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

BASELINE SURVEY

VOLUME 4:
BASELINE SURVEY RESULTS FOR QUANG NAM 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 South and Southeast Asia – Viet Nam

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Thua Thien Hue, April 2011

This publication has been made with the financial support from Spanish Agency of International Cooperation for Development (AECID) through an FAO trust-fund project, the Regional Fisheries Livelihoods Programme (RFLP) for South and Southeast Asia - GCP/RAS/237/SPA. The content of this publication does not necessarily reflect the opinion of AECID, FAO, RFLP, or MARD.

For bibliographic purposes, please reference this publication as:

Nguyen, V.T., Tong, T.H.H., & Truong, V.T. (2011). Baseline survey volume 4: Baseline survey results for Quang Nam Province. Regional Fisheries Livelihoods Programme for the South and Southeast Asia (GCP/RAS/237/SPA) Field Project Document 2011/VIE/7E.

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List of Acronyms

AgriBank	Bank for Agriculture and Rural Development
CPC	Commune People's Committee
DARD	Department of Agriculture and Rural Development
DONRE	Department of Natural Resources and Environment
DPC	District People's Committee
HH	Household
HP	Horse Power
MOLISA	Ministry of Labour, Invalids and Social Affairs
NAFIQAD	National Agro-Forestry–Fisheries Quality Assurance Department
NGOs	Non-Governmental Organizations
PFA	Provincial Fisheries Association
PPC	Province People's Committee
RFLP	Regional Fishers Livelihoods Programme
SDECAFIREP	Sub-Department of Capture Fisheries and Resources Protection
VBSP	Bank for Social Policies

Terminologies, Interpretation and Definitions

Target communes / communities	Refers to six RFLP target communes in Quang Nam
Control commune / community	Refers to the communes that are not RFLP target communes, but selected to provide control data, namely Tam Hoa commune in Quang Nam.
Fishing household(s)	Refers to the households in which fishing is self-reported by interviewees as main income source of the family. They include offshore, inshore, onshore and inland fishing households.
Fisher(s)	Refers to those who earn their living from capture fisheries. They are surveyed household who are from fishing households
Female	Refers to female respondents of surveyed households
Male	Refers to male respondents of surveyed households
Female fisher(s)	Refers to female respondents of the surveyed households who are from the fishing households
Male fisher(s)	Refers to male respondents of surveyed households who are from the fishing households
Resource managers	Include 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]. The fishing is carried out more than 24 hours to months.
Inshore fishing (in-shore fishing)	Fishing in the sea within 24 miles from the coast[2]. The fishing is carried out within 24 hours
On-shore fishing	Fishing from the land (coast)
Inland fishing	Fishing in rivers, river mouths, lakes, and streams
Formal services/systems	State owned / legally recognized services / systems
Informal services/systems	Community-based or private services / system without legal status.
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, business people, etc.) and external agents (non-governmental organizations (NGOs), academic and research institutions) share the responsibility and authority for fishery management.

[1] As defined by Quang Nam SDECAFIREP
[2] As defined by Quang Nam SDECAFIREP

Executive Summary

Vietnam is one of the six countries where the Regional Fisheries Livelihoods Programme (RFLP) funded by the Kingdom of Spain conducts activities. The aim of the RFLP is to improve livelihoods and sustainable fishery resources management through achievement of five outputs - (1) Building co-management mechanisms for sustainable utilization of fishery resources (Co-management); (2) Improving safety and reduced vulnerability for fisher communities (Safety at sea); (3) Improving quality of fishery products and market chains (Post harvest and marketing); (4) Strengthening and diversifying income opportunities for fisher families (Livelihood diversification and improvement); (5) Facilitating access to micro-finance services of the fishers, processors and vendors (Micro-finance). In order to establish the foundation for building, monitoring and evaluating the programme activities, a baseline survey has been carried out.

Both qualitative and quantitative methods were used to understand the current situation of the five outputs in Quang Nam province. The data and information related to the five outputs was collected through the in-depth interview with 57 key informants, 28 group discussions with male and female fishers, 218 households being interviewed and the reports and statistics of different offices at different levels. The baseline survey experienced some following key findings:

Output 1 - Co-management

The fishery resource is managed by the government as well as communities, however, the government is still taking the main role. The responsibility of the users – fishers in managing fishery resource is not clearly defined. Policies related to co-management almost have not been implemented in the province. “Co-management” is still a new term to the majority of fishers - 71.3% of respondents were not aware of this term. Accordingly, 76.6% had no idea of the usefulness of co-management.

Output 2 - Safety at sea

The majority (96.2%) of fisher households are aware of the safety information and regulations. The development of communication devices such as radio, television or mobile phone provided more opportunities for the fishers to access safety information. 76% of the respondents stated that it was easy to access information. However, the compliance percentage is still low. The number of fishers obeying regulations was only 45.5%. Remarkably, none of onshore fishers comply with safety regulations.

The number of fishers who have never participate to the training courses on avoiding accidents at sea is still high - 61.7%. Nevertheless, the majority of fishers remarked they were confident of avoiding accidents - 16.4% were “very confident” and 73.8 30% were “confident”.

Output 3 - Post harvest and marketing

Most of the surveyed fishers were skillful in post harvest measures, with the exception of using chemicals. The majority of fishers rated themselves as very skillful in using ice – 80.4% in the target and 90% in the control commune while this figure ranged from 16.3 to

31% for salting, drying or grilling. The fishers use only simple measures based on their own experiences to process their products. The majority of respondents in the target and control commune have not participated in any training courses on post-harvest during the last three years – 94.6% and 96.7% respectively. Remarkably, 100% of households who practice fish processing did not attend any courses. Moreover, the equipment used to preserve aquatic products is primitive. Ice storage and boxes are the main methods used to keep aquatic product fresh during transportation - used by 35.9 and 80.1% of the surveyed fishers respectively. The majority of fishery raw products are sold to the middlemen. The fishers emphasized that they are highly dependent on the middlemen in terms of the selling prices.

Output 4 - Livelihood diversification and improvement

The income sources of the fisher household are not particularly diversified. 34.6 of surveyed households had only one income source, while households having two or more than two income sources were – 48.4% and 17.0% respectively. Fishing is still the main income source for the majority of households. Because of fishery resource degradation, the number of fishers stated that they have the same or worse livelihood opportunities than five years ago takes a large proportion – 62.2%.

60.6% of the respondents showed their dissatisfaction with their current livelihoods. As a result, the majority of fishers want to change their livelihood – 86.2%. The change of livelihood of the fishers is constrained by some key factors such as the shortage of skilled labors, the shortage of financial capital, the shortage of job opportunities and the under development of infrastructure.

Output 5 – Micro-finance

There are a number of formal as well as informal financial institutions operating in Quang Nam province. However, according to a number of people - 39.9% of the respondents – it is difficult to access the credit when needed. In terms of choosing financial services for credit, more than 92% of the respondents prefer formal credit. The low interest rates of the formal credit are the major reason for this. However, the number of people who were satisfied with formal credit institutions was not particularly high – 49.5% for VBSP and 37.2% for AgriBank. The complicated procedures were the main reason for this.

I. Profile of Surveyed Communes and Households

1. Fishery sector of the province

Quang Nam is located in the coastal centre of Vietnam, about 860 km north of Ho Chi Minh city and 865 km south of Ha Noi. Quang Nam covers 10,405.14 km^2 and is divided into 17 districts, one town and one city. Of which, eight districts are located along the coastline and depend on fishery resources for their livelihoods.

In the fishery stock, people can get income from fishing, fishing processing as well as aquaculture. Of which, fishing being the traditional livelihood provides jobs for about 25,000 labors (DARD Quang Nam, 2009 and DARD Quang Nam, 2010). Fishing activity is intensifying with increasingly investment in labors, boats, improved fishing techniques and gears. However, fishing in Quang Nam is less developed than in neighboring Da Nang and Quang Ngai. The majority of boats are less than 20 HP – around 68% (Table 1). This creates pressure on inshore fishery resources. As a result, the total fish catch does not increase much, and in some areas may even decrease because the fishery resources are degraded by over-exploitation. The total fish catch of the province in 2010 was about 57,600 ton – about 5% higher than in 2009 (Quang Nam PPC, 2010). However, the average fish catch per household has decreased.

Table 1: Boat classification by capacity

Capacity	Number of boats	%
Total	4,346	100.0
> 400 HP	19	0.4
250 HP – <400	33	0.8
90 – <250	125	2.9
50 – 90 HP	166	3.8
20 – 50 HP	1,047	24.1
< 20 HP	2,956	68.0

(Source: SDECAFIREP, 2010)

The degradation of fishery resources has encouraged local people to practice aquaculture - especially raising shrimp in ponds in sandy areas. By 2009, 7,338 hectares of land (DARD Quang Nam, 2009) had been converted to this activity. At the beginning, aquaculture brought large profits for a number of people. Aquaculture production developed dramatically in terms of both area and productivity. Nevertheless, environmental pollution coupled with disease outbreaks diminished productivity and profit. According to the report of Quang Nam People's Committee, the aquaculture productivity in 2010 decreased by 20% compared to the productivity of 2009 (Quang Nam PPC, 2010). More and more aquaculture households have fallen into debt in coastal areas of Quang Nam province.

Apart from fishing and aquaculture, fish processing provides opportunities for fisher households to improve their livelihoods. However, the number of households as well as enterprises operating processing is not really high. Quang Nam had 29 enterprises including medium and small operators conducting fishery processing (DARD Quang Nam, 2010). However, only five enterprises have been issued food safety and hygiene certificates, according to NAFIQAD (National Agro - Forestry – Fisheries Quality Assurance

Department). Processing can increase the value for fishery products and so fishers' income. However, the majority of fishers sold their products as raw material without basic processing. They had little skill or knowledge on processing.

Table 2: Capture fisheries production and aquaculture production between 2005-2009

	2005	2006	2007	2008	2009
Total (tons)	45,481.0	46,081.0	55,127.0	56,893.0	73,430.0
Fish catch (tons)	42,330.0	43,151.0	50,556.0	51,643.0	54,836.0
Aquaculture productivity (tons)	3,151.0	2,930.0	4,571.0	5,250.0	16,812.0
Exported value (million USD)	22.6	26.4	22.2	25.2	24.0

(Source: General Statistic Office)

In summary, the development of the fishery stock is constrained by the degradation of fishery resources, environmental pollution and the shortage of processing knowledge. The picture of the fishery stock of Quang Nam province is not really bright. It needs to be resolved to improve the livelihoods of the local people.

2. Characteristics of the surveyed communes

The survey was conducted in seven communes (six target communes and one control commune) of three districts – Duy Xuyen, Thang Binh and Nui Thanh of Quang Nam province (Table 3). The six target communes - Duy Nghia, Duy Hai, Binh Minh, Binh Hai, Binh Nam and Tam Tien - were assigned by RFLP Vietnam. The control commune – Tam Hoa - was selected by consulting with SDECAFIREP and RFLP's coordinators based on two key criteria. Firstly, it had to be a fishing community that had similar social – economic characteristics to the target communes. Secondly, the fishery livelihood of the control commune should be similar to those of the target communes.

