioned as "control commune" or "respondents in control commune" otherwise the figures related to household survey provided in the main text in this report refers to target communes of 161 surveyed households, e.g. excluding control commune.

[8] Only the main income sources in each household was recorded.

[9] All fishery - based careers in a household were recorded (i.e. one HH had two or more fishery-based careers, e.g. offshore fishing and inshore fishing, or inshore fishing and fish processing, or lagoon fishing and aquaculture, etc.

II. Baseline results and analysis of five outputs

1. Fishery Co-management

1.1 Existing policies and institutions that influence co-management and areas for strengthening

1.1.1 Existing policies that influence on co-management

Recognizing the important role of communities in management of fisheries resources, the Government has emphasized the involvement of communiies in fishery management as one of the solutions for fisheries management in the Government strategy for fisheries development up to 2020 that was approved by the Prime Minister on 16/9/2010.

The national and provincial governments have promulgated several policies to promote co-management. Government decree No 45 dated 21st April 2010 regulating the organization, operation and management of associations has provided a legal corridor for the establishment of fishery associations at the commune level. At the provincial level, policies for enhancing the contribution of local communities in fishery resources protection have been issued. In 2007, the provincial government issued decision No. 227/QD-UBND dated 27th September 2007 approving the fisheries resources protection and development programme. Under this programme, a network of fisheries resources protection collaborators at commune level were recruited, trained and paid a monthly allowance. However, this programme was only implemented for three years from 2008 to 2010.

During the last 10 years most of the fisheries programmes and projects funded in Thua Thien Hue have paid attention to fisheries management with an emphasis on co-management. In its two phases from 2005 to 2010, the Italian funded and FAO executed "Integrated Management of Lagoon Activities (IMOLA) project has significantly contributed to the development of commune fishery association network in Tam Giang Lagoon communes. The Danish (DANIDA) funded Fisheries Sector Programme Support (FSPS I and II) in Thua Thien Hue has a separate component for the strengthening of the management of capture fisheries which focused on piloting and implementation of sustainable fisheries co-management models. Between 2008 and 2011, a project on Common Pool Resources Management was implemented by Hue University of Agriculture and Forestry under the financial support of the International Development Research Centre (IDRC - Canada). This project successfully piloted the fishing right allocation model and built up and documented a process for allocating fishing rights to commune Fisheries Associations. Recently in November 2009, the first fisheries conservation zone (Con Chim) in Vinh Phu commune was planned and executed by communities under the financial support from the province and the Global Environment Facilities (GEF). After the success of the first conservation zone, three more zones were planned and protected with the active participation of fishing communities. In addition, NGOs such as NAV, CSSH, etc., are also interested in supporting co-management through their technical, financial and organizational support.

1.1.2 Key government / non-government fishery management stakeholders

At Provincial level

Provincial People's Committee (PPC) promulgates decisions, guidelines and policies on resource management in the province and this agency also has the right to withdraw promulgated polices.

Department of Agriculture and Rural Development (DARD) acts as an advisor to the Provincial People's Committee (PPC) in making plans for fisheries management and development.

The Sub-department for Fisheries Exploitation and Resource Protection is responsible for state management of fisheries resources at the provincial level. It plays the role of an advisor to DARD in the management of fishing facilities, gears, and water surface for the better management of fisheries resources.

At district level

District People's Committee (DPC): is responsible for the state management of fisheries at the district level.

District Section of Agriculture and Rural Development is responsible for giving advice to the DPC on the management of fisheries in the district.

District Office of Resources and Environment (DONRE) is responsible for giving advice to the DPC on water surface and aquaculture land management. Moreover, they also issue certificates to resources users.

At commune level

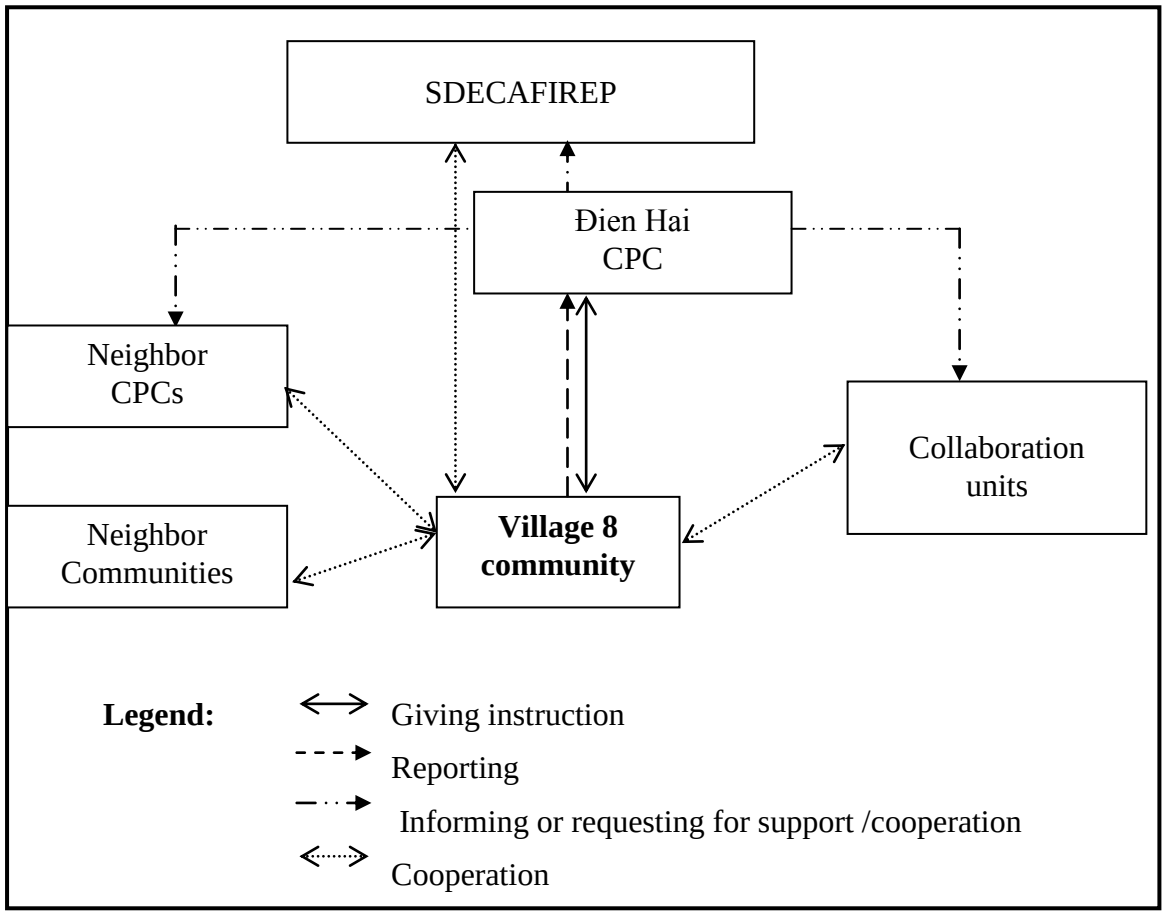
Commune People's Committee (CPC): is responsible for the state management of fisheries resources in the commune. In the commune, the staff in charge of agriculture and fisheries and / or the vice chairperson in charge of economics are assigned to deal with issues related to fisheries. In addition, the commune police are assigned to cooperate with the Fishery Association and or the community to organization patrolling and to deal with violators in fishery resources management.

Commune Fishery Association (FA): The commune Fishery Association has the legal status to manage the fisheries activities allocated to the FA. In most cases, within the FA, the fishery resources protection group(s) is/are responsible for the management of fisheries resources. The management of fisheries by FA's is carried out through written regulations which are developed by FA members and the community.

At community level

Commune stakeholders: Beside the FA, the fishing community is involved in fisheries management through their self-managed organizations (see more details in section 1.2.1).

Box 1 is an example of co-management among stakeholders in banning electronic fishing in Dien Hai Commune - Phong Dien district - Thua Thien Hue province.



Box 1: Co-management for banning electric fishing in Dien Hai - Phong Dien district. (Source: T.C.Uy, 2010)

In addition to state management agencies and communities, fisheries management recognized the contribution of research institutions who provided technical support to improve the effectiveness of fisheries management mechanisms and NGOs who provide financial and technical support for improving fisheries management in the province.

1.2. Fisheries management systems

The fisheries management systems in Thua Thien Hue can be classified into three types. The first type is community-based fishery management system. In this system the community is the core actor who voluntarily participates in management of fisheries and the cooperation between community and stage management agency is weak. The second system is state fishery management which involves government agencies from different levels. The last system is co-management which represents cooperation between government and the community.

1.2.1. Community-based (CB) fishery management

This system consisted of three main types of organization of fisheries management including Fishing Village (*Vạn*); Fishing Cooperative (*Tập đoàn / liên đoàn / nghiệp đoàn*) and Self-Managed Groups (*Nhóm tự quản*) (Table 6)

Table 6: Types of CB fishery management in the surveyed communes

	Fishing village (Vạn)	**Fishing cooperative *(Tập đoàn / liên đoàn / nghiệp đoàn)***	**Self-managed groups**
Phu Loc Town	X		X
Loc Tri	X		
Vinh Thanh	X	X	X
Phu Thuan	X	X	
Phong Hai		X	
Phu Hai (CC)	X	X	

Fishing Village (*Vạn*): "*Vạn*" are informal fisher organizations where fishers managed fishing activities based on unwritten regulations. Based on the fishing methods and location, a fisher group was given a name according to their fishing method such as " *Van Luoi* - Gill Net Groups", "*Van Sao* - Fish Trap Group", or based on their community location such as "*Van Hoa Duan*" or "*Van An Truyen*". *"Van"* are typical organizations of the boat people (sampan) communities who were resettled recently around lagoon areas in Thua Thien Hue province. *"Van*" normally consists of the fishers who are dependent on lagoon fishing and or inshore fishing. In the five target communes, *"Van"* were the most common type of fisheries management organization and operated in four out of five communes. The number of members of a "*Van*" was different from commune to commune and ranged from 40-50 to hundreds. A "*Van*" is led by a *"Van*" leader who is respected , trusted and selected by the members every two or three years. The members in the same *"Van"* help each other when fishing, in times of need like sea rescue and other matters in their life.

Fishing cooperatives *(Tập đoàn / liên đoàn / nghiệp đoàn):* These are also informal fisheries management organizations. Their operation mechanisms are similar to "*Van"*, but they are organizations for offshore fishing households. The members in fishing cooperatives help each other to find fishing grounds, rescue and disaster preparedness and management. Fishing Cooperatives have been formed in Vinh Thanh, Phu Thuan and Phong Hai communes where there were a considerable number of offshore fishing households.

Self-managed groups: Are groups of fishers living in the same area, which manage fishing activities based on some agreed regulations. The self-managed groups are usually formed in fishing communities where the number of fishing households in an area is small or may be formed as a unit of *"Van"* or Fishing Cooperative.

Traditionally, fishing villages and fishing cooperatives operated based on their own regulations and there was only limited cooperation with local government However, recently, the cooperation between these organization and government have been increased. In communes without FA's, implementation of government fisheries management legislation is usually done in cooperation with these informal management groups even though they have no legal status.

1.2.2. State fishery management system

This system involves the participation of the government stakeholders/staff from province to commune levels as mentioned in section 1.1.2 above. Fisheries management is done through law, policy and regulation systems. Though many government agencies are involved in fisheries management, the state management system has some shortcomings and weaknesses.

1.2.3. Fishery Co-management organizations

Fishery co-management is a relatively new system of fisheries management in Vietnam. Co-management has been established as a result of the alarming decline in fishery resources and environmental degradation, while government agencies have been unable to handle all the problems related to fisheries management.

The co-management system in Thua Thien Hue province involves Fishery Associations at the province and commune level. Establishment of Fishery Associations (FAs) is one of the measures used to promote co-management. An FA is a professional community-based organization that has legal status. An FA consists of those who are interested in fisheries including fishers, aquaculturists, fish processors, fisheries service suppliers, researchers, etc. FAs have shared responsibilities with government agencies for fisheries management and reduce the workload for the government. The formation of FAs has also been proven to be good for fisheries resource management, especially in Tam Giang lagoon (HUAF, 2010, in preparation)

In Thua Thien Hue, the provincial FA was established in 2003. By 2010, the provincial FA had 56 sub-FAs with 3,689 members. The first FA was organized in 2003 and most of the FAs were established between 2006 and 2008 when the role of FAs was recognized and the donors supported the promotion of the FA network.

The majority of the sub-FAs are a mixture of aquaculture and fishing members. In addition, there are fishing FA, aquaculture FA and marine FA. Noticeably, out of 56 sub-FAs, there is only one FA for fish processors (Table 7).

Table 7: Profile of Fishery Associations in Thua Thien Hue province

Year of establishment	2010
No of sub-association	56
No of members	3,689
% female members	2%
No of lagoon fishing FA	3
No of offshore FA	6
No of aquaculture FA	6
No of fish processing FA	1
No of research FA	1
No of mixed FA (aqua-fishing)	39
No of fishing rights allocated	8

(Source: TTH FA, 2010)

There is at least one FA in each of surveyed communes. Loc Tri however has four FAs with about 300 members. Each of the surveyed communes has one marine FA. To date, only three out of 10 FAs in target communes have been allocated fishing rights and all these FAs were in Phu Loc district (Table 8).

Table 8: Fishery association status in RFLP target communes

Commune	No of FA						No of members
	Total	Lagoon FA	Marine FA	Aqua FA	Mixed FA	FA with fishing right	
Phu Loc Town	2	0	1		1	1	185
Loc Tri	4	0	1	1	2	2	278
Vinh Thanh	2	0	1	1	0	0	78
Phu Thuan	1	0	1	0	0	0	23
Phong Hai	1	0	1	0	0	0	120
Phu Hai (CC)	**2**	**1**	**1**	**0**	**0**	**0**	**52**

(Source: TTH FA, 2010)

1.3. Perception of fishers on fishery management and conflict resolution systems

Almost 45% of respondents in target communes rated community based fishery management system as "very effective" and "effective". Most fishers who were *"Van"* or Fishing Cooperative members appreciated the effectiveness of the traditional systems because this management system was the mechanism with which fishers were most familiar and was a long held traditional system in fishing communities which had proved its usefulness. However, about 40% of respondents had no idea about community based fishery management systems. A high proportion (45.6%) of women respondents gave no opinion on the effectiveness of community based management systems. The low awareness of women of this management system was probably due to their low participation in "Van" or Fishing Cooperatives activities. In many cases, women were not invited to attend discussion meetings on fishing issues of "Van" or Fishing Cooperatives. The different perception of male and female respondents on the effectiveness of community based fishery management systems is presented in Table 9.

Table 9: Effectiveness of Community Based fishery management systems

	N	Very effective (%)	Effective (%)	Not effective (%)	No idea (%)
Target communes	161	41.0	13.6	5.6	39.8
- Male fisher	93	39.8	18.3	6.4	35.5
- Female fisher	68	42.6	7.4	4.4	45.6
Control commune	34	32.4	29.4	0.0	38.2
- Male fisher	22	27.3	31.8	0.0	40.9
- Female fisher	12	41.7	25.0	0.0	33.3

About 43% of respondents stated that the state fishery management systems including the presence of regulations and law-based management were effective. The effectiveness of this system was better recognized by those who often have contact with government officers such as FA management board members, offshore fishing households, etc. However, approximately 40% of both men and women respondents had no idea how effective

government management systems were for fisheries (Table 10). People with lower education who seldom come into contact with government agencies were more likely to be unaware of the effectiveness of government regulation of fisheries management.