Table 3: Number of fishing villages and poverty[3] rate in the surveyed communes

Commune	Number of villages	Number of fishing village	Number of HHs	Number of poor HHs	% of poor HHs
Duy Nghia	6	3	2,506	716	28.6
Duy Hai	5	5	1,818	482	26.5
Binh Minh	4	4	1,706	344	20.1
Binh Hai	6	3	1,541	437	28.4
Binh Nam	6	2	2,311	536	23.2
Tam Tien	12	7	3,025	802	26.5
Tam Hoa (CC)	9	3	2,346	490	20.9

(Source: Binh Hai CPC, 2009a; Binh Minh CPC, 2009a; Binh Nam CPC, 2009a; Duy Hai CPC, 2009a; Duy Nghia CPC, 2009a; Tam Hoa CPC, 2009a; Tam Tien CPC, 2009a).

The surveyed communes were comprised of agricultural and fishing villages. The fishing villages ranged from 30 to 100% of the total villages of each commune. Of which, Duy Hai and Binh Minh were entirely comprised by fishing villages. The poverty rate ranged from 20.12 to 28.57%. This poverty rate was considerable higher than the average of the province

[3] The MOLISA definition of 'poor' are households with an average monthly income of less than 200.000 VND per person.

– 17% (Quang Nam PPC, 2009). Generally, the poverty rate of the control commune was lower than of the target communes.

The proportion of fishery labor among communes was considerable different. The number of labors in the fishery stock in the surveyed communes ranged from 25 to 70% (Table 4). The number of fishers in the control communes was lower than in the target communes. Accordingly, the dependence on fishery for livelihood in the target communes was much higher than in the control. The proportion of labor in the service sector was very low – 1.7 to 22%. Besides farming, fishery and service stock, local people were also employed as hired labour or factory workers. However, agriculture (including farming and fishery) was still a crucial livelihood in the surveyed communes.

Table 4: Labor categories by industry in the surveyed communes

Commune	Farming (%)	Fishery (%)	Service (%)	Other (%)
Duy Nghia	39.6	38.2	1.7	19.5
Duy Hai	18.0	30.0	22.0	30.0
Binh Minh	10.0	70.0	10.0	10.0
Binh Hai	60.0	30.0	5.0	5.0
Binh Nam	70.0	27.0	3.0	0.0
Tam Tien	30.0	50.0	10.0	10.0
Tam Hoa (CC)	55.0	25.0	10.0	10.0

(Source: Binh Hai CPC, 2009b; Binh Minh CPC, 2009b; Binh Nam CPC, 2009b; Duy Hai CPC, 2009b; Duy Nghia CPC, 2009b; Tam Hoa CPC, 2009b; Tam Tien CPC, 2009b).

Table 5 presents the structure of fishery stock in the surveyed communes. For fishing, the majority of fishers are inshore and on shore fishing households. The capacity to invest in capture fisheries of both the fishers and the local authorities is still low. Off shore fishing bring higher income than others, according to the majority of fishers however, they have insufficient capital to invest in the big boats needed for off shore fishing. The households categorized as off shore fishing were mainly those who worked as hired labour for boat owners from Da Nang, Quang Ngai or in the South. Moreover, there is the shortage of infrastructure including a sea port to anchor large vessels during the storm season. *"The big boats need a deep berth to anchor. However, we only have a shallow berth. This shallow berth is not enough to anchor our boats in terms of quality and quantity. How can we protect our boats when we come home, especially in the storm season?"* – One fisher claimed in the group discussion.

Table 5: Types of fisheries - based households in the surveyed communes

Commune	Off shore fishing HHs	Inshore fishing HHs	On shore fishing HHs	Aquaculture HHs	Fish processing HHs	Fisheries service HHs
Duy Nghia	19	36	-	45	-	4
Duy Hai	1	800	200	0	80	12
Binh Minh	420	850	-	60	90	11
Binh Hai	0	45	350	90	0	0
Binh Nam	89	368	-	104	0	4
Tam Hoa (CC)	67	215	200	310	-	1

(Source: Binh Hai CPC, 2009b; Binh Minh CPC, 2009b; Binh Nam CPC, 2009b; Duy Hai CPC, 2009b; Duy Nghia CPC, 2009b; Tam Hoa CPC, 2009b; Tam Tien CPC, 2009b).

3. Characteristics of the household respondents

188 households in the target communes and 30 households in the control commune were surveyed. Of these, 21.3% and 13.3% were female respectively. The majority of the survey samples ranged in age from 30 to 60 years old. Most respondents were of working age.

Table 6: Age and sex of the household respondents

		Age range (%)				Sex (%)	
	N	<30	30-45	45-60	>60	Male	Female
Target communes	188	3.7	37.8	53.2	5.3	78.7	21.3
Control communes	30	0.0	33.3	43.3	23.3	86.7	13.3

(Source: Household survey, 2010)

Table 7 shows the diversification of the survey sample in terms of living standard and profession. For living standard, the number of non-poor households surveyed was significant higher than the number of poor. The poverty rate in the surveyed communes was considerable high. However, the poor households were mainly those with family members with a disability, who were elderly or had other ailments. Therefore, the number of surveyed poor households was limited. The majority of capture fishers were inshore and on shore fishing households. These households went fishing for less than a day. Typically they went to the sea in the morning and returned in the evening or vice versa. Therefore it was easy to access them for data collection.

Table 7: Classification of the surveyed households

Classified		Target communes	Control commune
By poverty	Non-poor HHs	144	26
	Observed poor HHs	33	1
	Certified poor HHs	11	3
By fishery activity	Offshore fishing HHs	25	4
	Inshore fishing HHs	121	24
	On shore fishing HHs	32	2
	Inland fishing HHs	5	0
	Aquaculture HHs	5	0

(Source: Household survey, 2010)

One fisher household typically has four or five members. This household size was as big as of other households, for example agricultural households. This means that most surveyed households had two productive people, usually the husbands and wives. Normally, husbands practiced fishing while their wives operated small businesses, rear livestock, work as labour and did house work.

II. Baseline Analysis of Five Outputs

1. Co-management

1.1. The policies and stakeholders related to co-management

1.1.1. An overview of policies related to co-management

Co-management is seen as a new method in which the management right is empowered to the communities by the government. The usefulness of co-management for natural resource management has been proved globally by researchers, authorities as well as local people. In the circumstance of natural resource degradation in general and fishery resource in specific, the Vietnamese Government as well as the local government have promulgated a number of policies to promote co-management practices.

According to The Fishery Law promulgated by Vietnamese National Assembly in 2003, the right of local people is conceded in the clause No 3, article No 15 *"... Creating favourable conditions for local people to practice their rights - monitor and denounce fishery law offence behaviours in the exploiting zone ..."* The decree number 123/2006/NĐ-CP issued in 27/10/2006 allocated management right to local government and communities: *"... Decentralizing management right to the Province People's Committee, Commune People's Committee; developing community-base management models for fishery resource management ..."* Although co-management has been facilitated legally, co-management is still not operated in the practice. In order to speed up the implementation of co-management, the State issued the official circular number 1700/BNN-KTBVNL dated in 16/06/2009. This circular requests the People's Committees at provincial level to support and foster the operation of co-management models at the local.

At the provincial level, responding to the State policies, some decisions have been issued by Quang Nam Provincial People's Committee. Decision number 58/2005/QĐ-UBND dated 29/08/2005 promulgates the regulations on fishery exploitation operation based on the Fishing cooperatives. The decision number 08/2009/QĐ-UBND and 09/2009/QĐ-UBND in 21/4/2009 promulgates the projects "Community-based management for aquaculture practice" and "Community-based management for fishing activity" respectively.

Many policies to promote co-management implementation have been promulgated at both national and provincial level. However, the distance between theory and practice is great. Only a few co-management models have been developed in Vietnam. Moreover, the term "co-management" even has not been understood by a number of authorities. The implementation of these policies is constrained by the shortage of financial capital and knowledge, according to Quang Nam authorities.

1.1.2. The stakeholders related to fishery resource co-management

Natural fishery resources have been managed by a number of stakeholders at different levels – province, district and commune. At the Provincial level, there are four key stakeholders. Firstly, the Provincial People's Committee (PPC) is responsible for fishery resource management at the province level. The PPC promulgates as well as withdraws decisions, guidelines and policies on fishery resource management. In addition, the PPC promotes and

monitors the implementation of these documents. Secondly, the Department of Agriculture and Rural Development (DARD) plays a role as an advisor to the PPC in making plans for fisheries management and development. Thirdly, the Sub-department of Capture Fisheries and Resource Protection (SDECAFIREP) is responsible for managing fishing activities through zoned fishing grounds, issuing fishing certificates to local people, patrolling and monitoring capture fisheries activities; protecting fishery resources and acts as an advisor to the PPC in making decision, implementing policies related to fishery resource management. Fourthly, the Provincial Fishery Association (PFA) established in 2005 has a responsibility to protect and develop the fishery resource through building "sub-associations". However, the role of PFA in fishery resource management is still legally not clear.

At district level, the District People's Committee (DPC) is responsible for fishery resource management in its district. The DPC directs and monitors the implementation of PPC documents. The District Section of the Agriculture and Rural Development and District Office of Resource and Environment (DONRE) are the institutions directly disseminating, executing and monitoring the implementation of PPC document in the lower level – commune. Moreover, these two institutions are responsible for giving advices to DPC on fishery resource management.

At the commune level, the Commune People's Committee (CPC) is responsible for fishery resource management in the commune. In the commune, the staff in charge of agriculture and fishery and / or the vice chair-person in charge of economics are assigned to deal with issues related to fisheries. In Quang Nam, there is a number of Fishery Cooperatives established in most communes/villages. However, the management almost has not been practiced by these cooperatives. The fishers are mainly organized to rescue each other from dangers (storms, accidents on the sea) and to provide mutual assistance in terms of finance, and fishing techniques.

Moreover, the management of fishery resources is monitored by border posts, waterway police as well as sea police. These agencies have right to penalize illegal behavior for example using destructive fishing gears, and fishing in protected areas.

In general, the fishery resource has been managed by the government and to a lesser extent by communities, however, the government has played the main role. The responsibility of the users – fishers in managing fishery resource has been legally unclear. This has been also contributing to speed up the degradation of fishery resources. Accordingly, the role of community needs to be enhanced and improved to reduce and ideally reverse the process of fishery resource degradation.

1.2. Perception of respondents to the fishery management and conflict resolution systems

The perception of the respondents to the effectiveness of the community-based and government fishery resource management was investigated in the interviewed households. The perception on the usefulness of fishery resource management from the government is shown in Table 8. 72.3% of respondents in the target communes stated that the government management was "effective" and "very effective". For Control commune, this figure was 86.7%. This means that people thought the State has an important role in fisheries resource management. For gender, there was no difference between men and women in their

perception of the effectiveness of the State in fishery resource management. However, percentage of women who responded "no idea" was higher than that of men in both the RFLP and CC communities. This may means that women were less aware of, or involved in and had less voice than men in resource management. 27.5% in Target communes and 25% in Control commune had no idea or opinion on the topic, or did not want to give an opinion.

Table 8: Effectiveness of government fishery management systems

	N	Very effective (%)	Effective (%)	Not effective (%)	No idea (%)
Target communes	**188**	**37.2**	**35.1**	**13.3**	**14.4**
- Male	148	39.9	33.8	15.5	10.8
- Female	40	27.5	40.0	5.0	27.5
Control commune	**30**	**60.0**	**26.7**	**6.7**	**6.7**
- Male	26	65.4	23.1	7.7	3.8
- Female	4	25.0	50.0	0.0	25.0

(Source: Household survey, 2010)

As mentioned above, communities play only a minimal role in fishery management. This was reflected in the perception of the respondents. In the target communes, the proportion of respondents having "no idea" about the effectiveness of community-based management system was high – 37.2%. 49% of respondents stated that community-based management was an effective method, while 13.8% of people responded the opposite – "not effective".

Table 9: Effectiveness of community-based fishery management systems

	N	Very effective (%)	Effective (%)	Not effective (%)	No idea (%)
Target communes	**188**	**34.6**	**14.4**	**13.8**	**37.2**
- Male	148	37.1	15.5	14.9	32.4
- Female	40	25.0	10.0	10.0	55.0
Control commune	**30**	**46.7**	**13.3**	**16.7**	**23.3**
- Male	26	53.8	15.4	15.4	15.4
- Female	4	0.0	0.0	25.0	75.0

(Source: Household survey, 2010)

Table 10 shows the fishers' perception on the effectiveness of conflict resolution systems – community-based and the government. The proportion of respondents having "no idea" was also still high - 43.1% for both the community-based as well as the government mechanism. The effectiveness of the community-based mechanism was more highly appreciated than that of the government – 40.9% compared to 35.1%. *"Scrambling for fishing ground is the main conflict that we often get in the sea. However, we rarely see the appearance of the Government when we get conflict with other boats, especially boats from outside the province. We usually solve conflicts by ourselves. Normally, we have to make concessions to others to save our lives and property. Our boats are small and we only have a few crew compared to others. We cannot argue with them even if we are right."* – stated by a fisher in a group discussion. In terms of gender, there is a difference between male and female in evaluating the effectiveness of both systems, with women being more positive than men about the effectiveness of community based management for conflict resolution.

Table 10: Effectiveness of conflict resolution systems

	N	CB mechanism			Government mechanism		
		Effective (%)	Not effective (%)	No idea (%)	Effective (%)	Not effective (%)	No idea (%)
Target communes	**188**	**40.9**	**16.0**	**43.1**	**35.1**	**21.8**	**43.1**
- Male	148	38.5	17.6	43.9	34.5	23.6	41.9
- Female	40	50.0	10.0	40.0	37.5	15.0	47.5
Control commune	**30**	**66.7**	**10.0**	**23.2**	**50.0**	**23.3**	**26.7**
- Male	26	65.4	11.5	23.1	46.2	26.9	26.9
- Female	4	75.0	0.0	25.0	75.0	0.0	25.0

(Source: Household survey, 2010)

1.3. Understanding and expectation of the concept "co-management" among the fishers and the staffs

In terms of perception of the people on co-management, percentage of people who understood co-management was only 27% while those that did not understand was dramatically high - 71.3%. This reflects that co-management was still a new concept to many. For government staff, the proportion of people that were aware of co-management was much higher than that of local fishers. Their awareness was probably higher because of decisions, decrees, policies and/or training courses attended. There was a considerable difference between the target and Control commune in their awareness of co-management. This is because some courses on co-management were delivered to local people in the target communes before the survey.

Table 11: Awareness of fishery "co-management"

Target group	N	Very aware (%)	Aware (%)	Not aware (%)
Target communes	**188**	**1.1**	**27.6**	**71.3**
- Fisher	183	1.1	28.4	70.5
- Male fisher	144	0.7	29.5	69.8
- Female fisher	39	2.7	24.3	73.0
- Inshore fishing HH	121	0.8	31.4	67.8
- Inland fishing HH	5	0.0	40.0	60.0
- Off shore fishing HH	25	0.0	16.0	84.0
- On shore fishing HH	32	3.1	25.0	71.9
Government staff	**23**	**8.7**	**65.2**	**26.1**
Control commune	**30**	**0.0**	**10.0**	**90.0**
- Fishers	30	0.0	10.0	90.0
- Male	26	0.0	7.7	92.3
- Female	4	25.0	0.0	75.0

(Source: Household survey, 2010)

Table 12 experiences the perception of the fishers and government staff on the usefulness of co-management in fishery resource management and livelihood improvement. The majority

of fishers were not aware of the usefulness - 76.6% and 90% had "no idea" in the target and Control commune respectively. This reflects the poor development of co-management in Quang Nam province. In contrast, the majority of government staff (52.1%) perceived co-management as useful in fishery resource management and livelihood improvement. This evaluation is probably from their assessment of lessons learned from other provinces.

Table 12: Perception on overall usefulness of fishery co-management in fishery resources management and livelihood improvement

Target group	N	Very useful (%)	Useful (%)	Not useful (%)	No idea (%)
Target communes	**188**	**6.9**	**16.5**	**0.0**	**76.6**
- Fisher	183	7.1	16.9	0.0	76.0
- Male fisher	144	7.5	17.8	0.0	74.7
- Female fisher	39	5.4	13.5	0.0	81.1
Government staff	**23**	**13.0**	**39.1**	**8.7**	**39.1**
Control commune	**30**	**3.3**	**6.7**	**0.0**	**90.0**
- Fisher	30	3.3	6.7	0.0	90.0
- Male	26	0.0	7.7	0.0	92.3
- Female	4	25.0	0.0	0.0	75.0

(Source: Household survey, 2010)

1.4. Participation in fishery management

Table 13 shows that 60.5% of people in the target communes actively participated in the fishery management meetings while 39.5% passively participated. The fishers who did not participate in the meetings frequently and did not express their voice on fishery issues were considered as passively participating households and vice versa. 16.5% of respondents did not attend any fishery management meetings. In case of the control communes, percentage of people who actively and passively participated in the meetings was 40.7% and 59.3% respectively. The participation of women in fishery management meetings was less than men in both Target and Control communes.

Table 13: Stakeholder participation in fishery management meeting

Target group	Households participate			Not participate (%)	Participate in meeting on FM during last 6 months (%)
	N	Actively participate (%)	Passively participate (%)		
Target communes	**157**	**60.5**	**39.5**	**16.5**	**70.7**
- Fisher	152	60.5	39.5	16.9	69.7
- Male	119	62.2	37.8	18.5	68.9
- Female	38	54.5	45.5	10.8	72.7
Control commune	**27**	**40.7**	**59.3**	**13.3**	**51.9**
- Fisher	27	40.7	59.3	13.3	51.9
- Male	25	41.7	58.3	7.7	54.2
- Female	2	33.3	66.7	25.0	33.3

(Source: Household survey, 2010)

1.5. Fishers' and resource managers' perception on the fisheries resource situation and benefit allocation from fisheries

Table 14 shows the perception of fishers and government staff on fish catch over the past five years. In the target communes, the increase of fish catch was remarked by more than 50%. According to the fishers, increasing investment in fishing gears and boat capacity had resulted in more fish catch than before. There was a considerable difference between the target and control commune in perceiving the fish catch tendency. While the majority of respondents target communes thought fish catches had increased, the majority in the Control commune stated the opposite. The decrease trend of fish catch was emphasized by only 28.7% of the respondents in the target while this figure was 63.3% in the control commune. The decrease in fish catches was explained by a number of reasons. Firstly, the fishery resource, especially in the inshore area has been degraded while the inshore fishers cannot afford to build big boats to practice offshore fishing. Secondly, the number of fishing days has declined because the weather has worsened. Thirdly, the establishment of Cu Lao Cham conservation zone has prevented fishers from accessing the abundant fishing grounds.

Table 14: Fishers and resource managers' perception on state of the fish catch during the last five years

Target group	N	Increase (%)	Decrease (%)	No change (%)	No idea (%)
Target communes	**188**	**55.9**	**28.7**	**13.8**	**1.6**
- Fishers	183	55.2	29.0	14.2	1.6
- Male fisher	144	52.7	32.2	13.0	2.1
- Female fisher	39	64.9	16.2	18.9	0.0
Resources managers	**14**	**28.6**	**64.2**	**7.1**	**0.0**
Control commune	**30**	**26.7**	**63.3**	**10.0**	**0.0**
- Fishers	30	26.7	63.3	10.0	0.0
- Male	26	23.1	65.4	11.5	0.0
- Female	4	50.0	50.0	0.0	0.0

(Source: Household survey, 2010)

Predicting the fish catch trend for the next five years, 60.6% of people in target communes believed that fish catch will increase. These people believed that with the modern fishing technology as well as higher investment in improving boat capacity they will catch more fish. However, a significant number of fishers stated they thought catches would decline over time - 17% in the target and 33.3% in the control. The degradation of fishery resource was the main cause of this pessimism. Male and female almost shares the same perception.

Table 15: Fishers and resource managers' perception on state of the fish catch during the next five years

Target group	N	Increase (%)	Decrease (%)	No change (%)	No idea (%)
Target communes	**188**	**60.6**	**17.0**	**7.5**	**14.9**
- Fisher	183	60.1	17.5	7.7	14.7
- Male fisher	144	60.3	19.9	6.8	13.0
- Female fisher	39	59.5	8.1	10.8	21.6
Resources managers	**14**	**21.4**	**64.3**	**14.3**	**0.0**
Control commune	**30**	**40.0**	**33.3**	**13.4**	**13.3**
- Fisher	30	40.0	33.3	13.4	13.3
- Male	26	38.5	38.5	11.5	11.5
- Female	4	50.0	0.0	25.0	25.0

(Source: Household survey, 2010)

In terms of the perception on benefits allocation, the majority of respondent in both the target and control commune – 55.3% and 80% respectively - stated that the allocation of fishery benefits among people was not equal. According to them, better off households were the people who got more benefits from fishery resource, so they could buy big boats or modern fishing gears for fishing. This allowed them to find abundant fishing grounds further from the shore to catch fish. As the inshore fishery stocks degrade, the rich will become richer while the poor will become poorer.

Table 16: Perception on the benefit allocation from fisheries resources

	N	Equitable (%)	Inequitable (%)	No idea (%)
Target communes respondents	188	41.5	55.3	3.2
Control commune respondents	30	20.0	80.0	0.0
Resources managers	22	4.5	95.5	0.0

(Source: Household survey, 2010)

2. Safety at sea

2.1. An overview of documents related to safety at sea

The loss in terms of lives and access of fisher households over the sea strengthen the importance of safety at sea. Accordingly, the regulations on safety at sea have been delivered to the fishers by the government through the decrees, circulars and decisions. These legal documents provide guidelines for the fishers to comply with safety at sea regulations and set up legal frameworks for the government agencies to manage the safety conditions of the boat fleet.

Firstly, decision number 494/2001/QĐ-BTS dated 15/06/2001 by MARD regulates that all types of fishing boats have to be registered and that all boats over 20 HP have to be inspected annually by a government officer.

Secondly, Decree No. 66/2005/NĐ-CP dated 19 May 2005 by Vietnamese Government issues the regulations to guarantee the safety for the fishers and fishing boats. According to

this decree, *"the fishing boats have to be equipped with safety equipment and communication equipment to ensure the safety of both humans and boats depending on the regulated standards"*. In addition, the regulations on boat registration and inspection and responsibility of the captain and boat members are mentioned.

Thirdly, responding to decree number 66/2005/NĐ-CP Circular number 02/2007/TT-BTS dated 13 July 2007 by the Ministry of Fisheries issues guidelines for the implementation of this decree.

Fourthly, the Minister of MARD issued Decision No. 77/2008/QĐ-BNN dated 30 June 2008 to approve the regulations on training and issuance of certificates for captains, and mechanics.