Table 10: Effectiveness of government fishery management systems

	N	Very effective (%)	Effective (%)	Not effective (%)	No idea (%)
Target communes	161	40.4	12.4	6.8	40.4
- Male fisher	93	36.6	15.0	8.6	39.8
- Female fisher	68	45.6	8.8	4.4	41.2
Control commune	34	61.8	11.8	2.9	23.5
- Male fisher	22	68.2	4.5	4.5	22.8
- Female fisher	12	50.0	25.0	0.0	25.0

Community based systems (51.5%) were rated slightly more highly than the government system (45.3%) by fishers for conflict resolution. The number of fishers who had no idea about the effectiveness of government system and community based systems for conflict resolution was 42.2% and 34.8% respectively (Table 11).

Table 11: Fisher perception of the effectiveness of conflict resolution systems

	N	Community-based systems			N	Government systems		
		Effective (%)	Not effective (%)	No idea (%)		Effective (%)	Not effective (%)	No idea (%)
Target communes	**161**	51.5	13.7	34.8	**161**	45.3	12.4	42.3
- Male fisher	93	57.0	16.1	26.9	93	46.3	16.1	37.6
- Female fisher	68	44.1	10.3	45.6	68	44.1	7.4	48.5
Control commune	**34**	70.6	14.7	14.7	**34**	55.9	20.6	23.5
- Male fisher	22	86.4	13.6	0.0	22	68.2	18.2	13.6
- Female fisher	12	41.7	16.6	41.7	12	33.3	25.0	41.7

Most fishing conflicts were not serious and were resolved by the involved partners under customary regulations. That was why the community based systems on conflict resolution were better known by local fishers than official government conflict management systems.

More than one third of the respondents in target communes had no idea about the effectiveness of either type of conflict resolution system. Most of these respondents were people who had never experienced any fishing conflicts.

More women than men had no idea about the effectiveness of conflict resolution systems. For both systems more than 45% of female respondents were unable to evaluate the effectiveness of the conflict evolution systems. This was because women were seldom involved in conflict situations or their resolution.

Among 21 interviewed government staff, most of them (90.5%) rated conflict resolution systems as effective. They appreciated the cooperation and contribution of communities to fisheries management, especially the role of FAs and traditional fisher organizations.

1.4. Understanding and expectations of the concept "co-management" among fishers and government staff

Traditionally and informally, fishers have been involved in fisheries management for generations. However, the term "Co-management" seemed very new to most of them. More than 82% of the respondents had never heard about co-management and did not understand what co-management meant. Noticeably, almost (97.1%) of female respondents were completely unaware of the term co-management. Only 1.2% of fishers were well aware of co-management, and most of these were FA management board members or heads. 16% of respondents reported that they were aware of the term co-management but they had only heard of the term and did not really understand what it meant.

Compared to fishers, government staff had a better understanding of co-management. Of 21 respondents who were resource managers, more than 85% were aware of co-management. While one third of them were very aware of this term, more than 52% were not fully aware of co-management. Among the government staff, agriculture extension staff had only a limited understanding of co-management as extension workers were more concerned with aquaculture than capture fisheries and fisheries management.

Table 12: Awareness of fishery "co-management" by stakeholders

Target group	N	Very aware (%)	Aware (%)	Not aware (%)
Target communes	**161**	**1.2**	**16.2**	**82.6**
- Male fisher	93	2.2	25.8	72.0
- Female fisher	68	0.0	2.9	97.1
- Offshore fishing HH	40	0.0	30.0	70.0
- Inshore fishing HH	63	1.6	20.6	77.8
- Lagoon fishing HH	58	12.1	27.6	60.3
Government staff	**21**	**33.3**	**52.3**	**14.2**
Control commune	**34**	**2.9**	**8.8**	**88.2**
- Male fisher	22	4.5	9.1	86.4
- Female fisher	12	0.0	8.3	91.7

In general the lagoon FAs were more active and had more management activities than marine FAs. In addition, during the last few years the donors have supported lagoon fisheries management activities more than marine fishing. This explains why less offshore fishing households were aware of co-management than lagoon and inshore fishing households (Table 12).

Very few (6.8%) target commune respondents were well aware of the usefulness of co-management, while the majority (69.6%) of respondents had no idea about the usefulness of fisheries co-management in fishery resources management and livelihood improvement (Table 13).

Table 13: Perception on overall usefulness of fishery co-management in fishery resources management and livelihood improvement

	N	Very useful (%)	Useful (%)	Not useful (%)	No idea (5)
Target communes	**161**	6.8	7.5	16.1	69.6
Male	93	11.8	11.8	8.6	67.7
Female	68	0.0	1.5	26.5	72.1
Government staff	21	47.6	33.3	0.0	19.0
Control commune	34	0.0	11.8	0.0	88.2

Men and women perceived the usefulness of co-management differently. While more than 23% of male respondents rated co-management as very useful or useful for fishery management and livelihoods, only 1.5% of women respondents agreed. About one quarter of women rated co-management as not useful, while for male only 8.6% did. Many more women than men had no idea about the usefulness of co-management and this probably reflects their low participation in fishery management meetings, low membership of FAs and their poor awareness and understanding of co-management.

Contrary to fishers, more than 80% of resources managers rated co-management as "useful" or "very useful" for fishery management and livelihoods. However 19% of government staff had no idea of the usefulness of co-management because a significant number have still never heard about co-management.

1.5. Participation in fishery management

In general the participation of fishers in fishery management was very high because during the last few years there have been major changes in fishery management such as the development of FA network, rearrangement of fishing gear types (fish traps), protection of breeding grounds, etc. All these activities have impacted on fisher's livelihoods and this has encouraged fishers to participate in fishery management meetings and activities. Among the target communes, more than 97% of respondents reported that household members participated in fishery management activities. Nearly 56% reported that they participated actively in meetings by sharing their opinion and comments related to fishery management. Meanwhile nearly 42% attended meetings because they were invited but did not share their opinions. Not surprisingly, About 60% of women were passive participants in the fishery management meetings compared to 29% for men. During the last six months 82% of surveyed households in the target communes had attended at least one fishery management meeting.

Table 14: Stakeholder participation in fishery management meetings

Target group	N	Actively participate (%)	Passively participate (%)	Not participate (%)	Participate in meetings on FM during last six months (%)
Target communes	**161**	**55.9**	**41.6**	**2.5**	**82.0**
- Male	93	69.9	29.0	1.1	88.2
- Female	68	36.8	58.8	4.4	73.5
Government staff	**21**	**76.2**	**23.8**	**0.0**	**-**

Surprisingly, among the interviewed government staff, about 24% of staff from the extension station and commune staff in charge of fisheries reported that they did not actively participate in meetings (Table 14).

1.6. Fishers perception of the state of fisheries resources

Fisher's perception of the state of fisheries resources during the last five years is illustrated in Table 15.

Table 15: Fisher's perception of the state of fisheries resources during the last five years

	Decrease (%)	Increase (%)	Stable (%)	No idea (%)
Productivity of fish	39.7	45.4	13.6	1.3
Diversity of fisheries resources	45.9	18.1	32.9	3.1
Lagoon and sea water **pollution**	19.2	48.5	21.7	10.6
Fishing capacity	11.8	77.0	6.2	5.0

Slightly more fishers (45%) perceived that fish production had increased in the last five years than those (40%) which perceived that fish production over the same period had declined. Most of respondents in Cau Hai Lagoon (Loc Tri commune and Phu Loc Town) perceived an improvement in fisheries resources, especially during the last two years (2009-2010). Most fish traps respondents had enjoyed improved fish production during the last two years while mobile fishing households had suffered from decreased production. The rearrangement of the fish traps and favorable weather conditions were reported as the main factors that had improved fish production in Cau Hai lagoon.

About 46% of respondents perceived a decrease in fish diversification because some fish which were previously common species are no longer being caught. The loss of some fish species was reported by respondents from all target communes.

More than 48% of respondents believed that the lagoon and sea environment was getting more polluted, while about 19% believed that there was an improvement in lagoon and sea water quality due to the decline in aquaculture area. Runoff from aquaculture and agriculture activities were blamed for the increased pollution of the lagoon.

Though the rearrangement of fish traps had reduced fishing trap capacity in Tam Giang, lagoon, 77% of respondents perceived a significant increase in fishing capacity. The increased capacity has resulted from improved fishing techniques and new fishing gears. The uncontrolled development of Chinese fyke nets was reported as the main factor which had created increased fishing capacity.

Table 16 shows respondent's predictions for the status of fisheries resources over the next five years. 31% and 22% of respondents believed there would be an increase in fish production and diversification respectively. Conversely the number of respondents who felt that fish production and diversification would decrease was approximately 26% and 32% respectively. Respondents felt that better management of fishing activities would make fishery resources better, but that this would be counteracted by increased fishing capacity which would put pressure on aquatic resources.

The majority of respondents (64.6%) predicted that the number of fishing gears and fishing capacity will increase in the next five years, if Chinese fyke nets (*Lu*) and electric fishing was not effectively controlled. Nearly 34% of respondents projected an increase in water pollution caused by aquaculture, and agriculture runoff and most importantly by the chemicals used for washing Chinese fine nets (*Lu*).

Table 16: Fishers and resource managers' perception of the state of fisheries resources over the next five years

	Decrease (%)	Increase (%)	Stable (%)	No idea (%)
Productivity of fish	26.1	31.1	9.9	32.9
Diversity of fisheries resources	31.7	21.7	25.5	21.1
Lagoon and sea water **pollution**	17.4	33.6	24.2	24.8
Fishing capacity	10.6	64.6	7.5	17.3

1.7. Areas for strengthening of fisheries resources management

Community organizations in general and fishery associations in particular play an important role in strengthening and development of fishery co-management. However, limited capacity of these organizations / associations has been one of the factors affecting the contribution of these organizations to fisheries resources management. Therefore, building capacity for the community-based organizations including providing them with management and planning skills is important to strengthen co-management.

During the last few years, co-management has been paid attention and proven to be successful in some places. However, so far there is no policy or measure to encourage and ensure the sustainable and long term involvement of local communities in fishery resources management. Most co-management activities were promoted through projects / programmes. What is needed to sustain the involvement of local people in resource management is a co-management policy at the grass roots level.

Co-management requires responsibilities and contribution of local people. To encourage people to do this, it is important to let them know the benefits they could have by participating in co-management. Therefore, measures for improving fishers' livelihoods and diversification must be considered when implementing co-management.

2. Safety at sea and vulnerability reduction

2.1. Availability of the safety at sea information and legal frameworks / guidance for safety at sea measures

Fishers receive instructions and guidelines on safety at sea through the Government Decrees, Ministry Circulars and Decisions. These legal documents provide guidelines for fishers to comply with safety at sea regulations and set up legal frame works for the government agencies to manage safety conditions of its boat fleet. Some of these documents include:

- Decree No. 66/2005/NĐ-CP dated 19 May 2005 by the Government on ensuring safety for fishers and fishing boats.

- Circular number 02/2007/TT-BTS dated 13 July 2007 by the Ministry of Fisheries on providing guidelines for implementation of Government Decree No. 66/2005/NĐ-CP dated 19 May 2005 on ensuring safety for fishers and fishing boats.

- Decree No 33/2010/NĐ-CP dated 31 March 2010 on management of capture fisheries activities of individuals and organizations at sea.

- Decision No. 494/ 2001/QĐ-BTS dated 15 June 2001 by the Minister of Fisheries on approval of the regulations for registration of fishing boats and fishers and inspection of fishing boats.

- Decision No. 77/2008/QĐ-BNN dated 30 June 2008 by the Minister of MARD on approval of the regulations for training and issuance of certificate for chief mechanic, captain ship, mechanics and staff of fishing boats.

For the above national level documents, no further guidelines, regulations or handouts were found from the province to the commune level that have been prepared specifically for small scale fishers.

2.2. Awareness of, perception and access to safety at sea information

In general fisher's awareness of safety at sea has improved. However, not every fisher knows about safety at sea information and regulations and many of them do not fully understand the available information / regulations. Over half of respondents in the target communes were not fully aware about safety at sea information and nearly one third of the respondents were not aware of safety at sea information at all. Unsurprising men are more aware than women of safety at sea regulations because most fishers are men. 28% of men and 6% of women surveyed were very aware of safety at sea information (Table 17).

Table 17: Stakeholder awareness of safety at sea information and regulations

Target group	N	Very aware (%)	Aware (%)	Not aware (%)
Target communes	**161**	**18.6**	**50.3**	**31.1**
- Male fisher	93	28.0	44.1	27.9
- Female fisher	68	5.9	58.8	35.3
Government staff	**15**	**13.3**	**40.0**	**46.7**
Control commune	**34**	**52.9**	**32.4**	**14.7**
- Male fisher	22	68.2	27.3	4.6
- Female fisher	12	25.0	41.7	33.3

Noticeable, of 15 interviewed government staff, seven people (46.7%) were unaware of safety at sea information. Many of those surveyed were commune staff, while some were district staff in charge of fisheries. The management of boat fleet and safety issues is handled by SDECAFIREP and not by district and commune authorities, which explains the low awareness of commune and district fisheries management staff on safety at sea regulations.

Generally, fishers found it easy to access safety at sea information. However, the information they access routinely was only on weather forecasts for disaster preparedness. For other sorts of information such as how to deal with, or avoid accidents and disaster, safety at sea

measures, safety at sea regulations, fishers and especially inshore and lagoon fishing households have inadequate access to information.

Overall 70% of respondents perceived their access to safety information as "easy". 75% of men responded that had easy access to safety information as compared to 65% of women (Table 18).

Table 18: Stakeholder perception on ease of access to safety at sea information

Target group	N	Easy (%)	Difficult (%)	No idea (%)
Target communes	**161**	**70.8**	**12.4**	**16.8**
- Male fisher	93	75.3	10.7	14.0
- Female fisher	68	64.7	14.7	20.6
Control commune	**34**	**88.3**	**2.9**	**8.8**
- Male fisher	22	100.0	0.0	0.0
- Female fisher	12	66.7	8.3	25.0

As mentioned above, fisher access to safety as sea information was mainly limited to weather information and disaster preparedness information only. There was a big gap in access of other information and regulations on safety at sea for both fishers and government staff, and especially of commune staff. Out of 15 interviewed staff in charge of fisheries management, one third of them reported difficulty in accessing information, while some commune staff had no idea about safety at sea information.

Short wave radio, TV and mobile phones are the most frequently communication channels used by fishers to access safety at sea information (weather forecasts). However, accessing information via these channels are only suitable for lagoon and inshore fishing households. In addition, fishers access information via the Coastal radio station, Coastal border post communication systems, Commune broadcasting systems and mobile phones and transceivers.

Radio, TV and mobile phones were both the most commonly used channels for accessing safety at sea information by fishers, and were also perceived by more than 70% of respondents as being the most useful communication channels (Table 19). About of half of respondents were satisfied the information provided through commune broadcasting systems on disaster preparedness while the majority of respondents had no idea about the Coastal border post communication systems (68.7%) and Coastal radio station (72.3%). The majority of respondents who were unaware of particular communication channels were women.