Fifthly, Decree No 33/2010/NĐ-CP dated 31 March 2010 by Vietnamese Government issues regulations on the management of capture fisheries activities for individuals and organizations at sea.

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

The majority of fisher households stated that they know about the safety information and regulations. The propaganda through training courses, handouts, lift charts and posters and the inspection of the government has played a crucial role in improving local people's perception. Very few respondents were unaware – 10.4 and 3.3% in the target and Control commune respectively. The people who were unaware of the safety at sea information and regulations were households practicing on shore or inland fishing. These households went fishing during the day with small boats, therefore, they had not learned about safety issues.

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

Target group	N	Very aware (%)	Aware (%)	Not aware (%)
Target communes	**188**	**20.7**	**68.6**	**10.7**
- Fisher	183	21.3	68.3	10.4
- Male fisher	144	21.0	69.2	9.7
- Female fisher	39	22.5	65.0	12.5
Government staff	**13**	**30.8**	**61.3**	**0.0**
Control commune	**30**	**6.7**	**90.0**	**3.3**
- Male	26	7.7	92.3	0.0
- Female	4	75.0	25.0	0.0

(Source: Household survey, 2010)

In terms of the possibility on access to safety at sea information, a large number of fishers in both the target and control commune experienced that it is easy to access to information. However, this proportion with easy access to information was significantly higher in the control commune against the target communes – 93.3 compared to 70.1%. The development of communication devices such as radio, television and mobile phones has provided more opportunities for the fishers to access safety at sea information. The perception of men and women was not significantly different.

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

	N	Easy (%)	Difficult (%)	No idea (%)
Target communes	**188**	**76.6**	**12.2**	**11.2**
- Fisher	183	70.1	12.0	17.9
- Male fisher	144	76.9	13.3	9.8
- Female fisher	39	77.5	7.5	15.0
Government staff	**10**	**90.0**	**10.0**	**0.0**
Control commune	**30**	**93.3**	**3.3**	**3.4**
- Fisher	30	93.3	3.3	3.4
- Male	26	96.2	3.8	0.0
- Female	4	75.0	10.0	15.0

(Source: Household survey, 2010)

Table 19 presents the satisfaction with the channels for transferring safety at sea information. Radio and television were highly appropriated as satisfaction by the respondents. More than 70% of respondents were satisfied with these channels. The information transferred by radio and television were updated and accurate, according to fishers. The majority of respondents were displeased with commune broadcasting systems and complaining that the information broadcast by this system was very poor. Moreover, some fishers were unable to hear clearly because this system broadcast is set far from their houses.

Table 19: Fishers' satisfaction with the channels for transferring safety at sea information

Channel	N	Satisfied (%)	Not satisfied (%)	No idea (%)
Radio	183	86.7	3.7	9.6
Coastal radio station	183	21.3	3.2	75.5
Coastal border post communication systems	183	40.0	6.9	53.1
Television	183	73.9	3.2	22.9
Commune broadcasting systems	183	50.5	27.7	21.8
Personal communication (mobile)	183	75.5	5.9	18.6

(Source: Household survey, 2010)

For the government staff, the satisfied proportion with radio and television also occupied large proportion – 57.1 and 66.7% respectively. The staff explanation for this was the same as for fishers. Table 20 shows that surprisingly, 100% of the government staff had no idea about the coastal radio station and coastal border post communication system. The staff claimed that these channels were not very helpful for transferring safety at sea information to people and therefore, they were not appreciated.

Table 20: The government staff satisfaction with the channels transferring safety at sea information

Channel	N	Satisfied (%)	Not satisfied (%)	No idea (%)
Radio	7	57.1	42.9	0.0
Coastal radio station	6	0.0	0.0	100.0
Coastal border post communication systems	6	0.0	0.0	100.0
Television	9	66.6	33.3	0.0
Commune broadcasting systems	7	42.9	28.6	28.5
Personal communication (mobile)	6	**16.7**	**0.0**	**83.3**

(Source: Household survey, 2010)

The majority of fishers highly appreciated the usefulness of safety at sea information. More than 95% of respondents stated that the safety at sea information is useful for their family. Thanks to this information, the loss in terms of lives and access was reduced dramatically. Moreover, it helped fishers feel more secure when fishing.

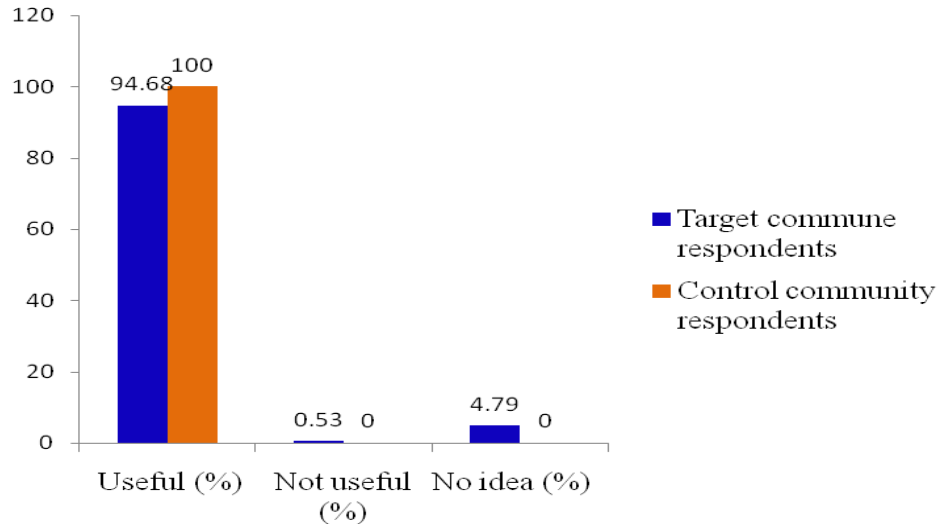

Figure 1 Fishers' assessment of usefulness of safety at sea information
(Source: Household survey, 2010)

2.3. Compliance with safety at sea regulations

The compliance with safety at sea regulation plays an important role in reducing sea accidents. The awareness on the regulation considerably influences compliance. A large number of respondents were aware of basic safety at sea items. However, the number of off shore fishing households who were aware of the basic safety items was higher than others (Table 21). The fishers who were not aware of safety items normally were the onshore and inland fishing. They were artisanal fishers and their boats were not inspected by the government. Therefore, they did not understand the safety items.

Table 21: Fisher's awareness of basic safety items/equipment whiling fishing at sea

Item	Very aware (%)		Aware (%)		Not aware (%)	
	Off shore fishers	Others	Off shore fishers	Others	Off shore fishers	Others
Life-vest	93.1	76.7	3.5	19.1	3.5	4.2
Life buoy	89.7	65.1	3.5	25.4	6.9	9.5
Communication devices	86.2	57.1	6.9	29.6	6.9	13.2

(Source: Household survey, 2010)

Table 22 records the compliance of the fishers with the safety at sea regulations. The number of fishers obeying the regulations was only 45.5%. There was a remarkable difference between offshore, inshore and onshore fishers. No onshore fishers complied with the safety regulations. According to these fishers, the authority did not monitor them because their fishing boats were small non-mechanized boats and they only went fishing during the day. As a result, they did not care whether their boats were equipped with safety equipment. On the contrary, most offshore fishers followed safety regulations – 80%. The monitor of the government offices especially the border posts and the risks in fishing far from the shore have been improving the awareness of these households.

Table 22: 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	**183**	**76.8**	**72.5**	**48.0**	**45.5**
- Offshore fishing HH	25	92.0	96.0	84.0	80.0
- Inshore fishing HH	121	60.0	80.0	40.0	40.0
- Onshore fishing HH	32	57.0	63.6	32.2	0.0

(Source: Household survey, 2010)

2.4. Fishing accident and effectiveness of rescue systems

The effectiveness of rescue activities was viewed positively by the majority of respondents (Table 23). The rescue activities saved numbers of lives and assets of the fishers, especially during storms. *"Thank to the rescue activities of the Government I feels more secure when I go fishing in the sea. Last year, the rescue activity of the border post saved my life and my boat when the boat got into an accident during an unexpected storm. In that circumstance, I communicated with the border post for help. Immediately, their staff came and rescued me, my colleagues and my boat."* – stated by a fisher from Binh Minh commune. More than 70% of the fishers rated the rescue services as effective or better. About 22.3% of the respondents had no idea of the effectiveness of rescue activities, however, they explained this was because they had never seen or received any rescue activities while at sea.

Table 23: Fisher's perception on the effectiveness of rescue services

Type of HH	N	Very effective (%)	Effective (%)	Ineffective (%)	No idea (%)
Target communes	**183**	**55.9**	**14.4**	**7.4**	**22.3**
- Offshore fishing HH	25	64.0	12.0	4.0	20.0
- Inshore fishing HH	121	57.0	15.7	8.3	19.0
- Onshore fishing HH	32	50.0	12.5	12.5	25.0
Control commune	**30**	**76.7**	**16.7**	**3.3**	**3.3**

(Source: Household survey, 2010)

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

Table 24 presents the participation of the fishers in training courses on avoiding sea accidents. Although training courses on avoiding sea accidents are introduced annually in coastal communes – according to fishery staff, the number of fishers who have never participated any of these courses was still high. According to fishers, there are number of fishers in the commune, but only one or two courses are conducted each year. Moreover, not all fishers participate in the courses when they are invited. Fishers invited by the local authority sometimes are busy with their fishing in the sea; meanwhile some fishers that are free are not invited. 61.7 and 50% in the target and control commune respectively have not attended avoiding accidents at sea training. More offshore fishing households members have been trained than other groups.

Table 24: Fisher's participation in training on avoiding accidents at sea

Type of HH	N	Yes (%)	No (%)
Target communes	**183**	**38.3**	**61.7**
- Offshore fishing HHs	25	52.0	48.0
- Inshore fishing HHs	121	42.2	57.8
- Onshore fishing HHs	32	21.9	78.1
- Female fisher	39	35.0	65.0
- Male fisher	144	39.2	60.8
Control commune	**30**	**50.0**	**50.0**

(Source: Household survey, 2010)

The confidence in avoiding sea accidents is recorded in Table 25. In both the target and control communes, the majority of fishers believed they are confident in avoiding accidents. However, the level of confidence of the fishers in the two communities was quite different. 30% of the fishers in the control communes stated that they were very confident while this figure was only 16.4% in the target communes. By fishing groups, onshore fishing households were more confident than off shore fishers in avoiding accidents. The onshore and inshore fishing households explained that they can handle bad situations because they normally go fishing during the day and do not fish far from the shore.

Table 25: Fisher's confidence in avoiding accidents at sea

Type of HH	N	Very confident (%)	Confident (%)	Not confident (%)
Target communes	**183**	**16.4**	**73.8**	**9.8**
- Off shore fishing HHs	24	20.8	66.7	12.5
- On shore fishing HHs	28	17.9	82.1	0.0
- Inshore fishing HHs	120	15.0	75.0	10.0
- Lagoon fishing HHs	5	20.0	80.0	0.0
- Female fisher	39	5.1	82.1	12.8
- Male fisher	144	19.4	71.5	9.1
Control commune	**30**	**30.0**	**63.3**	**6.7**

(Source: Household survey, 2010)

Table 26 shows the confidence in rescue practices at sea. The people who said that they are confident in rescuing practices at the sea take the large proportion. 19.7% of respondents were "very confident" and 67.2% were "confident". The fishers explained that they have been fishing years and as a result they have had many experiences in sea rescue.