Table 19: Fishers' satisfaction with different communication channels for SAS information

Channel	N	Satisfied (%)	Not satisfied (%)	No idea (%)
Radio	195	74.9	1.5	23.6
Coastal radio station	195	21.5	6.2	72.3
Coastal border post communication systems	195	27.2	4.1	68.7
TV	195	70.8	6.7	22.5
Commune broadcasting systems	195	46.7	25.6	27.7
Personal communication (mobile)	195	70.2	10.3	19.5

While offshore fishing households have had some opportunities to access other information on safety as sea such as safety regulations, safety measures through trainings, meetings, organized by fishing cooperatives and the Sub-department of Capture Fisheries Resources Exploitation and Protection (SDECAFIREP), inshore and lagoon fishing households have had hardly any access to these types of information. The information was provided by SDECAFIREP orally by highlighting key articles of the degrees or circulars without any handout, or written guidelines. As the dissemination of safety at sea was done by provincial agencies to fishers, communes and districts lagoon and inshore fishers were not given the opportunities to learn about the information. That was why five out of 15 interviewed staff were dissatisfied with or had no idea about the information dissemination channels.

The improvement in national weather forecast systems has provided fishers with precise information on weather forecast information, so as a result TV, communication systems and radio were perceived as being very useful by 94.4% of fishers. Many fishing household avoided disasters by listening to storm warnings on mass media and specialized communication systems.

2.3. Compliance with safety at sea regulations

Safety regulations by laws: According government decrees, circulars and decisions, fishing boats must meet the following safety requirements:

- **Registration and inspection:** According to Articles 5 and 7 of the Decision No. 494/ 2001/QĐ-BTS dated 15 June 2001 by the Minister of Fisheries on approval of the regulations for registration of fishing boats and fishers and inspection of fishing boats, registration is compulsory for all types of fishing boats. For the boats with a capacity of greater than 20 HP, safety and technical inspections are required. The inspection is carried out before the boat is put in use and annually, periodically and randomly.

- **Trained mechanic and captain:** According article 6 of the Decree No 33/2010/NĐ-CP dated 31 March 2010 on management of capture fisheries activities of individuals and organizations at sea; and Article 4 of the Decision No. 77/2008/QĐ-BNN dated 30 June 2008 by the Minister of MARD on approval of regulations for training and issuance of certificates for chief mechanic, captain ship, mechanics and staff of fishing boats, the captain and chief mechanic of all fishing boats with a capacity of more than 20 HP must have a master's certificate and a chief mechanic certificate.

- **Safety and communication equipment:** According to circular No. 02/2007/TT-BTS dated 13 July 2007 by the Ministry of Fisheries on providing guidelines for implementation of Government Decree No. 66/2005/NĐ-CP dated 19 May 2005 on ensuring safety for fishers and fishing boats, every fishing boat must have at least a life vest, life buoy, and radio / VHF signal receiver. For the offshore fishing boats GPS equipment is also needed.

In short, according to government regulations, a fishing boat must be registered, equipped with a life vest, lifebuoy, and communication equipment (Radio). In addition, the chief mechanic and captain of fishing boats over 20 HP must be trained and the boat must be technically and safety inspected. These are the minimum safety requirements of fishing boats. Though the regulations are quite clear, not all fishers are aware of these regulations.

Regarding the awareness of basic safety equipment on the boat including life vest, life buoy and communication equipment (radio), only 52.8% of respondents were aware of all three items. The majority of respondents were unaware of the requirement for communication equipment, especially the inshore fishing households (49.3%) and lagoon fishing households (60.8%). The survey results showed significant differences between household groups. Offshore fishing households had a good understanding of basic safety requirements with about 90% of respondents being aware of the need for a life vest, lifebuoy and communication equipment. The inshore fishing groups also showed a high rate of respondents who were aware of the safety equipment. However lagoon fishing households showed poor awareness of these regulations. 41.4%, 50.0% and 60.8% of this group were unaware of the requirement for a life vest, life buoy and communication equipment respectively (Table 20).

Table 20: Level of fishers' awareness of basic safety equipment

Safe Items	Offshore HHs			Inshore HHs			Lagoon HHs		
	Very aware (%)	Aware (%)	Not aware (%)	Very aware (%)	Aware (%)	Not aware (%)	Very aware (%)	Aware (%)	Not aware (%)
Life vest	62.2	35.7	2.1	32.4	59.2	8.4	25.2	33.4	41.4
Life buoy	59	30.8	10.2	29.2	52.1	18.7	12.3	37.7	50
Communication devices	54.3	39.5	6.2	21.1	29.6	49.3	10.5	28.7	60.8

In terms of compliance with basic safety requirements, only 17.5% of surveyed households met all basic requirements. Of these, offshore fishing households had the highest compliance rate at 62.5%. Less than 2% of the lagoon fishing households complied with basic safety requirements. Of the three compulsory basic safety equipment items, life vests were the most complied with by the fishers with 35%, while 22.5% of fishing boats had communication devices (Table 21).

Table 21: Fisher's compliance with safety at sea regulations

	N	% HH comply with safety items	% HH comply with communication devices	% HH comply with certificate	% HH comply with SAS regulations
Target communes	160	35.0	22.5	25.0	17.5
- Offshore fishing HH	40	85.0	77.5	67.5	62.5
- Inshore fishing HH	63	28.6	4.8	12.7	3.2
- Lagoon fishing HH	57	7.0	3.5	8.8	1.8

The differences in awareness and compliance of basic safety equipment among different groups resulted from the difference in boat inspection and training. Because off-shore fishing is perceived as being more risky than other fishing methods, the inspection of offshore boats and safety conditions of off-shore fishing boats has been given higher priority by government institutions than inshore and lagoon fishing boats. Moreover, more off-shore fishers have attended SAS training than inshore and lagoon fishers. Finally, most off-shore fishers are able to afford to buy the compulsory safety items, while lagoon and inshore fishers often cannot.

As said above, boat registration is compulsory for all boat types. Commune staff in charge of fisheries management reported that 100% of the boats in the target communes have been registered. However, commune authority and provincial agencies in charge of fishing boat management are unable to manage all the boats in their area, and smaller boats are often unregistered.

According to SDECAFIREP data, in December 2010, 1,971 boats were registered in Thua Thien Hue province. This figure was based on the number of registered boats, but there was no reasonable estimate of the number of unregistered boats. The percentage of unregistered boats is uncertain. Of the registered boat in the province, there were 673 boats of 20 HP and above. These boats must be inspected annually according the Decision No. 494/ 2001/QĐ-BTS dated 15 June 2001. However, in 2010, only about 76% of boats above 20 HP were inspected. For the entire boat fleet, the inspection rate was only 26.6% (Table 22).

Table 22: Boat registration and inspection in the province

No	Boat by capacity	No of boat registered	Boat inspection	
			Number	%
1	< 20 HP	1,298	12	
2	20-<50 HP	335	239	
3	50-<90 HP	139	97	
4	90-<250 HP	196	174	
5	250-<400 HP	3	3	
Sub total >20 HP		**673**	**513**	**76.2**
Total		**1,971**	**525**	**26.6**

(Source: SDECAFIREP, 2010c)

Secondary data analysis gave different results. Among 160 surveyed boats, 85% have been registered and only about one quarter were inspected in 2009 or 2010. Most of the unregistered boats have small engine capacity or are non-mechanized. 10% and 26% of boats between 20-50 HP and boats below 20 HP were found to be unregistered. Of the 96 boats above 20 HP, 35.8% were inspected, while the smaller capacity boats (less than 20 HP) had lower rates of inspection (Table 23).

Table 23: Boat registration and inspection in the surveyed target communes

No	Boat by capacity	No of boat	Boat registration		Boat inspection	
			Number	%	Number	%
1	< 20 HP	65	48	73.9	5	7.7
2	20-<50 HP	59	53	89.8	16	27.1
3	50-<90 HP	2	2	100.0	1	50.0
4	90-<250 HP	30	29	96.7	14	46.7
5	250-<400 HP	4	4	100.0	3	75.0
Sub-total >20 HP		**95**	**88**	**92.63**	**34**	**35.8**
Total		**160**	**136**	**85**	**39**	**24.4**

2.4. Fishing accident and effectiveness of rescue systems:

Fishers stated that during the last few years the number and severity of fishing accidents had been reduced. This was because fishers had better access to safety and disaster preparedness information than before. In addition, fishers were more risk averse than a few years ago. However, in some circumstances, under economic pressure, some fishers went to sea even when they had been warned of approaching storms.

The fishing accident records for the last three years (2008-2010) were actually the reverse of the perception of fishers. Tables 24 and 25 summarize the numbers and types of fishing accident in the province over the last three years.

Table 24: Number of fishing accidents during the last three years in the province

Type of accident	No of accident	No of death	No of missing people	No of injured	No. damaged boat	No of lost / sunk boat
2008	2	1		1	2	
2009	4	3				
2010	8	5	2	2	1	6
Total	**14**	**9**	**2**	**3**	**3**	**6**

(Source: SDECAFIREP, 2010b)

Table 25: Types of fishing accidents during the last three years in the province

Cause of accident	2008	2009	2010
Collision			3 (offshore)
Fire		1 (offshore)	
Typhoon / flood / strong wave	1 (lagoon)	83 (1 offshore)	4 (1 offshore)
Technical / operational procedures	1 (offshore)		1 (offshore)

(Source: SDECAFIREP, 2010b)

From 2008 to 2010, there were 14 reported fishing accidents that caused nine deaths, two missing, three injured people and three damaged and six lost / sunk boats. In addition more than 80 boats suffered minor typhoon in 2009. These accidents and typhoons have caused significant monetary losses to fishers.

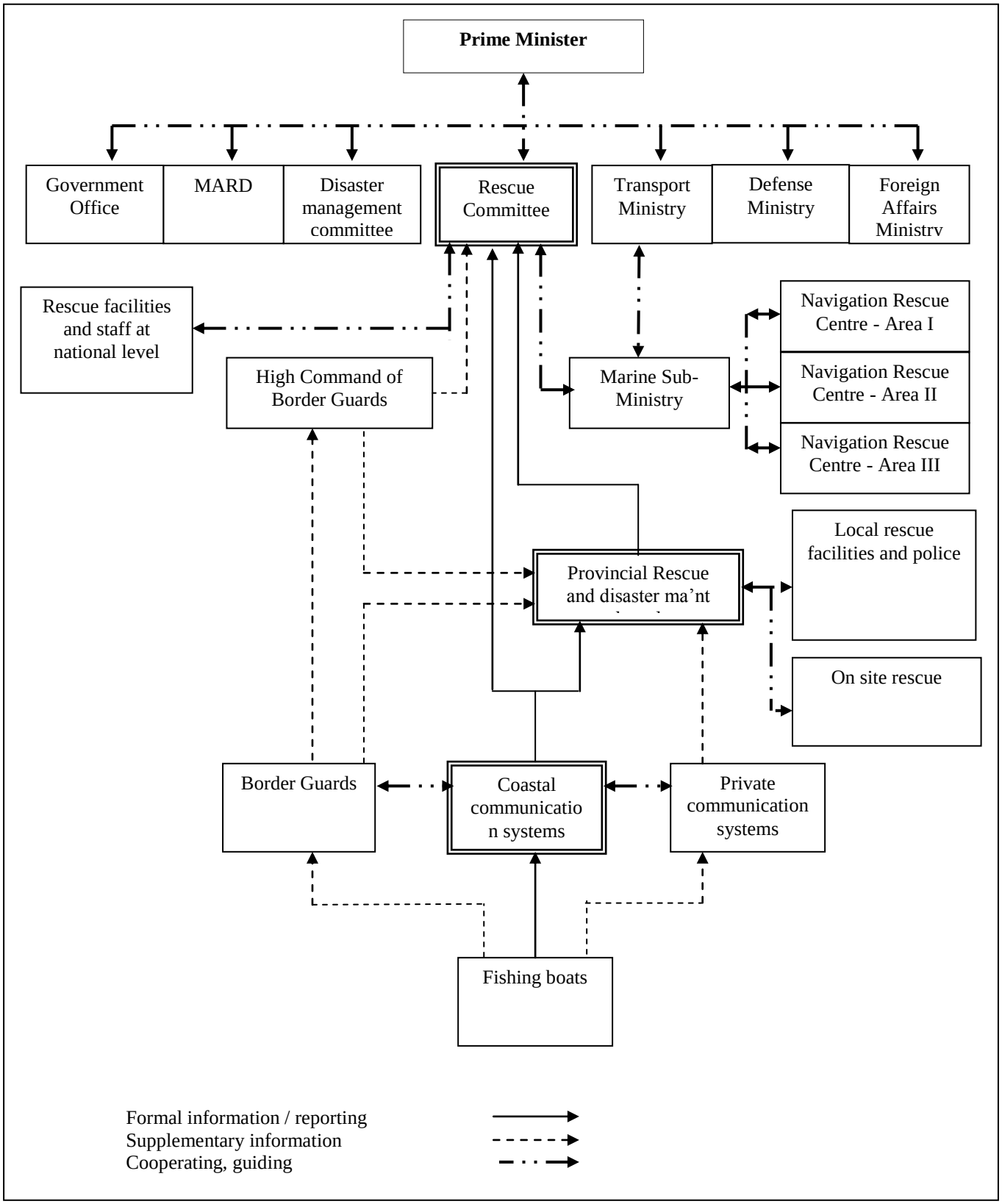
Typhoons have been the main cause of most accidents. Carelessness of crew has also led to serious accidents. In many cases, crew members have fallen overboard because of large waves or have fallen overboard at night. Some accidents were caused by improper use and / or breakdown of equipment e.g. failure to close water valves properly. In late 2010, there was a very serious accident which caused three deaths and one missing. The accident happened when the fishers went to sea during the bad weather (typhoon) even though they were well aware of the unfavorable conditions.

The organization of rescue activities is regulated under the Decision No. 137/2007/QĐ-TTg dated 21 August 2007 by the Prime Minister. This is illustrated in Box 2 which shows the many stakeholders involved in the process from the central level to the grass roots level. The relationships between stakeholders are clearly defined. However, in fact, this system only works in cases of very severe accidents. In other cases, the cooperation among the fishers in the same *"Van"* or Fishing Cooperative has been the best way for the fishers to deal with and overcome accidents. Fishers only seek support from government agencies to rescue sunk boats or to search missing and presumed dead crew. In most cases, if accidents have occurred, the first contact made by fishers was with their group members.

The survey results showed that more than half the respondents had no idea about the effectiveness of rescue activities. They were among those who never experienced any fishing accidents. Meanwhile, more than 34% rated rescue activities as "effective" and very effective" and most of them rated them so because of the effectiveness of the rescue services provided by their fishing team rather than the government rescue system (Table 26).

Table 26: Fisher's perception of rescue services effectiveness

Type of HH	N	Very effective (%)	Effective (%)	Ineffective (%)	No idea (%)
Target communes	**161**	**23.6**	**10.6**	**10.6**	**55.2**
- Offshore fishing HH	40	47.5	12.5	10.0	30.0
- Inshore fishing HH	63	14.3	7.9	9.5	68.3
- Lagoon fishing HH	58	17.2	12.1	12.1	58.6
Control commune	**34**	**67.7**	**17.7**	**2.9**	**11.7**



Box 2: Rescue organization and system
(Source: Government of Vietnam, 2007)

2.5. Fisher's knowledge and confidence in rescue practices at sea

Fishers believe that their skills and knowledge for dealing with fishing accidents is very important to prevent them from accidents and injury. However, the majority of fishers surveyed (70.2%) have never attended any training on avoiding and dealing with accidents. Again there was a big difference in participation in training between fishing type groups. While more than 55% of offshore fishers had received training on avoiding and dealing with accidents, only 15.5% of lagoon fishing households had done so (Table 27). Offshore fishers are prioritized for this type of training because of the high risks compared to other fisher groups. Offshore fishers of necessity have to be more concerned about safety rescue issues.