Table 26: Fisher's confidence in rescue practices at sea

Type of HH	N	Very confident (%)	Confident (%)	Not confident (%)
Target communes	**183**	**19.7**	**67.2**	**13.1**
- Offshore fishing HH	24	42.9	54.1	3.0
- Onshore fishing HH	32	21.9	68.7	9.4
- Inshore fishing HH	120	17.5	67.5	15.0
- Lagoon fishing HH	5	0.0	100.0	0.0
- Female fisher	39	5.1	76.9	18.0
- Male fisher	144	23.6	64.6	11.8
Control commune	**30**	**23.3**	**66.7**	**10.0**

(Source: Household survey, 2010)

3. Post harvest and marketing

3.1. Policies and institutions related to fishery post harvest

3.1.1. An overview of policies related to fishery post harvest

The development of fishery processing has been promoted by the State through a number of polices. Three policy documents are particularly important for fishery processing. The first is Decision No. 132/2000/QĐ-TTg dated 24 November 2000 by Vietnamese Government. This Decision approves the policies made by Ministries to create jobs in the rural areas. This decision provides incentives for the individuals or organizations operating businesses in rural areas in terms of land use, tax and credit. The second, Decision No. 253/2003/QĐ-TTg dated 25 November 2003 by Vietnamese Government encourages the development of fishery processing by approving the proposal on the establishment and development of National Trade Marks up to 2010. Under this decision, enterprises will get supports from the government in terms of finance, administration, and technique to register the trademark if their products reach the national standard quality. Thirdly, Inter-circular No. 36/2005/TTLT-BTC-BCN dated 16 May 2005 between the Finance Ministry and the Industrial Ministry

guides the usage of government budgets to promote industrial activities – for example fishery processing.

Thanks to these policies, some fisheries trade names and marketing in the provinces have been gained with the support of industrial extension services. This fund has given fishers the chance to introduce their products at national and international trade fairs. However, the fund for fisheries processing and marketing is still limited. There is still a big gap between issuing policy papers and policy implementation. Many enterprises cannot take credit as subsidized interest rates as well as credit from the banks at market rates. In the target communes, the number of fishery processing enterprises getting supports from the government is extremely limited.

3.1.2. The institutions related to fishery processing

There are a number of institutions with responsibilities to support fishery processing development. The Provincial Department of Industry as well as its district level offices are responsible for supporting the processing enterprises in terms market development, trademark registration and administrative assistance in business. The NAFIQAD office supports processors to improve their techniques, so that their processing systems reach national quality standards. Processing is also supported by the extension station through the organization of training courses on processing techniques and/or demonstrating processing models. In addition, the mass organizations like the Women's Union and the Farmer's Union promote their members to conduct processing, by acting as guarantors for members to take interest free or subsidized interest credit and organizing the field visits to effective business models. However, the role of these institutions in the fishery processing stock is very limited clear in the target communes. Most interviewed people knew nothing of the availability as well as supports provided by these institutions for processing activities.

The absence of these stakeholders in the fishery processing sub-stock was highly experienced by the fishers. More than 90% of the respondents having "no idea" when they were asked this question – are you satisfied with the supports of these institutions in post harvest and marketing (Table 27).

Table 27: Fisher's satisfaction with the supports of the institutions in fishery post harvest and marketing

Supporting Institutions	N	Satisfied (%)	Not satisfied (%)	No idea (%)
The officer of fishery quality control	183	2.2	0.5	97.3
District industry department	183	1.1	0.5	98.4
District DARD	183	3.8	0.5	95.6
Extension station	183	2.7	0.5	96.7
CPC	183	4.9	0.5	94.5
Mass organization	183	6.6	0.5	92.8

(Source: Household survey, 2010)

3.2. Post-harvest skills, knowledge and practices

Table 28 presents the skills and knowledge of the offshore and inshore fishers on post-harvest. Most of the fishers stated they were skillful in all post harvest measures, except for

using chemicals. The majority of fishers were very skillful in using ice – 80.4% in the target and 90% in the control commune while 16.3 to 31% of fishers were skilled in using salt, drying or grilling of aquatic products. This feedback reflects the more frequent use of ice after fish harvest. Use of ice however is the most basic post-harvest technique.

Table 28: Fisher's skills and knowledge on post-harvest

	N	Very skillful (%)	Skillful (%)	Not skillful (%)
Target communes				
Using Ice	146	80.4	14.7	4.9
Using chemicals	146	1.6	9.8	88.6
Using salt	146	31.0	29.9	39.1
Dry	146	33.7	37.0	29.3
Grill	146	16.3	26.6	57.1
Control commune				
Using Ice	30	90.0	6.7	3.3
Using chemicals	30	0.0	33.3	66.7
Using salt	30	20.0	36.7	43.3
Dry	30	30.0	26.7	43.3
Grill	0	0.0	30.0	70.0

(Source: Household survey, 2010)

Table 29 shows the participation of fishers in post-harvest training courses in the last three years. Remarkably, the majority of respondents did not participate in any training courses on post-harvest during the last three years - 94.6% in Target communes and 96.7% in Control community. Moreover, 100% of households practicing fish processing did not attend any training courses. The processors learn by themselves or use processing knowledge handed down within their family. The knowledge of processing has not really considered by the government in general and the fishery staff in particular.

Table 29: Fisher's participation in the training courses on post-harvest practices during the last three years

Type of HH	N	Yes (%)	No (%)
Target communes	**183**	**5.4**	**94.6**
- Off shore fishing HH	25	0.0	100.0
- Inshore fishing HH	121	6.6	93.4
- On shore fishing HH	32	5.3	94.7
- Female fisher	39	5.1	94.9
- Male fisher	144	5.5	94.5
- HH having fish processing	6	0.0	100.0
Control commune	**30**	**3.3**	**96.7**

(Source: Household survey, 2010)

3.3. Post-harvest facilities

Table 30 shows the equipment used for post-harvest of aquatic products. The equipment used for maintaining aquatic fisheries products is very basic in Quang Nam province. Ice storage and insulating boxes are mainly used to preserve aquatic product during transportation. The majority of fishers in the Target communes and Control commune used ice storage and

insulating boxes to store their products – 35.9 and 80.1% respectively, as only a small number of respondents had freezers. A large proportion of the survey respondents were inshore and on shore fishers. These households did not need to use modern equipment to store fish because they only went fishing for a day or some days and they sold their catch immediately after arriving back at shore.

Table 30: Equipment used for post-harvest

Post harvest facilities	N	Used (%)	Not used (%)
Target communes			
Ice storage	183	35.9	64.1
Insulating box	183	80.1	19.9
Freezer	183	0.6	99.4
Fridge	183	1.1	98.9
Oven	183	0.0	100.0
Control commune			
Ice storage	30	77.7	22.3
Insulating box	30	86.7	13.3
Freezer	30	0.0	100.0
Fridge	30	0.0	100.0
Oven	30	0.0	100.0

(Source: Household survey, 2010)

3.4. Fishery market

Fishers sold less than 20% of their catch directly at local markets. The majority of fisheries products were sold to the middle traders. Fishers usually take the interest-free credit for operating costs like fuel, fishing gears or boats from the middle traders. They then have to sell their fishery products back to the middle traders, usually at a price lower than the market rate to pay off their debt.

Table 31: Immediate buyers and their buying product proportion from the fishing households

Product	Fish processing factories (%)	Middle trader (%)	Local fish processor (%)	Local market (%)	Others (%)	No idea (%)
Prawn	4	78	0	18	0	0
Green crab	3	87	0	8	5	0
Fish	2	68	4	25	1	2
Squid	5	77	0	18	0	0
Dried squid	0	90	0	10	0	0
Dried fish	0	74	0	26	0	0
Others	0	70	0	22	8	0

(Source: Household survey, 2010)

Understanding the perception of fishers on consumer markets is very useful to help fishers to develop markets for their aquatic products. Fishers' perception of consumer markets was quite different for different fishery products (Table 32). A large number of fishery products were sold at the provincial market – Quang Nam. Higher value fishery products and larger specimens of squid, green crab or fish (for example mackerel *(Cá Thu)*, tuna *(Cá Ngừ)*) were

normally sold outside the province – to national or international markets. About 10 to 15% of aquatic products were sold to neighbouring provinces, for example Da Nang or Quang Ngai. Fishers estimated that 2 or 3 % fish, green crab, and squid and as much as 31% of dried squid were exported.

Table 32: Fisher's perception of fishery consumer markets

Product	Provincial market (%)	National market (%)	International market (%)	No idea (%)
Prawn	37	9	0	56
Crab	63	0	0	38
Green crab	32	8	3	57
Fish	47	11	3	38
Squid	35	15	2	43
Dried squid	13	19	31	38
Dried fish	87	0	0	13
Others	58	0	0	25

(Source: Household survey, 2010)

The majority of fishers emphasized that their selling prices depend on the middle traders (Table 33). The situation of "high fish catch, low price" occurs seasonally. Fishers had to sell their fishery product to the middle traders to pay off their debt. Therefore, they had no opportunity to choose better price. The dependence of fishers on the middle traders considerably reduced their income.

Table 33: The dependence of fishers on middle traders

Product	N	Very high (%)	High (%)	Not at all (%)	No idea (%)
Prawn	74	17.6	41.9	8.1	32.4
Crab	35	11.4	8.6	2.9	77.1
Green crab	75	32.0	34.7	21.3	12.0
Fish	178	23.6	56.1	19.7	0.6
Squid	117	22.2	48.7	15.4	13.7
Dried squid	39	12.8	2.6	2.6	82.0
Dried fish	44	2.3	9.1	18.2	70.4
Grilled fish	31	0.0	0.0	0.0	100.0
Others	55	14.6	18.2	10.9	56.3

(Source: Household survey, 2010)

4. Livelihood diversification and enhancement

4.1. Livelihood activities and livelihood diversification

The surveyed communes are located in coastal areas. Their residents mainly depend on agriculture crops, livestock, fishing, aquaculture and secondary jobs for their livelihoods. In case of the fishers, however, they cannot practice agriculture crop because they do not have land. The fisher's income comes from fishing, livestock and secondary jobs such as small business operation, and labouring. Men normally practice fishing, aquaculture or secondary jobs while the women practice livestock and small businesses including selling some catch in the local market. However, fishing is the main income source.

The average income per household in the target communes was about 47.136 million VND per year. There was however a large reported range of household income – ranging from - 8 to 836 million VND per year. Fishing provides over 80% of average household income – 39.445 of the total 47.136 million VND. Aquaculture, processing, livestock and other activities provided other smaller income sources. However, few households practiced other income sources. Average annual income per person was 11.407 million VND. The average income per person for the target communes was much lower than the provincial average - 17 million VND (Quang Nam PPC, 2009). This shows how difficult fishing is as a livelihood.

Table 34: Income sources and average income of respondent households (million VND)

	N	Mean	SD	Median	Min	Max
Average income/household/year	188	47.136	77.149	30	- 8	836
Average income per person/year	188	11.407	20.270	7	- 2	209
Income from fishing/year	183	39.445	71.816	24	8	800
Income from aquaculture/year	15	14.667	25.575	15	- 30	60
Income from processing/year	5	17.400	19.138	15	2	50
Income from livestock/year	66	6.077	4.819	4	0.6	20
Income from small business/year	43	14.809	22.910	8	2	150
Income from other sources/year	37	6.994	4.956	5	1	25

(Source: Household survey, 2010)

Table 35 describes the livelihoods diversification of the respondents. It is obviously that the income sources of the fisher household were not particular diversified. 34.6% of households had only one major income source. The proportion of households having two or more than two income sources was fairly low – 48.4% and 17.0% respectively. Fishing was still the main income source for the majority of households. The shortage of financial capital, limited education and limited other job opportunities were the key factors preventing the people in fishing communities from taking another livelihoods and jobs. The dependency on fishing for livelihoods results in further degradation of natural fishery resources. Fishers have competed for limited resources, trying to take as many fish today as possible to feed themselves – using more destructive and unsustainable fishing gears.

Table 35: Number of major income sources of respondent households

	Number of HH	%
Number of surveyed households	188	100.0
HHs having only one major income source	65	34.6
HHs having two major income sources	91	48.4
HHs having more than two major income sources	32	17.0

(Source: Household survey, 2010)

4.2. The perspectives of male and female on poverty and well-being

Feedback from survey respondents shows (Table 36) that men and women have similar perspectives on poverty and well-being. There were three main indicators to differentiate poverty and well-being. Firstly, poverty or well-being was determined by the number of men in a household capable of fishing. The more men of working age a fisher household has, the more prosperous the household will be. This was because for fisher communities, income from fishing is the main source for living. Predominately only men fish at sea. The abundance of male fishers increased their fish catch and therefore their income. This

perspective reflected and emphasized the significant dependence on fishery resources for their livelihoods. Moreover, it also highlighted the dependence of women on men for a living. The number of women earning money through practicing small business or rearing livestock, working as hired labour or sewing shoes (Binh Minh commune) was relatively few. It emerged from female group discussions that the majority of women normally does housework and waits for money from their husbands. These women absolutely wanted to get jobs but they could not because of the shortage of labour opportunities, their low levels of education and their lack of skills.

Secondly, the well-being depended on the number of children per household. Those households with many children (normally more than three) were typically poorer households. According to fishers, the cost for feeding their children and giving them an education took a large proportion of the household income. Having many children, reduced a households ability to save and could even take them into debt.

Thirdly, livelihood diversification also contributed significantly to household social-economic status. Households with income from secondary jobs, such as small businesses, hired labor (women) or fishery processing, were generally better off. Fishers now no longer believe that they can get a high income from fishing due to the degradation of fishery resource. Therefore, in order to improve fishers' livelihood, diversifying their income sources is critical. There were also other indicators which respondents stated including education, house condition and health status (Table 36). However, these indicators were not as important as the three aforementioned criteria.

Table 36: The perspectives of male and female on poverty and well-being

Perspectives on	Male	Female
Poverty	- Having no men for fishing - Being in poor health - Having many children - Investing money for children education - Getting low income	- Having no men for fishing - Being in poor health - Having many children - Investing money for children education - Getting low income - Lack of finance for production
Well-being	- Having more men for fishing - Getting high fish catch - Practicing secondary jobs - High education - Being healthy - House with conveniences	- Having more men for fishing - Getting high fish catch - Practicing secondary jobs - Having few children - Having a big house with conveniences - No need to take credit for production

(Source: Group discussion)

4.3. Respondent's perception on satisfaction with and their attitude toward livelihoods

The experience on livelihood opportunities between the respondents in the target communes and in the control commune was quite different (Table 37). In the target communes, 37.8% of the respondents experienced that they have better livelihood opportunities compared to five years ago while in the control commune this number was 60.0%. In the target communes just

over 30% of respondents thought their livelihood opportunities were the same and a similar number thought they were worse. The degradation of fishery resourced and high production cost were the main reasons given for this. In addition, the establishment of Cu Lao Cham conservation zone has played an important role in the respondent's perception. Fishers have been prohibited from to fish around this zone where they can get high fish catch as well as high valuable fish. According to the fishers in Binh Minh, Duy Nghia and Duy Hai commune, their income from fishing has reduced by a haft since 2008.

Table 37: Respondent's perception on the livelihood opportunities compared to five years ago

	N	Better (%)	Same (%)	Worse (%)	No idea (%)
Target communes	**188**	**37.8**	**30.9**	**31.3**	**0.0**
- Female	40	32.5	50.0	17.5	0.0
- Male	148	39.2	25.7	35.1	0.0
- Off shore fishing HH	25	48.6	24.0	28.0	0.0
- Inshore fishing HH	121	37.2	35.5	27.3	0.0
- On shore fishing HH	32	31.3	25.0	43.7	0.0
- Inland fishing HH	5	60.0	20.0	20.0	0.0
- Aquaculture HH	5	20.0	0.0	80.0	0.0
Control commune	**30**	**60.0**	**20.0**	**20.0**	**0.0**

(Source: Household survey, 2010)

The respondents who experienced that they have better livelihood opportunities than five years ago were also the ones who said that they were satisfied with their current livelihoods – 39.4 and 60% in the target and control commune respectively. Notably, in the target communes the number of respondents who were not pleased with their livelihood was really high – more than 60%.

In terms of profession, there was a significant difference between fisher and aquaculture households. 80% of aquaculture households were dissatisfied with their current livelihoods, while only 60% of the fishers were dissatisfied. The decline in aquaculture productivity due to environmental pollution has pushed a number of aquaculture households into difficulty and debt. As a result, a number of them remarked their satisfaction as "not satisfied".

Table 38: Respondent's satisfaction with current livelihoods

	N	Satisfied (%)	Not satisfied (%)	No idea (%)
Target communes	**188**	**39.4**	**60.6**	**0.0**
- Female	40	32.5	67.5	0.0
- Male	148	41.2	58.8	0.0
- Off shore fishing HH	25	40.0	60.0	0.0
- Inshore fishing HH	121	38.8	61.2	0.0
- On shore fishing HH	32	43.7	56.3	0.0
- Inland fishing HH	5	40.0	60.0	0.0
- Aquaculture HH	5	20.0	80.0	0.0
Control commune	**30**	**60.0**	**40.0**	**0.0**

(Source: Household survey, 2010)

The dissatisfaction with current livelihood affects the fisher's attitudes toward changing or diversifying livelihoods. The majority of respondents wanted to change their livelihoods (Table 39). There were three main reasons for this attitude. Firstly, fishing no longer provides enough money for fishers' expenditure because of fishery resource degradation. Secondly, the risks in fishing have occurred with the higher frequency due to climate abnormality. Thirdly, the cost of fishing has increased dramatically, and especially fuel cost. There was a little difference between the respondents in the target and control communities in attitude in changing or diversifying livelihoods. The respondents who did not intend to change their livelihoods occupy a small proportion - 13.3 % and 6.7% of the total respondents in the target and community respectively. These households normally had no labor or were too old to change or diversify their livelihoods.

Table 39: Respondent's attitude toward changing or diversifying livelihoods

	N	Intended to change (%)	Not-intended to change (%)	No idea (%)
Target communes	**188**	**86.2**	**13.3**	**0.5**
- Female	40	82.5	15.0	2.5
- Male	148	87.2	12.8	0.0
- Off shore fishing HH	25	76.0	24.0	0.0
- Inshore fishing HH	121	88.4	10.8	0.8
- On shore fishing HH	32	88.4	15.6	0.0
- Inland fishing HH	5	80.0	20.0	0.0
- Aquaculture HH	5	100.0	0.0	0.0
- HH having processing	6	60.0	34.0	0.0
Control commune	**30**	**90.0**	**6.7**	**3.3**

(Source: Household survey, 2010)

4.4. Factors affecting livelihood alternatives

According to the fishers as well as government staff, the livelihood alternatives have been affected by a number of factors including enabling as well as constraining factors (Table 40). Government staff stated that having sufficient family members of working age is the most important factor which stimulates livelihoods changes. Moreover, the supports of the government and non-government organizations (NGOs) have played a crucial role. Thanks to these supports, many livelihood opportunities were created and the income of local people was steadily improved (Quang Nam PPC, 2009 and Quang Nam PPC, 2010).

However, the livelihood alternatives have been constrained by a number of factors. Firstly, unskilled labor has been seen as the prerequisite factor constraining the alternatives of livelihood. Fishers generally have been only skilled at boat handling and fishing. It is therefore difficult for fishers to get good and stable jobs outside the fishery stock. Secondly, there has been a shortage of financial capital. Livestock rearing or operating a small business or processing has required money for investment, which most fishers do not have. Fishing has seldom allowed fishers to save. In addition, the access to financial services has been still difficult. Thirdly, it is difficult for the fishers to find jobs outside fishing because of the limited number of job opportunities. The target communes have been seen as the poorest and least developed communes of Quang Nam province. Local people have been critically depended on agriculture and fishing for their living. There have been very few non-farm jobs because of the absence of industrial factories and under-development of fishery processing.

Moreover, the undeveloped infrastructure and environmental pollution have also constrained livelihood alternatives. In order to improve livelihoods in fisher communities, these factors need to be addressed.

Table 40: Factors affecting livelihood alternatives

Constraining factors	Enabling factors
• Lack of killed labour • Shortage of financial capital • Shortage of job opportunities • Unfavorable natural conditions – unfertile land, natural disasters, ... • Undeveloped infrastructure • Environmental pollution	• Abundant labor force • Improved education level (younger generations) • Support from the government and NGOs • The development of industry and services

(Source: Group discussion and in-depth interview)

4.5. Supporting services for livelihood enhancement and diversification

Being aware of the existence of supporting services can significantly influence the likelihood of people adopting alternative livelihoods. The majority (70%) of respondents in both the target and control communes were aware of available supporting services for livelihood enhancement and diversification. However, the awareness was almost concentrated on the financial services. Only a few respondents being aware of technical assistance or marketing or input supply services. Very few respondents, and especially of the fishers, have had any technical support on fishing or aquatic product marketing from either the Government or NGO's.

Table 41: Respondent's awareness of the availability of supporting institutions / programmes for livelihood enhancement and diversification

	N	Very aware (%)	Aware (%)	Not aware (%)
Target communes	**188**	**2.1**	**64.9**	**33.0**
- Female	40	5.0	72.5	22.5
- Male	148	1.4	62.8	35.8
- Off shore fishing HH	25	0.0	60.0	40.0
- Inshore fishing HH	121	1.6	69.4	29.0
- Lagoon fishing HH	32	6.2	46.9	46.9
- On shore fishing HH	5	0.0	40.0	60.0
- Aquaculture	5	0.0	100.0	0.0
Control commune	**30**	**3.3**	**66.7**	**30.0**

(Source: Household survey, 2010)

Table 42 shows the experience of the respondents in accessing supporting services. 45.7% of the respondents in the Target communes reported that it is easy to access to credit services. However, 36.7% of respondents reported difficulty in accessing credit services. Accessing credit usually required some form of collateral and this was a difficult criteria for some fishers. The majority of respondents had no idea on how to access technical assistance, marketing and input supply services – from 44.7 to 63.8% of the total. The respondents stated

that they had little or no access to these services and therefore it was difficult for them to evaluate their perception of access.