Table 27: Fisher's participation in training on avoiding accident

Type of HH	N	Yes (%)	No (%)
Target communes	**161**	**29.8**	**70.2**
- Offshore fishing HH	40	55.0	45.0
- Inshore fishing HH	63	27.0	73.0
- Lagoon fishing HH	58	15.5	84.5

Even though many fishers did not attend any training and there were no guidelines on avoiding accidents, because of their extensive fishing experience and knowledge handed down from generation to generation, about 68% of surveyed fishers believed that they were confident to deal with accidents based on skills they had learned and their experiences. It is not surprising that offshore households were again more confident than other fishing households, and men were more confident than women in dealing with fishing accidents (Table 28).

Table 28: Fisher's confidence in avoiding accident at sea

Type of HH	N	Very confident (%)	Confident (%)	Not confident (%)
Target communes	**161**	**16.8**	**50.9**	**32.3**
- Offshore fishing HH	40	42.5	52.5	5.0
- Inshore fishing HH	63	9.5	44.4	46.1
- Lagoon fishing HH	58	6.9	56.9	36.2
- Female	68	0.0	51.5	48.5
- Male	93	29.1	50.5	20.4
Control commune	**34**	**35.3**	**55.9**	**8.8**

3. Post harvest and marketing

3.1. An overview of post harvest and marketing in Thua Thien Hue

Thua Thien Hue has favorable conditions for the development of a fish processing industry with rich sources of raw materials and good transportation systems. However, the fish processing industry and marketing are very much less developed than its potential. The poor development of post harvest and marketing has been a major factor in constraining export of fish products. Over the five year period from 2005 to 2009, the export production of fish accounted for only 3% of total production (Figure 3).

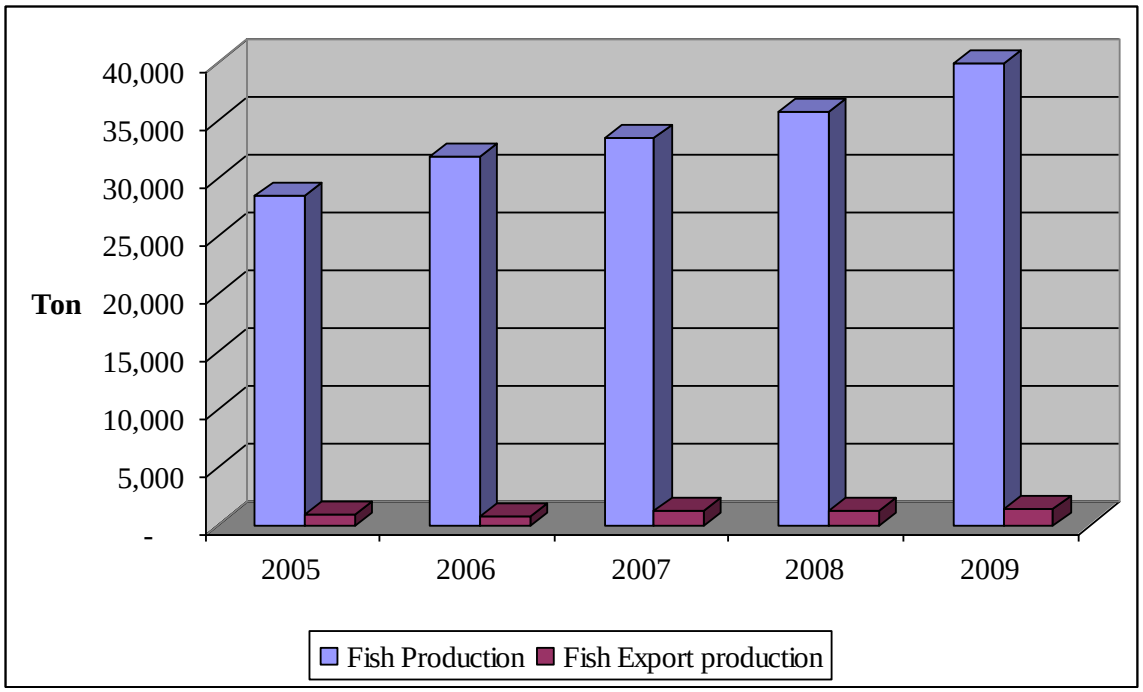


Figure 3: Fish export production in Thua Thien Hue 2005-2009
(Source: SRDAFIQA, 2010 and TTH Statistics Book, 2010)

Most fish production in the province is consumed locally and nationally. Aquatic products used to be one of the key economic sectors contributing to provincial economic development. The total export value of fisheries from Thua Thien Hue province however reached a plateau of just under US$ six million dollars per year in 2006 and has not increased since, while the total export value of other sectors in the province has increased (Figure 4).

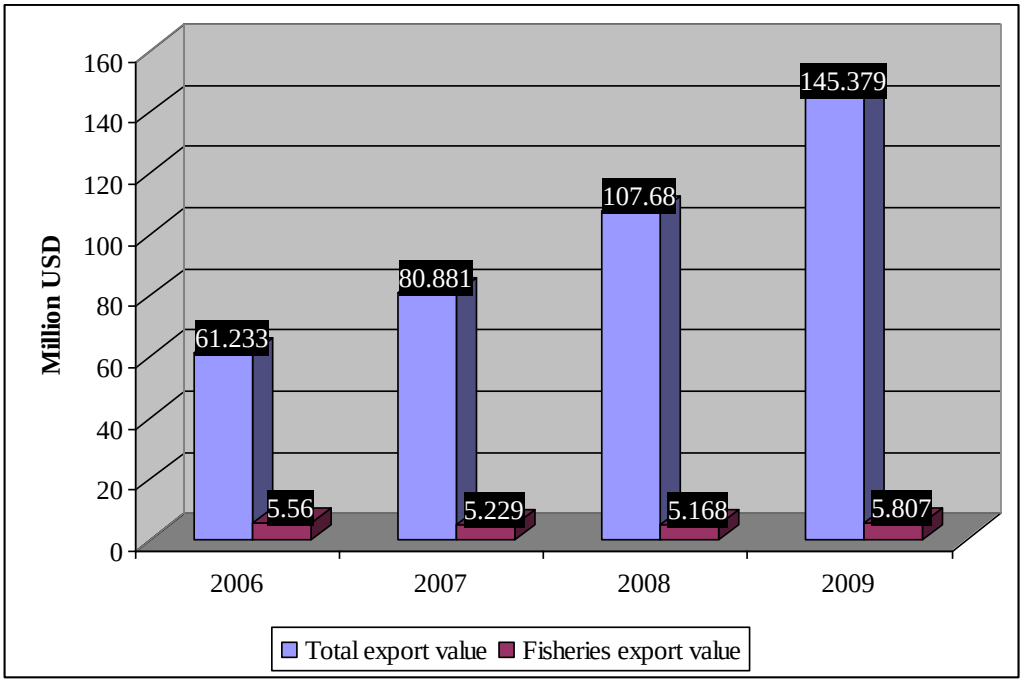


Figure 4: Fisheries export value from Thua Thien Hue province between 2006-2009
(Source: SRDAFIQA, 2010)

At present, there are four fish processing companies. Their main export products are frozen prawn, fish and squid products (sushi). However, only one of these four companies is maintaining stable production. Annually, these companies process about 5,800 tons of fish. However, about 80% of the raw material used by these companies comes from other provinces and 10% is imported from other countries (SRDAFIQA, 2010). Therefore, fishers in Thua Thien Hue province are facing unstable markets that has resulted in fisher's receiving lower prices for their products than they should do.

In addition to the above four processing companies, there are hundreds of small and very small scale processing enterprises and households. The main products of these enterprises / households are fish sauce, different types of salted fish / shrimp *(Mắm)* including some local specialties. Most processed production is consumed locally, while very small volumes are exported.

Due to lack of investment in improved techniques and equipment, the processed products produced are not of high quality and value, and only 16 trademarks have been approved (Table 29). Most trademarks issued have been for fish sauces. Among the target communes, fish sauce trademarks have been issued for Phu Thuan Fish Sauce and Phong Hai Fish Sauce. Among the hundreds of small and very small processing enterprises and households, very few enterprises meet the requirements and standards for getting an approved trademark. In the target communes only about 10 enterprises in Phu Thuan and Phong Hai communes have qualified to have the trademarks on their products.

Table 29: Number of fisheries products with an approved trademark

Fisheries products	No of trademarks issued		No. of enterprises issued with trademarks	
	Total	In target districts	Total	Target districts
Fish sauce and *Mắm*	13	6	-	10
Dried and frozen products	3	0	3	0
Total	16	6	-	10

(Source: TTH-DST, 2010).

3.2. Management of fisheries product quality and value in the province

The management of fisheries product quality is carried out by the Division of Agro-Forestry-Fisheries Quality Assurance based on national standards. Some of regulations are:

- National Technical Regulations No QHPN 02-05 / 2009/BNNPTNT for dried fish processing establishment.

- Decision No. 117/2008/QĐ-dated 11 December 2008 by the Minister of MARD on promulgating regulations on inspection and certifying of food safety and hygiene conditions of fisheries businesses and processing enterprises / households.

- Decision No. 118/2008/QĐ-dated 11 December 2008 by the Minister of MARD on promulgating regulations on inspection and certifying the quality and hygiene conditions of fisheries products.

In fact, the implementation of some of these regulations has not been done completely. For example, the national technical regulations National Technical Regulations for dried fish processing establishment have been too general to turn into practice. Moreover, some of the requirements are too high for the very small scale production households in Thua Thien Hue province to apply.

Regarding the issuance of certificates on food safety and hygiene conditions, there are overlaps in implementation of this between the Division of Agro-Forestry-Fisheries Quality Assurance (DARD) and the Heath Department. The procedures and standards for the issuance of certificates applied by two agencies are completely different. The overlap in function has resulted in inconsistence in management of fisheries product quality. By 2009, while one hundred percent of fish processing units had been issued with certification on food safety and hygiene as reported by the Sub-department of Food Safety (Health Department), only 11 out of 330 fish processing enterprises were certified by DARD (Table 30).

Table 30: Number of fish trading and fish processing units inspected and certified

Fish vendors			Fish processing					
			Dried products			Fish sauce and salted fish		
No of units	Inspected	Certified	No of units	Inspected	Certified	No of units	Inspected	Certified
150	6	5	15	1	0	330	12	11

(Source: SRDAFIQA, 2009b)

Among different fisheries products, the management of aquaculture shrimp products (i.e. excess levels of chemicals) has been most effective because it is easier to define the pond owners than fishers and it is easier to manage shrimp production and crop season than it is capture fisheries.

3.3. Policies and institutions related to fisheries post harvest

During the last ten years, the Government have promulgated many polices on rural vocational development including fisheries processing industry. Of these, the following policies have had most impact on fisheries processing:

- Decision No. 253/2003/QĐ-TTg dated 25 November 2003 by the Prime Minister on approval of proposal on establishment and development of National Trademarks up to 2010. Under this decision, the enterprises that have products qualified for national trade name are financially, administratively and technically supported by the government to register trademark, marketing and be provided with market information.

- Inter-circular No. 36/2005/TTLT-BTC-BCN dated 16 May 2005 between the Finance Ministry and the Industry Ministry on giving instructions on management and use of Government budget for industrial promotion activities.

- Decision No. 132/2000/QĐ-TTg dated 24 November 2000 by the Prime Minister on some policies for encouraging rural occupations. Under this decision, special polices on land use, tax, credit and development of raw materials are applied for development of rural occupations.

Among the above polices, industrial promotion has been implemented more effectively. Most of fisheries trade names and marketing in the provinces have gained the support of industrial extension services. This fund has helped fishers to have the opportunity to introduce their products in national and international trade fairs. However, the fund for fisheries processing and marketing was very low and much under demand. For example Phu Loc district was allocated around VND 150 million [10] per year only for industrial promotion activities however the promotion of forestry and agricultural products were given higher priority than fisheries products.

Meanwhile, there have been some limitations in implementation of other policies, especially in fisheries processing. In many cases the policies on land use / lease / allocation were not fully implemented because there were insufficient land resources available in communes for fisheries processing enterprises. In addition, the policies on credit were not always implemented fully by financial institutions (Table 31).

Table 31: Government staff perception on implementation of post harvest fisheries policies

N	Fully implemented	Almost implemented	Partly implemented	Not implemented
16	1	4	7	4

The management and promotion of post harvest and marketing of fisheries are handled by the following agencies from province to commune level:

At provincial level: Divisions in charge of Processing and Rural Occupation and Division of Agro-Forestry-Fisheries Quality Assurance (Sub-department of Rural Development and Agro-Forestry-Fisheries Quality Assurance, DARD).

At district level: Department of Commerce and Industry.

At commune level: Staff in charge of fisheries and or Vice chairperson in charge of economics.

In general the staff in charge of fisheries post-harvest are weak in terms of quantity and quality. At province level (Division of Agro-Forestry-Fisheries Quality Assurance in particular), only a few staff in charge of fisheries quality assurance have had fish processing training. None of them were trained in marketing. In the target districts and communes, none of the staff in charge had any academic training or background in fisheries post harvest or marketing. In addition, most of the district and commune staff have been assigned other tasks that are prioritized before the important their fisheries management tasks. Therefore, post harvest fisheries has been paid inadequate attention. This fact explains why among 12 interviewed staff, nine (commune and district staff) reported that they were not confident to give instructions on post harvest polices or techniques (Table 32).

[10] 1 USD = 21,000 VND as of April 2011.

Table 32: Degree of confidence of officers working on post harvest fisheries in performing post harvest techniques , giving instructions on post harvest polices

N	Very confident	Confident	Not confident
12	1	2	9

In addition to above Government management agencies, other organizations such as mass people's organizations, the extension station, the CPC, and FAs all also have some involvement in post harvest fisheries.

Despite the involvement of many agencies in post-harvest fisheries, most respondents (more than 90%) had no idea about their degree of satisfaction with all involved institutions (Table 33). This reflects that the majority of fishers and processor have not had any contact with institutions involved in post-harvest. Fishers were most satisfied with the contribution of FAs to post-harvest, however the respondent rate for this was low at only 8.1%. 4.4% of fishers were dissatisfied with the contribution of FAs to post-harvest.

Table 33: Fisher and processor satisfaction with the support from fisheries post harvest institutions

Institution	Satisfied (%)	Not satisfied (%)	No idea (%)
Sub-department of rural development and quality control	6.9	0.6	92.5
District industry department	1.2	0.0	98.8
District DARD	1.2	0.0	98.8
Extension station	1.2	0.0	98.8
FA	8.1	4.4	87.5
CPC	3.1	1.3	95.6
Mass organization	1.9	0.6	97.5

3.4. Fishers skills, knowledge and practices in post-harvest:

Fishers maintain fish quality and processed fish quality by using ice, chemicals, salt, drying and grilling. Fisher's post-harvest knowledge and skill levels were highly variable. Nearly 87% of respondents rated themselves as either skillful or very skillful in using ice to maintain fish quality, while the same number of surveyed fishers rated themselves as unskilled in using chemicals to maintain fish quality. The number of surveyed households which dry or grill was surprisingly low, but of these 62.7% and 49.4% (Table 34) rated themselves as very skillful or skillful for drying and grilling respectively.