Table 42: Respondent's access to supporting services for livelihood enhancement and diversification

Supporting services	N	Easy (%)	Difficult (%)	Not at all (%)	No idea (%)
Credit	188	45.7	36.7	7.5	10.1
Technical assistance	188	14.4	7.4	23.4	54.8
Marketing	188	18.6	4.3	13.3	63.8
Input supply	188	34.6	3.7	17.0	44.7

(Source: Household survey, 2010)

The satisfaction of the users reflects the quality of the supporting services. As most respondents had not accessed technical, marketing or input supply services the majority (from 54.8 to 74.5%) had no idea whether they were satisfied with the quality of services provided. The number of respondents satisfied and dissatisfied with credit services, was almost the same (Table 43). Those respondents who were not pleased (38.3%) with the credit services stated that it was because of difficulties in accessing credit and the high interest rate.

Table 43: Respondent's satisfaction with supporting services for livelihood enhancement and diversification

Supporting services	N	Satisfied (%)	Not satisfied (%)	No idea (%)
Credit	188	42.6	38.3	19.1
Technical assistance	188	16.5	9.0	74.5
Marketing	188	17.6	13.3	69.1
Input supply	188	24.5	20.7	54.8

(Source: Household survey, 2010)

The perception of the respondents on the usefulness of different livelihood supporting services is quite different. Table 44 underlines the importance of credit to the livelihood enhancement and diversification. 75% of the total respondents in the target commune believed that credit services can improve their livelihoods situation. On the contrary, the importance of technical assistance, marketing and input supply services was not realized by more than 50% of the respondents.

Table 44: Respondent's perception of the usefulness of supporting services for livelihood enhancement and diversification

Supporting services	N	Useful (%)	Not useful (%)	No idea (%)
Credit	188	75.0	4.8	20.2
Technical assistance	188	27.6	2.6	69.8
Marketing	188	36.7	2.7	60.6
Input supply	188	45.2	5.3	49.5

(Source: Household survey, 2010)

5. Micro-finance

5.1. The formal and informal financial institutions operating in the communes

5.1.1. The formal financial institutions

There are a number of formal financial institutions operating in Vietnam; the institutions in the survey communes were only a few nevertheless. The Bank for Social Policy (VBSP) and the Vietnam Bank for Agricultural and Rural Development (AgriBank) were the two main institutions providing credit for the people in the target and control communes.

VBSP gave credit to the people through mass organizations. This bank had transaction points in every commune. The VBSP is a "non-profit" bank and operates based on subsidization of the State (Corpuz, 2007). It provided credit at an interest rate of 0.65% per month - the lowest rate comparing to other formal institutions. Hence, many people were keen to take credit from the VBSP. However, VBSP borrowers had to meet three conditions. Firstly, they have to be members of a mass organization. Secondly, the borrowers must be on the CPC poor list or be households in difficulty, households with students or households requiring credit to install a water supply and a toilet. However, priority goes to the poor or difficult households. Thirdly, they have to make a saving of 20,000 to 100,000 VND per month. The loan amount provided by the bank for social policy ranges from one million to 30 million VND. However, most borrowers normally took loans of 10 to 15 million VND. The finance allocated for each commune annually depended on the subsidized fund of the government. This allocation was less than the demand of local people. Therefore, borrowers were rarely given the maximum loan amount.

The Vietnam Bank for Agricultural and Rural Development (AgriBank) provided loans against collateral. Clusters of four or five communes normally had one transaction point. However, there was a AgriBank credit officer stationed at each commune to help the people in making loan applications. AgriBank interest rate was 1.5% per month. People wanting loans had to submit their application form and property certificate (for example, "red book") as collateral. There was no restriction on loan size or the number of borrowers. However, the approved loan size would depend on the value of the collateral.

Apart from VBSP and AgriBank , people could also get credit from Dong A, Vietcombank or the SHB bank. The credit mechanisms were similar to that of AgriBank. However, number of borrowers was only a few. The main reasons that people did not want to take credit from other banks than VBSP and AgriBank were because the interest rates were higher, the procedures were more complicated and people had to travel from 20 to 50 km to the central district.

5.1.2. Informal financial institutions

Informal financial institutions existed in all the surveyed communes. These included "*hui*" groups and private money lenders. "*Hui*" groups were formed by 10 to 20 members living in the same hamlet or village or commune. They were very popular and presented in all villages in the surveyed communes. The members made monthly savings to the group and then borrowed it when in need. The amount saved ranged from hundreds to millions VND depending on the group's regulations. Each month, the group put the fund out to tender. The members bid against each other to take the credit. The one who offers the highest interest rate is approved to take the credit. The base interest rate is normally equal to the interest rate of the banks. The money earning from lending was distributed equally to the remaining members.

Private lenders were the rich members of the community. They provided credit of any size to local people. However, only a few people took this type of credit because of the high interest rate. The interest rate depended on the loan amount and the loan time, and ranged from 2.5 to 3.5% per month. Local people often borrow money from money lenders when they have immediate needs, for example when they have a health problem or have an accident. The prompt and simple procedures are considered to be the advantages of this informal financial service.

Besides "*hui*" groups and private money lenders, the Women Union and the Farmer's Union also established savings-credit groups to help poor households and households in difficulty. There were usually 10 to 20 members in each group. The members had to make an interest-free savings of 100,000 to 200,000 VND monthly. This money was lent rotationally. The members could take an interest-free loan for their production. However, the loan amount provided was very small – usually about two to seven million VND.

5.2. Respondent's awareness of and access to financial services in communes

Awareness of the availability of financial services plays an important role in facilitating micro-credit access. Although the financial services exist in every commune, about 30% of respondents were unaware of the availability of local financial services. Those people that were unaware of the existence of financial services are those that have never taken credit for their production costs. The answers of men and women were similar.

Table 45: Respondent's awareness of the availability of financial services

	N	Very aware (%)	Aware (%)	Not aware (%)
Target communes	**188**	**9.6**	**60.1**	**30.3**
- Male	148	8.8	60.1	31.1
- Female	40	12.5	60.0	27.5
Control commune	**30**	**13.3**	**83.3**	**3.4**

(Source: Household survey, 2010)

The proportion of respondents that knew the procedures of different financial institutions was variable. Around 70% of the respondents knew the procedures of the formal financial institutions – VBSP and AgriBank – while only 50% of respondents knew about procedures for taking loans from informal financial institutions – like private money lenders. Men and women were similarly aware of micro-finance procedures. The respondents who were aware of micro-finance procedures were mainly those that had taken loans.

Table 46: Respondent's awareness of the procedures/regulations of financial services

	Type of respondent	N	Very aware (%)	Aware (%)	Not aware (%)
Bank for Social Policy	Total	188	26.6	41.5	31.9
	Male	148	26.4	40.5	33.1
	Female	40	27.5	45.0	27.5
Bank for Agriculture and Rural Development	Total	188	27.1	44.7	28.2
	Male	148	29.1	40.5	30.4
	Female	40	20.0	60.0	20.0
Private financial services	Total	188	22.9	25.0	52.1
	Male	148	22.3	25.0	52.7
	Female	40	25.0	25.0	50.0

(Source: Household survey, 2010)

Many people complained about the difficulty in accessing credit in Vietnam (see also in Barslund, 2006). The demand from fishers for VBSP credit was always higher than the allocated funds. As a result, the bank had to reduce the maximum loan size and limited the number of borrowers. The priority was reserved for the poorest. For AgriBank, fishers explained that they have problems with the collateral when access to the services. Their applications were not often approved by the banks because of insufficient collateral. The number of respondent in the control commune believed that it is difficult to access the credit when in need was higher than in the target communes – 60% compared to 39.9%.

Table 47: Respondent's perception on possibility of access of credit when in need

	N	Easy (%)	Difficulty (%)	Can't access (%)	No idea (%)
Target communes	**188**	**41.5**	**39.9**	**9.6**	**9.0**
- Male	148	38.5	41.9	9.5	10.1
- Female	40	52.5	32.5	10.0	5.0
Control commune	**30**	**26.7**	**60.0**	**3.3**	**10.0**

(Source: Household survey, 2010)

Around 71% of the total sample in the target communes accessed financial services for credit. However, number of respondents accessed to as well as the loan amount of different financial institutions is absolutely different (Table 48). Among the borrowers, the respondents accessing to VBSP for credit held the highest proportion although the loan amount provided by this bank was not big – averagely 14.49 million VND. Accessing loans from the VBSP seemed to be easier for the respondents than others because of the low interest rate and collateral-free loans. Only a few (11.2%) respondents had accessed private financial services. The respondents were afraid of taking credit from private financial services because of their

high interest rates. They normally chose "*hui*" groups or saving-credit groups when in need instead of private financial services because most respondents were members of such groups.

Table 48: Access of the respondents to financial services

	Number of households accessed to financial services		Average amount (million VND)	Max amount (million VND)	Min amount (million VND)
	Number of households	%			
Bank for Social Policy	85	63.4	14.5	60	1
Bank for Agriculture and Rural Development	77	57.5	28.7	300	4
Private financial services	15	11.2	26.6	70	4

(Source: Household survey, 2010)

Table 49 presents the priority of the respondents in choosing financial services when in need. Formal services were preferred by the majority of respondent's households in the target as well as the control communities - more than 92 %. The responses of men and women were similar. The low interest rate of the formal service was the major reason for their choice. The interest rate of informal services was considerably higher than that of formal services – 2.5 to 3.5% compared to 1.25%. In very urgent cases (for example, a health problem or an accident), however, the respondents have to use informal credit services because it is quick and has simple procedures.

Table 49: Respondent's choice of financial services when in need

	N	Formal service (%)	Informal services (%)
Target communes	188	92.0	8.0
- Male	148	92.6	7.4
- Female	40	90.0	10.0
Control commune	30	96.7	3.3

(Source: Household survey, 2010)

Although the formal financial services were chosen by the majority of respondents for credit, the number of people being satisfied with them was not particularly high – 49.5% for VBSP and 37.2% for AgriBank (Table 50). The satisfaction of the respondents with the financial services was mainly dependent on the interest rate and the ease of procedures. According to fishers, it was not easy to obtain credit from VBSP and especially AgriBank because of their complicated procedures.

Table 50: Respondent's satisfaction with formal and informal financial services

	N	Satisfied (%)	Not satisfied (%)	No idea (%)
Bank for Social Policy	188	49.5	7.4	43.1
Bank for Agriculture and Rural	188	37.2	22.3	40.5

Development				
Private financial services	188	21.8	11.7	66.5

(Source: Household survey, 2010)

5.3. Respondent's awareness of and access to subsidized credit lines

5.3.1. Subsidized credit lines in the surveyed communes

In the surveyed communes, there were three types of subsidized credit lines – credit for the poor, credit for students and credit for sanitation works. The VBSP took responsibility for providing these subsidized credit types to people at an interest rate of 0.65% per month. Different subsidized credit types had different mechanisms. For the credit for the poor scheme, people categorized as poor or households in difficulty could take loans of up to a maximum of 30 million VND for livelihood activities. The loan had to be repaid within five years. For the student credit scheme, students accepted by universities or colleges could take out loans of up to a maximum of 15 million VND over a 13 year period. Interest was charged immediately when the loan was taken. However, they only paid the interest after they had graduated from universities. For sanitation work credit, households who wanted to install sanitation could take subsidized interest rate credit from VBSP. The maximum loan per household scheme was eight million VND and it had to be repaid within five years.