Table 34: Fisher's skills and knowledge on post-harvest

Post harvest measures	Very skillful (%)	Skillful (%)	Do not know (%)
Ice	49.4	37.3	13.3
Using chemicals	1.2	13.3	85.5
Using salt	21.7	39.2	39.2
Dry	18.1	44.6	37.3
Grill	13.3	36.1	50.6

Notably, nearly three quarters (72.3%) of respondents reported that they had not attended any post-harvest training during the last three years. Among the surveyed lagoon fishing households, more than 86% had never had any post-harvest training. This was because they normally immediately sell their fish fresh upon landing it. Among the surveyed households, those households engaged in fishing processing had had more chance to join post-harvest training. Nearly 80% of processing households had participated in training on food hygiene and safety. In addition, the medium fish processing enterprises had also had training on other processing techniques. Table 35 shows the differences in participation in post harvest training among different household groups.

Table 35: Fisher's participation in post-harvest training in the last three years

Type of HH	N	Yes (%)	No (%)
Target communes	**161**	**27.7**	**72.3**
- Offshore fishing HH	40	25.6	74.4
- Inshore fishing HH	63	38.0	62.0
- Lagoon fishing HH	58	13.6	86.4
Fish processing HH[11]	19	79.4	21.6

3.5. Fishers' post - harvest equipment

Ice and insulated boxes (*Thùng xốp*) were most commonly used for post-harvest. The percentages of respondents using these were 25.3% and 60.2% respectively. Ice storage was mainly used by offshore fishing households. Insulated boxes were commonly used by almost all households, but especially the inshore and lagoon fishing households. In addition freezers, fridges, and ovens were also used during post-harvest, but by very few fishers (Table 36). Most fishers sell their products as soon as they land so fridges, cooling and freezing are unnecessary.

[11] Including 13 household interviewees and 6 individual interviewees.

Table 36: Post-harvest methods

Post-harvest methods	Type of HH	Used (%)	Not used (%)
Ice storage	Total	25.3	74.7
	- Offshore HH	41.0	59.0
	- Others	5.5	94.5
Insulating box	Total	60.2	39.8
	- Offshore HH	53.8	46.2
	- Others	72.2	27.8

3.6. Fisheries market

In general there is almost no value added in any of the value chains for aquatic products in Thua Thien Hue province. Fishers have very little opportunity to add value to their catch. Fish, prawn, crab, green crab and squid are the main capture fisheries products and fishers have very little choice in how they sell these products. More than 90% of fish caught is sold directly to middle traders. Almost all green crab caught is sold directly to middle traders. Though there were a considerable number of processors in the communes, most processors use their own captured product as raw material. Fishers sell only 1.5% of their fish and almost none of their other products to processors. Limited quantities of fish, prawn and crab caught are sold by fisher's wives in local markets (Table 37).

Table 37: Immediate buyers of fisheries products (% production)

Product	Fish processing factories	Middle traders	Local fish processor	Local market	Other
Prawn	1.9	87.6	0.2	8.6	1.7
Crab	0.0	91.2	0.4	8.1	0.4
Green crab (Ghẹ)	0.0	97.8	0.0	1.7	0.5
Fish	0.0	87.1	1.5	10.5	0.9
Squid	3.2	96.8	0.0	0.0	0.0
Dried squid	100.0	0.0	0.0	0.0	0.0

The dependence of fishers on vendors / middlemen is clearly showed in Table 38. For all types of raw products including prawn, crab, fish and squid, more or less 60% of respondents reported that the vendors, not fishers who decided the price of fish in the market. Of these, prawn products heavily relied on middletraders with more than 46% of respondents having "very high dependence" and over 26% rated as "high dependence". Due to the lack of post harvest facilities and processing, almost all captured fish was immediately on being landed.

Table 38: Degree of the dependence of fishers and fish processors on middletraders

Product	N	Very high (%)	High (%)	Not at all (%)	No idea (%)
Prawn	130	46.2	26.2	15.1	12.5
Crab	89	21.3	39.4	13.5	25.8
Green crab	119	24.2	41.0	14.3	20.5
Fish	150	16.0	41.3	38.0	4.7
Squid	108	32.1	30.6	12.0	25.3
Dried squid	82	1.2	6.1	3.7	89.0
Dried fish	82	1.2	4.9	4.9	89.0
Grilled fish	81	0.0	7.4	2.5	90.1

In many cases, fishers had no idea where their products went after they sold it to the middletraders. In the other cases fishers were not sure of the final consumers of their products but most of them believed that their products were consumed locally in the province (Table 39).

Table 39: Fisher's perception of the market type of their fisheries products

Product	Provincial market (%)	National market (%)	International market (%)	No idea (%)
Prawn	59.7	14.1	0.2	26.0
Crab	30.5	11.2	0.0	58.3
Green crab	56.5	3.1	0.0	40.4
Fish	71.6	0.8	0.1	27.5
Squid	66.5	0.0	0.0	33.5

4. Livelihood diversification and enhancement

4.1. Livelihoods activities and the engagement of men and women in livelihoods activities

In fishing households, men were the main income earners. In many cases they were the only person in the household earning cash income. Besides fishing, household members were also engaged in other livelihoods activities including fish processing, fisheries services, vendors, etc. Unlike agricultural communities where men may do other jobs during the off-season, male fishers do only fish, even when fishing can only be done part of the year.

There are significant differences in the workloads of men and women in the fisher households of different fishing groups. In marine fishing households, only the men fish, while in lagoon fishing households, both men and women fish. While most women of offshore fishing households are more likely not to work outside the home, women from inshore fishing households are more likely to also sell fish or do other income generation activities such as services, vendors, and fish processing, in addition to managing housework and the home. Women from lagoon fishing households work much harder than men. They do daily fishing with their men for about 12 hours, then they bring products to market, and additionally do housework. In the afternoon they also help the husbands to repair broken fishing gear.

Women from lagoon fishing households have very little time free time for relaxation or entertainment.

In the marine fishing households, like the women, most children (juveniles) were not engaged in any income generation activities, while some children from lagoon fishing households fish with their parents. The livelihoods in fishing communities are changing. Fishing is not the choice of many young people. The lagoon and inshore fishers in particular do not want their children to be fishers. Many young people are moving to big cities to earn money.

Culturally, men dominate in making social and family decisions in fishing households. However, the gender inequity was not perceived as being as bad as in previous generations. Nowadays, men and women discuss things before making decisions, though men still make the final decisions in most cases.

4.2. Income and livelihood diversification

Table 40 shows the household income of surveyed target communes. In general, there were a wide range of incomes between members within communities and between different household groups. The average income of households in the target communes was quite high income at more than VND 62 million per household per year. The average income from fishing activities was VND 51.66 million per year, while the average reported income of fish processing activities was about VND 24 million per year. However, there were very large differences in income among the surveyed households, with annual income ranging from VND 5.5 million to 530 million per household.

Table 40: Fisher' household incomes in 2009

	Indicator	Average income per HH	Average income per capita (per person)	Average income from fishing	Average income from fish processing	Average income from other activities
Target communes	**N**	**161**	**161**	**154**	**16**	**80**
	Mean	62,824,596	11,985,909	51,666,883	23,906,250	22,194,500
	SD	81,721,294	17,593,356	73,248,266	34,909,511	35,333,761
	Median	36,000,000	5,142,857	25,000,000	16,500,000	10,000,000
	Min	5,500,000	785,714	3,600,000	500,000	500,000
	Max	530,000,000	106,000,000	400,000,000	150,000,000	230,000,000
- Offshore fishing HH	**N**	**40**	**40**	**40**	**10**	**19**
	Mean	117,696,250	24,724,991	104,000,000	16,100,000	20,360,526
	SD	120,024,020	28,364,796	105,689,434	10,754,327	51,043,376
	Median	66,000,000	12,416,667	55,000,000	16,500,000	10,000,000
	Min	7,900,000	1,128,571	4,000,000	3,000,000	500,000
	Max	530,000,000	106,000,000	400,000,000	40,000,000	230,000,000
- Other HH	**N**	**121**	**121**	**114**	**6**	**61**
	Mean	44,685,207	7,774,643	33,304,386	36,916,667	22,765,738
	SD	53,732,739	8,901,782	45,822,216	55,882,391	29,339,397
	Median	26,100,000	4,714,286	20,000,000	17,500,000	10,000,000
	Min	5,500,000	785,714	3,600,000	500,000	2,250,000
	Max	360,000,000	51,428,571	360,000,000	150,000,000	150,000,000

While offshore fishing households enjoyed very high incomes, inshore fishing households that did not have other sources of income were the poorest surveyed groups.

There was a big gap in income between offshore fishing households and others. On average offshore fishing households earned about VND 118 million per year, or three times as much as other households. However, again the income differences among households in the same group were significant.

There were very low levels of livelihood diversification in fishing communities. Unlike agricultural communities where many households may have four or five income sources, 46% of surveyed fishing households relied on only one income source, which was fishing. However, fishing cannot be done year around as fishers cannot go to sea during typhoons which occur quite often in Thua Thien Hue province. Only 44.1% of fishing households had two income sources and in most cases, the second income source was a young household member working in a city. Less than 10% of respondent households had more than two sources of income, and most of these had only three livelihood options and processing households made up a large proportion of this group. Table 41 shows the level of diversities of fisher's household income sources.

Table 41: Number of major HH livelihoods

	Number of HHs	**%**
Number of surveyed HHs	**161**	**100.0**
- HH having only one major income source (fishing)	74	46.0
- HH having two major income sources from two livelihoods	71	44.1
- HH having more than two major income sources (more than two livelihoods)	16	9.9

While men in agricultural communities often do supplementary jobs during the off-season most male fishers did not do any job other than fishing, even though they had plenty of free time. It was also agreed that male fishers are not as good at agricultural jobs that requires skills. In addition, fishing communities have strong sense of "community" and the relationships among community members are very close. Resettled sampan communities are considered outsiders to other fishing communities which may make it difficult for them to find new opportunities to improve their livelihoods, even in finding temporary off-season work.

It is also surprising that though there were a considerable number of females (especially those who come from inshore fishing households) who only did household work, very few did any paid jobs or income generation activities.

The lack of livelihood diversification makes the economics of fisher households extremely insecure. That was why some fishers who have no other income streams risked their lives to go fishing even when warned that extreme weather was imminent, as their family was entirely dependent on fishing.

4.3 Fisher's perception on, satisfaction with, and attitude toward livelihoods

Almost half of fishers thought that livelihoods opportunities had improved during the last five years. However, different household groups and genders perceived this differently. While more than half of men felt an improvement in their livelihoods, only about 35% of women thought so, and more than one third of women thought their livelihoods were "worse" than five years ago. Men were more satisfied with their current livelihood(s) than women as they perceived an improvement in livelihoods within the community in general, while women from fishing households hardly had any opportunity for other income generation activities. Between the household groups, more offshore fishing households felt their livelihoods had improved than any other groups. Fewer lagoon and inshore fishing households (Table 42) felt their livelihoods had improved and this was probably because of the decline of fisheries resources in the lagoon and in inshore areas respectively.

Table 42: Fisher perception on livelihood opportunities compared to five years ago

	N	Better (%)	No change (%)	Worse (%)	No idea (%)
Target communes	161	49.1	18.0	31.1	1.8
- Female	68	35.3	22.1	38.2	4.4
- Male	93	59.1	15.1	25.8	0.0
- Offshore fishing HH	40	57.5	12.5	30.0	0.0
- Inshore fishing HH	63	39.7	17.5	38.1	4.7
- Lagoon fishing HH	58	53.5	22.4	24.1	0.0
Control commune	34	14.7	17.7	67.6	0.00

Despite the fact that a significant number of respondents thought that livelihoods had improved in the last five years, nearly half (46.6%) of respondents were dissatisfied with their current livelihoods. Again there were clear differences between men and women. It is no surprise that more women were unhappy with their livelihoods as the majority of women in fishing communities stay at home doing housework and no productive work. Of the three household groups, more than 67% of offshore fishing households were "satisfied" with their livelihoods, while about 40% of inshore fishing households and lagoon fishing households were dissatisfied with their current livelihoods (Table 43), which was probably due to declining aquatic resources and reduced fishing ground area.

Table 43: Fisher community satisfaction with their current livelihoods

	N	Satisfied (%)	Not satisfied (%)	No idea (%)
Target communes	161	47.8	46.6	5.6
- Female	68	47.1	44.1	8.8
- Male	93	65.6	31.2	3.2
- Offshore fishing HH	40	67.5	27.5	5.0
- Inshore fishing HH	63	58.7	38.1	3.2
- Lagoon fishing HH	58	50.0	41.4	8.6
Control commune	34	38.2	61.8	0.0

Of the 50% plus of lagoon and inshore fishing households who were satisfied with their livelihoods, many of them stated they "must-be-satisfied" because fishing was their traditional livelihood and they had no other livelihood improvement options other than fishing.

Because of their dissatisfaction with their current livelihood, 83.9% of fishing households would like to change or diversify their livelihoods. Over 92% of inshore fishing households would like to change their livelihoods because there has been a significant reduction in fish catches from inshore areas, while because of improved fishing techniques lagoon and offshore catches have improved significantly. Of the fishing household that processed fish, only one third would like to change their livelihoods (Table 44).

Table 44: Fisher's attitude toward changing or diversifying livelihoods

	N	Intended to change %)	Not-intended to change (%)	No idea (%)
Target communes	**161**	**83.9**	**14.3**	**1.8**
- Female	68	80.9	16.2	2.9
- Male	93	86.0	12.9	1.1
- Offshore fishing HH	40	80.0	20.0	0.0
- Inshore fishing HH	63	92.1	6.3	1.6
- Lagoon fishing HH	45	82.2	13.3	4.5
- HH having processing	19	33.3	66.7	0.0
Other HH	13	70.0	30.0	0.0
Control commune	**34**	**97.1**	**2.9**	**0.0**

4.4 Factors affecting livelihood change:

There are different factors that can constrain or help fisher households to change their livelihoods.

During the last few years many opportunities have been promoted to enable fishers to change their livelihoods. Aware of declining fish resources the Provincial Government has enacted policies to reduce fishing capacity by giving fishers opportunities to change their livelihood. The provincial programme to re-arrange the fish traps in Tam Giang Lagoon was one of those polices. In addition, like in other communities teenagers in fishing communities have been offered government supported vocational training to help them diversify the livelihoods of their family.

Secondly, fishing communities are rich in human resources and have many young labourers, many of whom are un- or under-employed. These conditions can promote livelihood diversification.

In addition, the rapid decline in fishery resources is threatening the income of inshore and lagoon fishing households. This in turn is forcing fishers to change their livelihoods.

Despite the interest of fisher's to diversity their livelihoods and clear opportunities, advantages and motivation for changing livelihoods, fishers have found it difficult to adopt and improve their livelihoods. The first factor that hinders fishers from diversifying their

livelihoods is their lack of awareness and willingness. Fishers are reluctant to change their current livelihoods as it is very familiar to them. In addition few fishers have made a real effort to search for new livelihoods opportunities. Low levels of education and skills are the second factor that constrains fishers' from livelihood improvement. Many fishers including both men and women are illiterate or cannot read and write well. Moreover other than fishing, most fishers have very few other skills as they have only fished since they were young. Therefore, it is virtually impossible for middle aged and older fishers to change their livelihoods because they had no skills and insufficient knowledge to do any jobs other than fishing. The lack of land was also reported as another constraining factor which constraints fishers from changing their livelihood. Many of the lagoon and inshore fishers are boat or 'sampan' people who were resettled in the last 10 to 15 years. When they were resettled their land allocation was only sufficient on which to erect a house and almost none of them have arable land for cultivation or livestock rearing. The last but not least factor is the bias against fishing communities. Fishing communities, especially former sampan communities, were customarily considered as low class in society. Fishers are often looked down by the others. This bias has made fishers unconfident in communicating with others and this also reduces their opportunities, including opportunities for improving their livelihoods.