In addition, there was also a subsidized credit line for the fishers wanting to improve their old boats or to construct new ones. According to decision number 20/2010/QĐ-UBND issued by Quang Nam People's Committee in 09/2010, the government will contribute 5% towards the annual interest rate. If fishers take credit (maximum 500 million VND for new boat construction and 200 million VND for old boat improvement or repair) at an annual interest rate of 14%, the State covers 5% and the fishers have to pay 9%. However, no fishers have benefitted from this policy for two main reasons. Firstly, only a few fishers were aware of the policy because it is a new policy (see Table 51). According to the local authorities, the second reason is that the support will only be given for the construction of new boats over 90 HP or to improve boats to 90 HP or repair old boats over 90 HP. None of the surveyed communes however had ports deep enough to provide anchorage for boats bigger than 90 HP. Therefore, no fishers were willing to consider building boats over 90 HP.

5.3.2. Respondent's awareness of and access to subsidized credit lines

Table 51 shows the awareness of the respondents of the availability of subsidized credit lines. The majority of respondents were aware of the availability of the subsidized credit. Although the information about the subsidized credit was available in all communes through the transaction points of VBSP, from 20 to 40% of respondents were still not aware of the availability of subsidized credit lines. This ignorance of subsidized credit lines was a constraint to livelihood improvement opportunities of fishers.

Table 51: Respondent's awareness of subsidized credit lines

	N	Very aware (%)	Aware (%)	Not aware (%)
Credit for the poor	188	20.7	50.0	29.3
Credit for students	188	31.4	47.9	20.7
Credit for sanitation works	188	18.6	43.1	38.3
Credit for building boats	188	9.6	29.2	61.2

(Source: Household survey, 2010)

Figure 2 presents the awareness of fishers on eligibility to access subsidized credit lines. Nearly half of the respondents were aware that they are the targets of the subsidized credit lines – 48.4% of the respondents in the target communes and 43.4% in the control commune. Although the mechanism for subsidized credit lines has been widely disseminated by the VBSP, the number of fishers who do were unaware of their eligibility to access subsidized credit lines was still quite high – 13.4 to 17.0%.

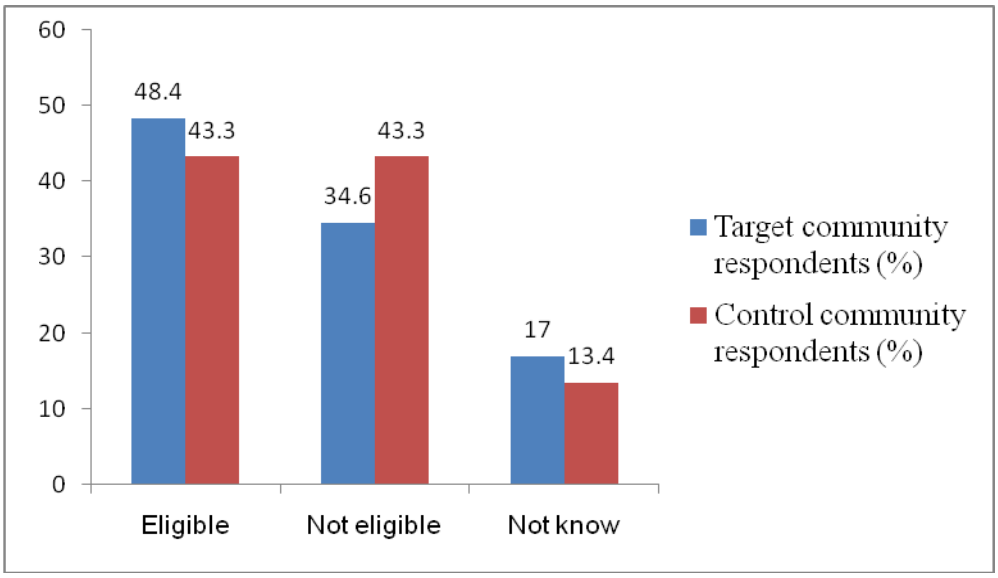

Figure 2 Respondent's awareness of eligibility to access subsidized credit lines
(Source: Household survey, 2010)

Among households who have rights to get subsidized credit from VBSP, 85.7% of the households in the target communes and 92.3% of the households in the control commune accessed subsidized credit lines. Households mainly took loans to cover production costs or child education costs. However, the provided loan size was still small and insufficient for their needs.

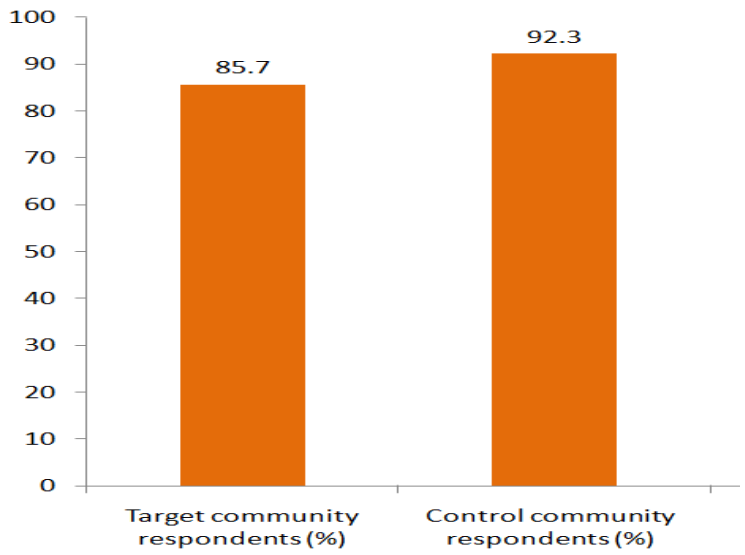

Figure 3 Respondents access to subsidized credit lines during the last five years
(Source: Household survey, 2010)

5.4. Potential for savings mobilization

Saving awareness significantly contributes to saving action. The perception on saving is an essential indicator to identify the potential for savings mobilization in communities. The majority of respondents were aware of the importance of saving (Table 52). Saving helps households accumulate money to cover production costs or to invest in new activities. Moreover, saving can be a useful tool to cope with shocks or risks – for example, ill health. Only 2.6% and 0% of the respondents stated that saving was not important in the target and Control commune respectively.

Table 52: Respondent's perception on saving

	N	Very important (%)	Important (%)	Not important (%)
Target communes	**188**	**67.6**	**29.8**	**2.6**
- Male	148	68.2	29.1	2.7
- Female	40	65.0	32.5	2.5
Control commune	**30**	**53.3**	**56.7**	**0.0**

(Source: Household survey, 2010)

In term of gender, men and women both perceived savings in the same manner. However, the percentage of women willing to save was much higher than for men, 65% compared to 45.9% respectively (Table 53). The women tried to save as much as they could. Men however only saved when they have considerable surplus money.

Table 53: Respondent's willingness to save

	N	Willing (%)	Not willing (%)	Can't decide (%)
Target communes	**188**	**50.0**	**25.5**	**24.5**
- Male	148	45.9	27.7	26.4
- Female	40	65.0	17.5	17.5
Control commune	**30**	**53.3**	**20.0**	**26.7**

(Source: Household survey, 2010)

Although most of the respondents were aware of the importance of saving, only about half of them in both the target and control communities were willing to save (Table 53). On average, the respondent households in the target communes could save about 432,000 VND per month, while the households in the control communes could save significantly more at 659,000 VND per month (Table 54). The difference in social-economic condition probably explained this difference because the poverty rate in the control communes was substantially lower than in the target communes.

For the target communes, off shore fishing households could make the highest savings – 633,333 VND per month compared to the others - around 300,000 to 400,000 VND per month. According to the fishers, the off shore fishing households were normally seen as better-off. With degraded inshore fishery resources, the more a household could investment in offshore fishing, the more benefit fishers received. Off shore fishing households conventionally had higher incomes than others because of their robust financial position.

Table 54: Fisher's saving capacity

	N	No of HH making saving (%)	Average amount per month (VND)	Max amount per month (VND)	Min amount per month (VND)
Target communes	**188**	**46.8**	**432,954**	**3,000,000**	**50,000**
- Offshore fishing HH	25	48.0	633,333	3,000,000	50,000
- Inshore fishing HH	121	49.2	404,237	3,000,000	50,000
- Onshore fishing HH	32	37.5	412,500	2,000,000	50,000
- Inland fishing HH	5	40.0	300,000	500,000	100,000
- Aquaculture HH	5	50.0	366,660	500,000	300,000
Control commune	**30**	**53.3**	**659,375**	**2,000,000**	**50,000**

(Source: Household survey, 2010)

Nearly half of the respondents were either unwilling to save or cannot decide whether to save. The decision to save or not depended significantly on household income level. Fishing was the main income source for fishers in the surveyed communes. Their income was low and unstable, which was seasonally insufficient to meet their needs. Therefore, many respondents had no surplus to save.

III. Proposed RFLP Output Indicators

The baseline survey results present the current situation of the target communes in terms of fishery co-management, safety at sea, post harvest and marketing, livelihood diversification and improvement and micro-finance. Based on the survey results, feedback and comments from validation workshops and RFLP inputs (for example, time and budget), some key RFLP output indicators were proposed. By the end of the programme, the following indicators for each output need to be achieved:

Output 1: Fishery Co-management

Indicators	Baseline (2010)	Target (2013)
Fisheries association (FA) established in each target commune	0 FA	1 FA (in each target commune)
FAs in target communes allocated with fishing rights	0 FA	2 FAs
Percentage of fishers who are "very aware" and "aware" of co-management increased	28.7 %	50 %
Percentage of women who are "very aware" and "aware" of co-management increased	27 %	50 %
Government officials understanding of co-management increases	73.8 %	100 %
Percentage of fishers who judge that co-management contributes to fisheries management and livelihood improvement increased	23.4 %	50 %
Percentage of community members who feel they are actively contributing to fisheries co-management increased	60.5 %	90 %

Output 2: Safety at Sea and Vulnerability Reduction

Indicators	Baseline (2010)	Target (2013)
Percentage of fishers who feel they understand information and regulations on safety at sea increased	89.3 %	100 %
Fisheries management officials understand clearly about information and regulations on safety at sea	30.8%	100 %
Percentage of fishers complying with safety at sea regulations increased	45.5%	100 %
Fishers satisfied with the effectiveness of rescue service operation	70.2 %	90 %
Fishers received basic safety at sea training	38.2 %	70 %
Fishers feel confident in avoiding accidents at sea	86.9 %	100 %

Output 3: Post harvest and marketing

Indicators	Baseline (2010)	Target (2013)
Fishers trained on post-harvest fisheries (this should focus on large towns and cities and/or boat owners)	5.4%	30 %
Fishers become skilled at least two post-harvest methods	33.7%	100%
The percentage of fishers depending on middle traders reduced	59.4%	30 %

Output 4: Livelihood diversification and improvement

Indicators	Baseline (2010)	Target (2013)
Percentage of households having more than two livelihood activities increased	17.0 %	30%
Percentage of households satisfied with their livelihoods increased	39.4 %	70 %
Percentage of households reported an improvement in their livelihoods increased	37.8%	70%
Number of livelihood models exclusively piloted for women	0	1

Output 5: Micro-finance

Indicators	Baseline (2010)	Target (2013)
The percentage of households obtaining informal loans reduced	11.2 %	5 %
Percentage of fishers that are aware of credit channels and credit regulations increased	69.7 %	80 %
Percentage of fishers who judge that accessing credit is easy increased	41.5 %	70 %

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