4.5. Supporting services for livelihood enhancement and diversification:

Fishers were less likely to have access to supporting services for livelihood improvement and diversification. Most of industrial and fisheries extension programs focus mainly on fisheries processing and aquaculture. As a result the proportion of fishers who were well aware of the availability of supporting programmes for livelihood enhancement very low. More than 65% were unaware of any livelihood improvement programs. 85% and 75.3% of women and men respectively were unaware of livelihood improvement services (Table 45).

Table 45: Fisher's awareness of the availability of supporting institutions / programmes for livelihood enhancement and diversification

	N	Very aware (%)	Aware (%)	Not aware(%)
Target communes	161	0.6	34.2	65.2
- Female	68	0.0	15.0	85.0
- Male	93	1.1	23.7	75.3
Control commune	34	3.0	58.8	38.2

More than 40% of respondents had had no idea what types of supporting services were available which they could access. Between 21 to 38% of respondents reported being unable to or having difficult access to different types of support services (Table 46). Fishers reported easier access to credit services than input supplies, marketing and technical assistance support services.

Table 46: Fisher's ease of access to support services for livelihood enhancement and diversification

Supporting services	N	Easy (%)	Difficult (%)	Not at all (%)	No idea (%)
Loan	161	21.0	29.8	8.7	40.5
Technical assistance	161	5.4	10.0	11.1	73.5
Marketing	161	8.7	21.0	14.8	55.5
Input supply	161	21.9	18.7	10.1	49.3

Of those who knew of or had accessed support services for livelihood enhancement and diversification, more than 54.1% and 64.3% were dissatisfied with loan and marketing services respectively. Fishers were most satisfied (77.6%) with the support of input supply services, which were mainly provided by local people (Table 47).

Table 47: Fisher's satisfaction with supporting services for livelihood enhancement and diversification

Supporting services	N	Satisfied (%)	Not satisfied (%)
Loan	102	45.9	54.1
Technical assistance	41	58.1	41.9
Marketing	70	35.7	64.3
Input supply	85	77.6	22.4

During the last few years, the government policy that has had the greatest impact on fishers was the Government financial support for fishers under Decision No 289QĐ-TTg dated 18 March 2008 which provides policies which support minor ethnic groups, policy groups, the poor and fishers. Under this decision, partial financial support is provided to fishers to build new boats, purchase new boat engines and cash for fuel. However, few fishers have benefitted from the policies to support building new boats or purchasing new engines because the subsidized amount from the Government was only small and fishers were unable to fund the large balance. Most fishers therefore buy cheaper used boats / engines of the same capacity that they currently use.

5. Micro-finance

5.1. Financial institutions and services operating in the communes

In the target communes, fishers accessed financial services through three systems, namely formal (banks), semi formal (NGO and ODA funded credit schemes) and informal systems (money-lenders, family, relatives and friends).

The formal rural financial sector comprises the system of State-Owned Commercial Banks (SOCBs), NGOs, and ODA funded credit schemes. In the target communes the Vietnam Bank for Social Polices (VBSP) and the Bank for Agriculture and Rural Development (Agribank) have been the dominant financial service providers. The VBSP is most commonly used by lagoon and inshore fishing households, while many offshore fishing households were clients of the Agribank. The VBSP conducts monthly transaction in every commune. The Agribank has district level branches.

In principle, the VBSP provides loans at a special interest rate for the poor, however in reality many non-poor households also access these loans. Clients do not need to provide collateral to get a loan from the VBSP, instead they must be approved and certified by the Commune People's Committee (CPC). Conversely the Agribank requests collateral for loans above VND 30 million. However again there are differences between polices and reality. In many cases Agribank borrowers had to provide collateral for loans of less than VND 30 million.

In the target communes a semi-formal financial system was operated in Phu Loc Town where NAV's credit scheme of VND 200 million was operated by the Commune Women Union.

Informal credit is the most diversified sector in rural credit market in term of providers, types and scales of lending, interest rates, durations as well as repayment regulations. Informal financing regimes used to be the most important sources of rural credit in target communes.

The major types of the informal financial networks which provide credit to households include i) private money-lenders; ii) relatives, friends and neighbors; and iii) rotating savings and credit associations (ROSCAs, commonly known as "*Hui*" or *"Buu"* in Vietnamese). Of these, *Hui* was most commonly used by women. Private money-lenders were characterized by diverse and flexible operations. Their loans were usually small-scale and short-term (specified by a season or by days). The interest rates were however higher and ranged between three to 20 times higher than other credit sources, ranging from 3% to 10% per month, and even up 20% per month in emergency cases. Money-lenders are usually wealthy families who live within communities or villages near their customers. Relatives, friends and neighbors have often provided loans at either zero or low interest rates and without collateral or written contracts. Repayment terms are often very flexible, and can even be rescheduled in case of need.

5.2. The proportion of fishers among the client base and the proportion of loan for fisheries production (Bank for Social Policies)

In principle, fishers who meet VBSP criteria are eligible to take a loan if funds are available. However, the ease of access of fishers to VBSP credit varied between the target communes. In communes where there were a mixture of fisher and non-fisher households, fishers were less likely to be able to access credit than non-fisher households, especially in Phu Loc town.

Previous late repayment of loans by members of credit groups or high rates of bad debt had spoiled the chance of other fishers accessing VBSP credit services. Table 48 shows the level of fisher's access to VBSP credit services. In fishing-based communes such as Phong Hai and Phu Thuan, fisher clients accounted for 60% and 86.8% of the bank clients respectively. In Phu Loc communes where fishing communities were in the minority, very few fishers were VBSP clients (6.8%) and the outstanding amount among fisher borrowers accounted for only 4.8% in the total of VBSP clients in the town. Remarkably, in Phu Loc Town where there is a small credit scheme granted by NAV with a low interest rate, out of 200 clients of this scheme, none was fishers.

The possibility of accessing VBSP credit services largely depends on the judgment of the credit provider's staff. Intermediary credit organizations for example the Women's Union and the Farmer's Union, play an important role in making recommendations on the names on VBSP client lists.

Table 48: Proportion of loans and clients among the beneficiaries of the Bank for Social Polices in RFLP target communes

	Amount (VND)		No and % of borrower	
	Total	For fisheries / %	Total	No of Fisher / %
Phu Loc Town	11,391,492,900	546,460,000 (4.8%)	1,017	69 (6.8%)
Loc Tri commune	4,400,000,000	1,275,750,000 (28.9)	467	135 (29%)
Vinh Thanh Commune	5,100,000,000	1,020,000,000 (27.5%)	408	112 (20.0%)
Phu Thuan commune	3,522,000,000	3,056,772,020 (85.9%)	717	616 (86.8%)
Phong Hai commune	5,000,000,000	3,000,000,000 (70.0%)	400	280 (60.0%)

5.3. Fisher's awareness and access of financial services in the communes

In general the majority of fishers (over 88%) were aware of the availability financial services including formal and informal services. Men had a better understanding of financial services than women, mainly because most of clients of Agribank were men. However among the fishers who reported they were aware of credit services three quarters of surveyed respondents had only heard about these services and did not have a detailed understanding of the procedures (Table 49)

Table 49: Fisher's awareness of the availability of financial services

	N	Very aware (%)	Aware (%)	Not aware (%)
Target communes	**161**	**13.1**	**75.0**	**11.9**
- Male	93	20.4	68.8	10.8
- Female	68	2.4	82.3	13.3

Of the different financial services, surprisingly, fishers were more familiar with the procedures and regulations of the Agribank than the VBSP, with 63.2% being aware of Agribank regulations compared to 56.9% of VBSP. Women were more aware of the regulations of VBSP than men, as most VBSP clients were female. The majority (63.1%) of fishers were unaware of private financial services, with nearly three quarters of men being unaware of procedures for private financial services (Table 50).

Interestingly, many respondents with loans from both Agribank and VBSP were unaware of the regulations of these banks, mainly because they had not prepared their loan application themselves. Normally loan applications are done by bank credit staff, or by a representative of the Women's Union, or the Farmer's Union in the village.

Table 50: Fisher's awareness of the procedures / regulations of financial services

Financial institutions		Very aware (%)	Aware (%)	Not aware (%)
VBSP	**Target communes**	**12.5**	**44.4**	**43.1**
	- Male	15.1	30.1	54.8
	- Female	9.0	64.2	26.8
Agribank	**Target communes**	**16.3**	**46.9**	**36.9**
	- Male	7.5	61.2	31.3
	- Female	7.6	51.6	40.9
Private services	**Target communes**	**11.3**	**25.6**	**63.1**
	- Male	5.1	20.8	74.2
	- Female	6.0	46.3	47.8

Fishers, reported that today it is easier to access credit services than previously, because people including fishers are able to access formal financial services from the Agribank and the VBSP. More than 44% of surveyed fishers in target communes reported that it was easy to get a loan when in need. 36.3% reported that it was difficult to access a loan and 6.2% reported they were unable to access loans; the balance had no idea on the subject. 55.3% of women compared to 33.3% of men reported that it was difficult or they were unable to access loans (Table 51). This may have been because women often take loans from VBSP which only provided small loans, which may be less than the needs of borrowers.

Table 51: Fisher's perception on the ease of accessing credit when in need

	N	Easy (%)	Difficulty (%)	Can't access (%)	No idea (%)
Target communes	160	44.4	36.3	6.3	13.1
- Male	93	55.9	29.0	4.3	10.8
- Female	67	28.4	46.3	9.0	16.4
Control commune	34	47.1	50.0	0.0	2.9

During the last three years, out of 161 surveyed households, 90 (56%) households had accessed financial services. Of these 13 households had accessed two loan sources during the three years. There were significant differences in access to different types of financial services. Most fishers accessed formal credit services. The maximum size of loan taken by fishers from the Agribank and the VBSP were VND 250 and VND 50 million respectively, while the minimum loans were VND 30 million from the Agribank and VND 1 million from the VBSP (Table 52).

Table 52: Level of fisher's access to financial services

	Access to financial services		Average amount (Mil. VND)	Max amount (Mil. VND)	Min amount (Mil. VND)
	No of HH	%			
Total	**90**	**100.0**	**39.6**	**250**	**1**
- VBSP	45	50.0	12.5	50	1
- Agribank	35	38.9	53.9	250	30
- Private services	23	25.6	13.0	50	1

Only one quarter of surveyed fishers accessed loans from private services. Though not included under private financial services, one third of respondents were members of a *Hui"*group or Rotating Savings and Credit Association (ROSCA). ROSCA are groups of individuals (normally 10 people) that agree to meet for a defined period of time (normally 10 months) in order to save and borrow together. Each member contributes the same amount on a daily or monthly basic which is collected by an agent who is trusted by group members. The amount collected from group members in a month (normally) is borrowed by one group member following an auction or bidding process. The winner of the first round (month) has to pay an extra amount that is considered as interest for taking loan, to the other (9) members and the agent and she/he will not qualify to share the interest amount in the following rounds (months). This process continues until the last person takes the money and the person who takes money last will not pay any extra amount/interest. *Hui* groups can be considered as a savings model for the member that does not take the money, or a high-interest credit service for the member that withdraws money early in the process.

Of households that accessed credit in the last three years, 55 household took loans under a female name. Of these, six households took loans from both formal and informal sources. In addition, females in 53 household joined *"Hui"* groups (Table 53). Therefore, generally, women accessed informal financial services more often than formal services. Of the women who accessed formal services the loan sizes ranged from VND 1 million to VND 30 million, while the informal loan sizes ranged from VND 1 to VND 15 million for informal services. Among the households that were in *"Hui*" groups, each woman contributed between VND 5,000 to VND 50,000 per day.

Table 53: Women's access to formal and informal financial services

	No of HH	%	Max amount (Mil VND)	Min amount (Mil VND)	Average amount (Mil VND)
Formal financial services	44	80.0	30	1	13.2
Informal financial services	17	30.9	15	1	4.5
Hui	***53***		***1.5 per month***	***0.15 per month***	

Most fishers preferred to use formal financial systems to take loans when in need because of its low interest rate. However, about 14% of fishers had taken private service loans when they were unable to access formal credit schemes. More women (20.6%) replied that they would choose informal services then men (9.7%) when in need. In addition some fishers would ask their relatives for money, free of interest (Table 54).

Table 54: Fisher's choice of financial services when in need

	N	Formal service (%)	Informal services (%)	Relatives (%)
Target communes	**161**	81.99	14.29	3.73
- Female	68	72.06	20.59	7.35
- Male	93	88.17	9.68	2.15

5.4. Fisher's perception of financial services

Generally fishers are happy with the services provided by formal financial institutions. 71.1% and 82.9% of surveyed fishers reported being satisfied with the services provided by the VBSP and Agribank respectively (Table 55).

Table 55: Fisher's satisfaction with formal and informal financial services

Financial services	N	Satisfied (%)	Not satisfied (%)
VBSP	45	71.1	28.9
Agribank	35	82.9	17.2
Private services	23	52.2	47.8

Most Agribank clients were satisfied with the fast processing of loan applications by the bank and the large loans sizes provided. However, the requirement for collateral by the Agribank may have been one reason why some clients were unsatisfied with their service. The VBSP was appreciated by its clients for providing low interest loans, with an easy transaction process. However the slow application processing of VBSP loans disappointed some clients. Moreover, it is not easy to get a loan from the VBSP when in need. More importantly, as the VBSP does not require collateral but provides loan through mass organizations, fishers have to rely on both the bank and a mass people's organization to access credit services. The bias and capacity of the credit intermediary agencies were reasons given by fishers for their dissatisfaction with VBSP services.

Fishers were split 50:50 between those that were "satisfied" and those that were "dissatisfied" with private services. The fishers liked the flexibility of both private service loan duration and size. This system was most accessed by women probably because of its simple procedure which does not require completion of any written documentations. The high interest rates for private services was the main reason for fishers dissatisfaction with private service financial services.

5.5. Fisher's awareness of and access to subsidized credit lines

There are very few subsidized credit lines that are exclusively for fishers. The common subsidized credit lines in the target RFLP communes were the regular schemes provided by VBSP to all communities, including credit for the poor, students, and sanitation works. However, not all fishers were aware of these schemes because some were not interested in these schemes, and others were unaware of these schemes. While about two thirds of surveyed fishers were aware of or had heard about the credit scheme for the poor, many were unaware of any specifics of this service. Nearly 80% were unaware of the credit scheme for sanitation works (Table 56).

Table 56: Fisher's awareness of subsidized credit lines

	N	Very aware(%)	Aware (%)	Not aware (%)
Credit for the poor	160	3.1	60.0	36.9
Credit for student	160	4.4	48.1	47.5
Credit for sanitation works	160	0.0	20.6	79.4

Due to low interest in or a lack of information about subsidized credit lines, many fishers (62.5%) did not know if they were eligible to access subsidized credit lines or not (Table 57).

Table 57: Fisher's awareness of their eligibility to access subsidized credit lines

	N	Eligible (%)	Not eligible (%)	Not know (%)
Target communes	160	28.1	9.4	62.5
Control commune	34	32.4	11.8	55.9

5.6. Potential for saving mobilization

Culturally fishers are quite familiar with informal savings such as *"Hui"*. Both male and female respondents were aware of the importance of savings to ensure household economic security. Nearly 60% of respondents were willing to make savings if there was a secured organization / group to which they could deposit their savings. Interestingly, more men (66.7%) than women (47.8%) replied that they were willing to make savings (Table 58). This may be because some women have witnessed or experienced the failure of *"Hui"* groups. Many fishers stated that they were willing to save, but that it was impossible because their income was very low.

Table 58: Fisher's willingness to save

	N	Willing (%)	Not willing (%)	Can't decide (%)
Target communes	**160**	**58.8**	**19.4**	**21.9**
- Male	93	66.7	9.7	23.7
- Female	67	47.8	32.8	19.4

Nearly 60% of respondents were making some type of savings. The most common type of savings included bank savings (by creating bank saving accounts or saving books), buying gold, or by joining a *"Hui"* group. There was a significant difference in saving capacity among fishers. Some could only save VND 100,000 per month, while others were saving up to VND millions. Many of those that were able to make significant savings were getting remittances from an overseas family member. Offshore fishers had the greatest savings capacity. On average, each offshore fishing household was saving over VND 3 million per month. Lagoon fishers had the least average savings with about VND 600,000 per household per month (Table 59).

Table 59: Fisher's savinga capacity

	N	No of HH making savings (%)	Average per month (VND)	Max per month (VND)	Min month (VND)	Most common types of savings
Target communes	**161**	**59.0**	**1,623,980**	**20,000,000**	**100,000**	
- Offshore fishing HH	40	69.2	3,675,926	20,000,000	100,000	Bank saving, *Hui*, buying gold
- Inshore fishing HH	63	45.1	1,490,625	6,500,000	150,000	*Hui*, buying gold
- Lagoon fishing HH	58	72.7	609,375	2,000,000	100,000	*Hui*, buying gold
- HH having fish processing	19	57.9	1,322,727	3,000,000	300,000	*Hui*, buying gold

III. Proposed RFLP Output Indicators

Based on the results of the baseline survey and in consideration of RFLP in puts in terms of time, coverage and budget, the following indicators are proposed under each of the outputs:

Output 1: Fishery Co-management

Indicators	Baseline (2010)	Target (2013)
Marine FAs allocated with fishing rights	0 FA	2 FAs
Number of fisheries association (FA) in target communes increased	10 FAs	15 FAs (1 FA established in each target commune)
Percentage of fishers who are "very aware" and "aware" of co-management increased	17.4%	50%
Percentage of women who are "very aware" and "aware" of co-management increased	2.9%	30%
Government officials very well understood co-management	33.3%	90%
Percentage of fishers who judge that co-management contributes to fisheries management and livelihood improvement increased	14.3%	30%
Percentage of community members who feel they are actively contributing to fisheries co-management increased	55.9%	70%

Output 2: Safety at sea

Indicators	Baseline (2010)	Target (2013)
Percentage of fishers who feel they understand information and regulations on safety at sea increased	18.6%	30%
Fisheries management officials understand information and regulations on safety at sea	13.3%	70%
Percentage of fishers complying with safety at sea regulations increased	17.5%	30%
Percentage of offshore fishers complying with safety at sea regulations increased	62.5%	80%
Fishers satisfied with the effectiveness of rescue service operation	34.2%	60%
Fishers received basic safety at sea training	29.8%	50%
Fishers feel confident in avoiding accidents at sea	67.7%	90%

Output 3: Post harvest and marketing

Indicators	Baseline (2010)	Target (2013)
Fishery processing units/households certified as meeting food safety and hygiene conditions by DARD	3.2%	20%
Number of trademarks issued	6	7
Number of fishery processing units/households issued with quality trademark	10	15
Fishery processing units/households trained on **food hygiene and safety**	27.7%	50%
The percentage of fishers depended on middle traders reduced	60%	40%
Fishers become skilled at least two post-harvest methods	21.7%	60%

Output 4: Livelihood diversification and improvement

Indicators	Baseline (2010)	Target (2013)
Percentage of households having more than two livelihood activities increased	9.9%	20%
Percentage of households satisfied with their livelihoods increased	47.8%	60%
Percentage of households reporting an improvement in their livelihoods during the last five years increased	49.1%	70%
New income generation models for women introduced	0	1

Output 5: Micro-finance

Indicators	Baseline (2010)	Target (2013)
The percentage of households obtained formal loans increased	77.7%	85%
Percentage of women obtained informal (including *"Hui"* loans reduced	61.4%	40%
Percentage of fishers that are aware of credit channels increased	88.1%	95%
Percentage of fishers that are aware of credit regulations increased	<20%	50%
Percentage of fishers who judge that accessing credit is easy increased	44.4%	60%

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ANNEX: Summary of Survey Responses

Section 0: General information

0.1. and 0.2. Age and gender of respondents

Respondent	N	Age range				Sex	
		<30	31-45	46-60	>60	Male	Female
Target communes	161	9	80	67	5	93	68
Control commune	34	3	10	20	1	22	12

0.3 and 0.4. Respondent household classification

	N	By poverty			By fishery activity			
		Non-poor	Observed poor	Certified poor	Offshore fishing	Inshore fishing	Lagoon fishing	Aqua.
Target communes	161	96	52	13	40	63	58	10
Control commune	34	27	5	2	24	2	8	0

0.5 to 0.8. Surveyed household Democracy

	N	No of people per HH	No of labourer per HH	No of fisheries labourer per HH
Target communes	161	6	3.3	2.0
Control commune	34	5	3.0	1.4

Section 1: Co-management

1.1. To what extent are you aware of the term Fishery Co-management (FCM)?

Target group	N	Very aware (%)	Aware (%)	Not aware (%)
Target communes	**161**	**1.2**	**16.2**	**82.6**
- Male fisher	93	2.2	25.8	72.0
- Female fisher	68	0.0	2.9	97.1
- Offshore fishing HH	40	0.0	30.0	70.0
- Inshore fishing HH	63	1.6	20.6	77.8
- Lagoon fishing HH	58	12.1	27.6	60.3
Government staff	**21**	**33.3**	**52.3**	**14.2**
Control commune	**34**	**2.9**	**8.8**	**88.2**
- Male fisher	22	4.5	9.1	86.4
- Female fisher	12	0.0	8.3	91.7

1.2. What do you think about the overall usefulness of FCM in fisheries resources management?

Target group	N	Very useful (%)	Useful (%)	Not useful (%)	No idea
Target communes	161	6.8	8.1	16.1	68.9
Government staff	21	47.6	33.3	0.0	19.0
Control commune	34	0.0	11.8	0.0	88.2

1.3. What do you think about the overall usefulness of FCM in fisheries livelihoods improvement?

Target group	N	Very useful (%)	Useful (%)	Not useful (%)	No idea (%)
Target communes	161	6.8	8.1	15.5	69.6
Government staff	21	47.6	33.3	0.0	19.0
Control commune	34	0.0	11.8	0.0	88.2

1.4. What do you think about the effectiveness of formal fishery management systems?

	N	Very effective (%)	Effective (%)	Not effective (%)	No idea (%)
Target communes	161	40.4	12.4	6.8	40.4
- Male fisher	93	36.6	15.0	8.6	39.8
- Female fisher	68	45.6	8.8	4.4	41.2
Control commune	34	61.8	11.8	2.9	23.5
- Male fisher	22	68.2	4.5	4.5	22.8
- Female fisher	12	50.0	25.0	0.0	25.0

1.5. What do you think about the effectiveness of informal fishery management systems?

	N	Very effective (%)	Effective (%)	Not effective (%)	No idea (%)
Target communes	161	41.0	13.6	5.6	39.8
- Male fisher	93	39.8	18.3	6.4	35.5
- Female fisher	68	42.6	7.4	4.4	45.6
Control commune	34	32.4	29.4	0.0	38.2
- Male fisher	22	27.3	31.8	0.0	40.9
- Female fisher	12	41.7	25.0	0.0	33.3

1.6. Which member in your family often participate in fishery management activities?

	N	Male (%)	Female (%)	Both (%)	None (%)
Target communes	161	81.4	10.6	5.6	2.4
- Male fisher	93	90.3	2.2	6.5	1.0
- Female fisher	68	69.1	22.1	4.4	4.4
Control commune	34	88.2	0.00	5.9	5.9
- Male fisher	22	95.5	0.00	0.00	4.5
- Female fisher	12	75.00	0.00	16.7	8.3

1.7. To what extent did you participate in fishery management activities?, and
1.8. During the last six months, did any member in your family attend any fishery management meetings / activities?

Target group	N	Actively participate (%)	Passively participate (%)	Not participate (%)	Participate in meeting on FM during last 6 months (%)
Target communes					
- Fishers	161	55.9	41.6	2.5	82.0
- Male fisher	93	69.9	29.0	1.1	88.2
- Female fisher	68	36.8	58.8	4.4	73.5
Control commune	**34**	73.5	26.5	0.0	73.5
- Fishers	34	73.5	26.5	0.0	73.5
- Male fisher	22	81.8	18.2	0.0	95.5
- Female fisher	12	58.3	41.7	0.0	33.3

1.9. To what extent are you satisfied with current fishery management activities?

	N	Satisfied (%)	Not satisfied (%)	No idea (%)
Target communes	**161**	56.5	13.1	30.4
- Male fisher	93	63.4	15.1	21.5
- Female fisher	68	47.1	10.3	42.6
Control commune	**34**	58.8	11.8	29.4
- Male fisher	22	59.1	13.6	27.3
- Female fisher	12	58.3	8.3	33.4

1.10. What do you think about the effectiveness of the conflict management systems?

	N	CB mechanism			N	Govnment		
		Effective (%)	Not effectiv e (%)	No idea (%)		Effective (%)	Not effective (%)	No idea (%)
Target communes	**161**	51.5	13.7	34.8	**161**	45.3	12.4	42.3
- Male fisher	93	57.0	16.1	26.9	93	46.3	16.1	37.6
- Female fisher	68	44.1	10.3	45.6	68	44.1	7.4	48.5
Control commune	**34**	70.6	14.7	14.7	**34**	55.9	20.6	23.5
- Male fisher	22	86.4	13.6	0.0	22	68.2	18.2	13.6
- Female fisher	12	41.7	16.6	41.7	12	33.3	25.0	41.7

1.11. What are your opinion about fisheries resources **during the last five years**?

	Decrease (%)	Increase (%)	Stable (%)	No idea (%)
Productivity of fish	39.7	45.4	13.6	1.3
Diversity of fisheries resources	45.9	18.1	32.9	3.1
Lagoon and sea water **pollution**	19.2	48.5	21.7	10.6
Fishing capacity	11.8	77.0	6.2	5.0

1.12. What are your opinion about fisheries resources during **the next five years**?

	Decrease (%)	Increase (%)	Stable (%)	No idea (%)
Productivity of fish	26.1	31.1	9.9	32.9
Diversity of fisheries resources	31.7	21.7	25.5	21.1
Lagoon and sea water **pollution**	17.4	33.6	24.2	24.8
Fishing capacity	10.6	64.6	7.5	17.3

1.13. What do you think about level of the equity in getting benefits from fisheries among different resource user groups?

	N	Equal (%)	Not equal (%)	No idea (%)
Target communes	**161**	54.6	37.9	7.5
- Male fisher	93	52.7	44.1	3.2
- Female fisher	68	57.4	29.4	13.2
Control commune	**34**	14.7	85.3	0.0
- Male fisher	22	13.6	86.4	0.0
- Female fisher	12	16.7	83.3	0.0

1.14. Who have more benefits from fishery resources?

	N	Poor (%)	Non-poor (%)	The same (%)	No idea (%)
Target communes	**161**	8.1	41.6	45.9	4.4
- Male fisher	93	9.7	50.5	38.7	1.1
- Female fisher	68	5.9	29.4	55.9	8.8
Control commune	**34**	8.9	88.2	2.9	0.0
- Male fisher	22	9.1	86.4	4.5	0.0
- Female fisher	12	8.3	91.7	0.0	0.0

	N	Men (%)	Women (%)	The same (%)	No idea (%)
Target communes	**161**	15.5	3.1	77.0	4.4
- Male fisher	93	23.67	2.1	72.0	2.2
- Female fisher	68	4.4	4.4	83.8	7.4
Control commune	**34**	50.0	0.0	50.0	0.0
- Male fisher	22	50.0	0.0	50.0	0.0
- Female fisher	12	50.0	0.0	50.0	0.0

Section 2: Safety at sea

The information on safety at sea that fishers use and the ways to access this

2.1. To what extent are you aware of the availability of Safety at sea (SAS) information?

Target group	N	Very aware (%)	Aware (%)	Not aware (%)
Target communes	**161**	**18.6**	**50.3**	**31.1**
- Male fisher	93	28.0	44.1	27.9
- Female fisher	68	5.9	58.8	35.3
Government staff	**15**	**13.3**	**40.0**	**46.7**
Control commune	**34**	**52.9**	**32.4**	**14.7**
- Male fisher	22	68.2	27.3	4.6
- Female fisher	12	25.0	41.7	33.3

2.2. To what extent can you access to information on SAS?

Target group	N	Easy (%)	Difficult (%)	No idea (%)
Target communes				
Fishers	**161**	**70.8**	**12.4**	**16.8**
- Male fisher	93	75.3	10.7	14.0
- Female fisher	68	64.7	14.7	20.6
Control commune				
- Fishers	34	88.3	2.9	8.8
- Male fisher	22	100.0	0.0	0.0
- Female fisher	12	66.7	8.3	25.0

2.3. To what extent are you satisfied with the following channels for accessing information on safety at sea?

Channel	N	Satisfied (%)	Not satisfied (%)	No idea (%)
Radio	195	74.9	1.5	23.6
Coastal radio station	195	21.5	6.2	72.3
Coastal border post communication systems	195	27.2	4.1	68.7
TV	195	70.8	6.7	22.5
Commune broadcasting systems	195	46.7	25.6	27.7
Personal communication (mobile)	195	70.2	10.3	19.5

2.4. How useful is the SAS information to your family ?

	N	Useful (%)	Not useful (%)	No idea (%)
Target communes	161	94.4	0.6	5.0
Control commune	34	100.0	0.0	0.0

2.5. To what extent are you aware of the following basis safety at sea equipment on boat?

Item	Very aware (%)		Aware (%)		Not aware (%)	
	Offshore fishers	Others	Offshore fishers	Others	Offshore fishers	Others
Life-vest	45	34	16	63	3	34
Lifebuoy	43	24	17	61	4	46
Communication devices	39	16	19	46	6	69

2.6. Do you and your family members comply with the following regulations on safety at sea?

	N	% compliable with safety items	% compliable with communication devices	% compliable with certificate	% compliance with safety at sea regulations
Target communes	160	35.0	22.5	25.0	17.5
- Offshore fishers	40	85.0	77.5	67.5	62.5
- Inshore fishers	63	28.5	4.7	12.7	3.1
- Lagoon fishers	57	7.0	3.5	8.8	1.7

2.7. During the last 12 months, how many inspections were made with your boat(s)

No	Boat by capacity	No of boat	Boat registration		Boat inspection	
			Number	%	Number	%
1	< 20HP	65	48	73.9	5	7.7
2	20-<50HP	59	53	89.8	16	27.1
3	50-<90HP	2	2	100.0	1	50.0
4	90-<250HP	30	29	96.7	14	46.7
5	250-<400HP	4	4	100	3	75
Sub-total >20 HP		**95**	**88**	**92.6**	**34**	**35.8**
Total		**160**	**136**	**85.0**	**39**	**24.3**

2.8. What do you think about the effectiveness of the systems for responding safety issues and disasters?

Type of HH	N	Very effective (%)	Effective (%)	Ineffective (%)	No idea (%)
Target communes	**161**	**23.6**	**10.6**	**10.6**	**55.2**
- Offshore fishing HH	40	47.5	12.5	10.0	30.0
- Inshore fishing HH	63	14.3	7.9	9.5	68.3
- Lagoon fishing HH	58	17.2	12.1	12.1	58.6
Control community	**34**	**67.7**	**17.7**	**2.9**	**11.7**

2.9. Have you or your family members ever been trained in avoiding and dealing with accidents at sea?

Type of HH	N	Yes (%)	No (%)
Target communes	**161**	**29.8**	**70.2**
- Offshore fishing HH	40	55.0	45.0
- Inshore fishing HH	63	27.0	73.0
- Lagoon fishing HH	58	15.5	84.5
Control commune	**34**	**29.4**	**70.6**

2.10. How confident are you to avoid accidents at sea?

Type of HH	N	Very confident (%)	Confident (%)	Not confident (%)
Target communes	**161**	**16.8**	**50.9**	**32.3**
- Offshore fishing HH	40	42.5	52.5	5.0
- Inshore fishing HH	63	9.5	44.4	46.1
- Lagoon fishing HH	58	6.9	56.9	36.2
- Female	68	0.0	51.5	48.5
- Male	93	29.1	50.5	20.4
Control commune	**34**	**35.3**	**55.9**	**8.8**

2.11. How confident are you to deal with accidents at sea?

Type of HH	N	Very confident (%)	Confident (%)	Not confident (%)
Target communes	**161**	**16.8**	**50.9**	**32.3**
- Offshore fishing HH	40	42.5	52.5	5.0
- Inshore fishing HH	63	9.5	44.5	46.0
- Lagoon fishing HH	58	6.9	56.9	36.2
- Female	68	0.0	51.5	48.5
- Male	93	29.0	50.6	20.4
Control commune	**34**	**35.3**	**55.9**	**8.8**

Section 3: Post harvest and marketing

Post-harvest skills, knowledge and practices.

3.1. When are you your fish products applied post-harvest method to maintain their quality?

Target group	N	On boat (%)	On land (%)	On boat and on land (%)	Not at all (%)
Target communes	**161**	33.5	9.3	13.1	44.1
- Male fisher	93	45.1	9.7	12.9	32.3
- Female fisher	68	17.7	8.8	13.2	60.3
- Offshore fishing HH	40	67.5	7.5	15.0	10.0
- Others	121	22.3	9.9	12.4	55.4
Control commune	**34**	44.1	8.8	2.9	14.7
- Male fisher	22	77.3	9.1	4.5	9.1
- Female fisher	12	66.7	8.3	0.0	25.0

3.2. To what extent are you aware of the following post harvest methods

Post harvest measures	Very skillful (%)	Skillful (%)	Do not know (%)
Ice	49.4	37.3	13.3
Using chemicals	1.2	13.3	85.5
Using salt	21.7	39.2	39.2
Dry	18.1	44.6	37.3
Grill	13.3	36.1	50.6

3.3. To what extent does your family apply the following post harvest methods to the harvested production ?

Post harvest methods	Fully applied (%)	Partly applied (%)	Not applied (%)
Ice	51.0	21.1	27.9
Using chemicals	0.00	1.0	98.0
Using salt	2.1	19.1	78.8
Dry	0.0	20.1	79.9
Grill	0.5	11.3	88.2

3.4. Have you or your family members attended a training course on post harvest during the last thee years?

Type of HH	N	Yes (%)	No (%)
Target communes	**161**	**27.7**	**72.3**
- Offshore fishing HH	40	25.6	74.4
- Inshore fishing HH	63	38.0	62.0
- Lagoon fishing HH	58	13.6	86.4
- HH having fish processing12	19	79.4	21.6
- Female	67	31.3	68.7
- Male	93	26.9	73.1
Control commune	**34**	**47.1**	**52.9**

[12] Including 13 household interviewees and 6 individual interviewees.

3.5. Availability, status and utilization of post harvest facilities

Post harvest facilities	Types of HH	Used (%)	Not used (%)
Ice storage	Total	25.3	74.7
	Offshore HH	41.0	59.0
	Others	20.5	79.5
Insulating box	Total	60.2	39.8
	Offshore HH	53.8	46.2
	Others	62.2	37.8
Freezer	Total	1.8	98.2
	Offshore HH	0.0	100.0
	Others	2.4	97.6
Fridge	Total	3.6	96.4
	Offshore HH	0.0	100.0
	Others	4.7	95.3
Oven	Total	3.0	97.0
	Offshore HH	0.0	100.0
	Others	3.9	96.1
Control commune			
Ice storage	Total	73.5	26.5
	Offshore HH	66.7	33.3
	Others	84.6	15.4
	Total	82.4	17.6
	Offshore HH	85.7	14.3
	Others	76.9	23.1

3.6. To whom did you sell your fish / fisheries products last year?

Product	Fish processing factories (%)	Middle person (%)	Local fish processor (%)	Local market (%)	Other (%)	No idea (%)
Prawn	1.9	87.6	0.2	8.6	1.7	0.0
Crab	0.0	91.2	0.4	8.1	0.4	0.0
Green crab	0.0	97.8	0.0	1.7	0.5	0.0
Fish	0.0	87.1	1.5	10.5	0.9	0.0
Squid	3.2	96.8	0.0	0.0	0.0	0.0
Dried squid	100.0	0.0	0.0	0.0	0.0	0.0

3.7. Where did you sell your fish / fisheries products last year?

Product	Provincial market (%)	National market (%)	International market (%)	No idea (%)
Prawn	59.7	14.1	0.2	26.0
Crab	30.5	11.2	0.0	58.3
Green crab	56.5	3.1	0.0	40.4
Fish	71.6	0.8	0.1	27.5
Squid	66.5	0.0	0.0	33.5

3.8. To what level do you depend on middlemen (on price) in trading fish / fisheries products?

Product	N	Very high (%)	High (%)	Not at all (%)	No idea (%)
Prawn	130	46.2	26.2	15.1	12.5
Crab	89	21.3	39.4	13.5	25.8
Green crab	119	24.2	41.0	14.3	20.5
Fish	150	16.0	41.3	38.0	4.7
Squid	108	32.1	30.6	12.0	25.3
Dried squid	82	1.2	6.1	3.7	89.0
Dried fish	82	1.2	4.9	4.9	89.0
Grilled fish	81	0.0	7.4	2.5	90.1

3.9. To what extent are you satisfied with the support of the following institutions on post harvest fisheries?

Institution	Satisfied (%)	Not satisfied (%)	No idea (%)
Sub-department of rural development and quality control	6.9	0.6	92.5
District industry department	1.2	0.0	98.8
District DARD	1.2	0.0	98.8
Extension station	1.2	0.0	98.8
FA	8.1	4.4	87.5
CPC	3.1	1.3	95.6
Mass organization	1.9	0.6	97.5

Section 4: Livelihood enhancement and diversification

Perception livelihood options

4.1. What do you think about the livelihood opportunities for fishing communities compared to five years ago?

	N	Better (%)	No change (%)	Worse (%)	No idea (%)
Target communes	161	49.1	18.0	31.1	1.8
- Female	68	35.3	22.1	38.2	4.4
- Male	93	59.1	15.1	25.8	0.0
- Offshore fishing HH	40	57.5	12.5	30.0	0.0
- Inshore fishing HH	63	39.7	17.5	38.1	4.7
- Lagoon fishing HH	58	53.5	22.4	24.1	0.0
Control commune	34	14.7	17.7	67.6	0.00

4.2. Can you give an approximate income amount for the following livelihood activities in 2009?

	Indicator	Average income per HH	Average income per capita	Average income from fishing	Average income from fish processing	Average income from other activities
Target communes	N	161	161	154	16	80
	Mean	62,824,596	11,985,909	51,666,883	23,906,250	22,194,500
- Offshore fishing HH	N	40	40	40	10	19
	Mean	117,696,250	24,724,991	104,000,000	16,100,000	20,360,526
- Other HH	N	121	121	114	6	61
	Mean	44,685,207	7,774,643	33,304,386	36,916,667	22,765,738

4.3. To what extent are you satisfied with your family current livelihoods?

	N	Satisfied (%)	Not satisfied (%)	No idea (%)
Target communes	161	47.8	46.6	5.6
- Female	68	47.1	44.1	8.8
- Male	93	65.6	31.2	3.2
- Offshore fishing HH	40	67.5	27.5	5.0
- Inshore fishing HH	63	58.7	38.1	3.2
- Lagoon fishing HH	58	50.0	41.4	8.6
Control commune	34	38.2	61.8	0.0

4.4. Do you want to diversify your family livelihoods?

	N	Intended to change %)	Not-intended to change (%)	No idea (%)
Target communes	**161**	**83.9**	**14.3**	**1.8**
- Female	68	80.9	16.2	2.9
- Male	93	86.0	12.9	1.1
- Offshore fishing HH	40	80.0	20.0	0.0
- Inshore fishing HH	63	92.1	6.3	1.6
- Lagoon fishing HH	45	82.2	13.3	4.5
- HH having processing	19	33.3	66.7	0.0
Other HH	13	70.0	30.0	0.0
Control commune	**34**	**97.1**	**2.9**	**0.0**

4.5. To what extent are you aware of the supporting services for livelihood enhancement and diversification?

	N	Very aware (%)	Aware (%)	Not aware(%)
Target communes	161	0.6	34.2	65.2
- Female	68	0.0	15.0	85.0
- Male	93	1.1	23.7	75.3
Control commune	34	3.0	58.8	38.2

4.6. To what extent can you access to the following supporting services for livelihood enhancement and diversification?

Supporting services	N	Easy (%)	Difficult (%)	Not at all (%)	No idea (%)
Loan	161	21.0	29.8	8.7	40.5
Technical assistance	161	5.4	10.0	11.1	73.5
Marketing	161	8.7	21.0	14.8	55.5
Input supply	161	21.9	18.7	10.1	49.3

4.7 to 4.11: No information

4.12. To what extent are you satisfied with the quality and cost of the following supporting services for livelihood enhancement and diversification

Supporting services	N	Satisfied (%)	Not satisfied (%)
Loan	102	45.9	54.1
Technical assistance	41	58.1	41.9
Marketing	70	35.7	64.3
Input supply	85	77.6	22.4

4.13. Are the following supporting services useful for livelihood enhancement and diversification

Supporting services	N (HH respondent)	Useful (%)	Not useful (%)	No idea (%)
Loan	161	51.5	16.2	32.3
Technical assistance	161	32.3	4.4	63.3
Marketing	161	32.3	18.6	49.1
Input supply	161	51.6	6.8	41.6

4.14. To what extent are you confident to change or diversify your family livelihood with the use of existing services?

	N	Confident (%)	Not confident (%)	No idea (%)
Target communes	**161**	54.0	23.0	23.0
- Male	93	64.5	14.0	21.5
- Female	68	39.7	35.3	25.00
Control commune	**34**	70.6	23.5	5.9

Section 5: Microfinance

5.1. To what extent are you aware of the availability credit systems?

	N	Very aware (%)	Aware (%)	Not aware (%)
Target communes	**161**	**13.1**	**75.0**	**11.9**
- Male	93	20.4	68.8	10.8
- Female	68	2.4	82.3	13.3
Control commune	**34**	**11.8**	**88.2**	**0.0**

5.2. To what extent are you aware of regulations for accessing the following credit programmes?

Financial institutions		Very aware (%)	Aware (%)	Not aware (%)
VBSP	**Target communes**	**12.5**	**44.4**	**43.1**
	- Male	15.1	30.1	54.8
	- Female	9.0	64.2	26.8
Agribank	**Target communes**	**16.3**	**46.9**	**36.9**
	- Male	7.5	61.2	31.3
	- Female	7.6	51.6	40.9
Private services	**Target communes**	**11.3**	**25.6**	**63.1**
	- Male	5.1	20.8	74.2
	- Female	6.0	46.3	47.8

5.3. To what extent can you access to credit services when in need?

	N	Easy (%)	Difficulty (%)	Can't access (%)	No idea (%)
Target communes	160	44.4	36.3	6.3	13.1
- Male	93	55.9	29.0	4.3	10.8
- Female	67	28.4	46.3	9.0	16.4
Control commune	34	47.1	50.0	0.0	2.9

5.4. To what extent are you satisfied with the following financial institutions?

Financial services	N	Satisfied (%)	Not satisfied (%)
VBSP	45	71.1	28.9
Agribank	35	82.9	17.1
Private services	23	52.2	47.8

5.5. Which credit mechanism do you most like to borrow money?

	N	Formal service (%)	Informal services (%)	Relatives (%)
Target communes	**161**	82.0	14.3	3.7
- Female	68	72.1	20.6	7.3
- Male	93	88.2	9.7	2.1
Control commune	**34**	**91.2**	**6.6**	**2.2**

5.6. During the last five years, which of the following financial services did you borrow money or make a saving?

Financial services	Loan				Saving			
	N	Average (Mil VND)	Max	Min	N	Average (Mil VND)	Max	Min
Target communes								
- Bank for Social Policies	45	12.5	100	1				
- Agriculture Bank	35	53.9	250	3	10	38.3	150	0.7
- Other commercial banks	1	10.0			4	129.0	300	30.0
- NGOs, ODAs, others	2	7.0	9	5				
- Private	23	13.0	50	1				
Control commune								
- Bank for Social Policies	9	9.2	30	3				
- Agriculture Bank	13	37.9	110	10	1	150.0		
- Other commercial banks					4	47.5	100	15.0
- NGOs, ODAs								
- Private	8	61.3	200	10				

5.7. To what extent are you aware of the availability of the following subsidized credit lines

	N	Very aware(%)	Aware (%)	Not aware (%)
Credit for the poor	160	3.1	60.0	36.9
Credit for student	160	4.4	48.1	47.5
Credit for sanitation works	160	0.0	20.6	79.4
Credit for buying ship	160	3.1	18.1	78.8
Credit for buying fuel	160	0.6	10.6	88.8

5.8. Are you eligible to get loan from any above subsidized credit lines?

	N	Eligible (%)	Not eligible (%)	Don't know (%)
Target communes	160	28.1	62.5	9.4
Control commune	34	32.4	55.9	11.8

5.9. Have you ever borrowed money from any of following subsidized credit lines during the last three years?

	Accessed (%)	% accessed among eligible HH (%)
Target communes	18.1	64.4
Control commune	11.8	36.4

5.10. In your opinion, how important is it for saving?

	N	Very important (%)	Important (%)	Not important (%)
Target communes	160	55.0	40.0	5.0
- Male	93	51.6	41.9	6.5
- Female	67	59.7	37.3	3.0
Control commune	34	70.6	20.6	8.8

5.11. If there is a reliable and convenient financial organization for you to deposit your savings, are you willing to make saving?

	N	Willing (%)	Not willing (%)	Can't decide (%)
Target communes	160	58.8	19.4	21.9
- Male	93	66.7	9.7	23.7
- Female	67	47.8	32.8	19.4
Control commune	34	70.6	8.8	20.6

5.12. If yes, how much can your family mobilize for saving per month? _____VND

	N	No of HH making saving (%)	Average amount per month	Max amount per month	Min amount per month	% HH Joining Hui	Most common type of saving
Target communes	166	59.0	1,623,980	20,000,000	100,000	35.7	ROSCAs
- Offshore fishing HH	39	69.2	3,675,926	20,000,000	100,000	18.5	Bank Saving
- Inshore fishing HH	71	45.1	1,490,625	6,500,000	150,000	43.8	ROSCAs
- Lagoon fishing HH	44	72.7	609,375	2,000,000	100,000	31.3	ROSCAs
- HH having fish processing	19	57.9	1,322,727	3,000,000	300,000	54.5	ROSCAs
Control commune	34	50.0	894,118	2,500,000	100,000	41.2	ROSCAs