

MYANMAR DEVELOPMENT RESEARCH INSTITUTE (MDRI)



Gender Value Chain (Fishery)

Gender Value Chain: Fishery in Pya Pon and Dedaye Townships

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Abbreviations

DOF	Department Of Fishery
MFF	Myanmar Fishery Federation
FDC	Fishery Development Committee
VDC	Village Development Committee
VERP	Village Elderly and Respected Persons
MLFDB	Myanmar Livestock and Fishery Development Bank
NAG	Network Activities Group

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GENDER MARKET CHAIN (FISHERY) REPORT

1. EXECUTIVE SUMMARY

THE VALUE CHAIN

At first glance, the value chain of fresh water fishery in Pya Pon and Dadeye townships seem to be comprised of such key actors as big fishers, medium fishers and small fishers at the production phase and collectors at the village and township at the distribution phase. On the contrary, the most significant actors of the value chain are the middle- men with whom the whole value chain is originated and headed. The property rights of the fresh water fishery arena are fetched only by the huge capital of the middlemen because of the distribution through competitive auction. Then the right is conveyed to real fishers in the arena beginning with the big fishers who have close working relations or blood relations with the middle men. Then the right is passed unto the medium and small fishers directly through the middlemen or through the big fishers. Then the fishes caught by big and medium fishers flows back to middlemen who collect fishes in terms of collecting repayment for credit they paid to the big and medium fishers as the formers repurchased the fishing rights from the later on credit. So, the value chain of fresh water fishery commenced with the middlemen and ended with them before the products reached to the hands of consumers and the exporters.

The value chain of the sea fishing arena is different. But it is simple. The sea fishers who are true fishers with strong capital undertake the business by themselves. The fish catches are sold at the brokerage houses located at the whole sale markets in Yangon. Those brokerage firms resell to the retailers and the international exporters. The international exporters have to purchase the stocks through competitive auction held every month.

POWER AND GOVERNANCE

It is none other than the middlemen who governs the fresh water fishery arena which in fact is originated and ended by that very handful of capital rich people. This de facto governance existed since the junta administration and has been sustained because of the price competitive auction practiced under the new so called newly civil rules. This price competing auctions help sustain the extra layers of middlemen despite that the new government openly claims to give the fishing rights directly and only in the hands of true fishers. Far from reaching that goal, it is the real fishers particularly the big fishers who have to bear the risk for illogical increase of prices for fishing grant thanks to the competitive bids made by the middlemen. One positive thing in the new scenario is elevation of the role DoF despite being unobvious so far. The middlemen under the former administration have direct informal communication with government authorities and they gained the grant because of those informal ties, the DoF rarely had role. Now under the highest-bidder-win-the grant rule, the ties between the capitalist and the state authorities have been fainted and thus rendering more roles for DoF in interpreting the fishing rules and regulations. However, the influence of capital rich middlemen sustains under the rule of money.

DISTRIBUTIONAL ANALYSIS

The analysis of value added is undertaken in order to reveal distribution of returns among the different actors in the value chain. It is obviously found out that the middlemen are the actors who make the highest value added among the actors in the fresh water fishery arena. However, the value added made by fishers in the fresh water fishery area are much lower comparing to big sea fishers because of the fish catches differences and the price on the products. One important finding is the significant loss of big fishers in the fresh water fishery mainly because of the high license fees and fish catch decrease. It is found out that the license fees for them occupy 82% of their total annual cost while the license fees for big sea fishers occupy only 1% of their total annual cost.

GENDER

Both women and men have significant role in the fresh water fishery of the studied areas. In reflecting the whole value chain women are seen being significantly involved as small fishers, co-fishers for the small and medium fishers and the fish retailed sellers at the market and as vendors at the village. In addition, women are seen as managing the village level fish collecting firms. However, it seems that women have fewer roles as middlemen as the middlemen referred by fishers from the village were men.

The study found out women playing much broader role than it has been expected as the fishing tends to be constructed as a livelihood operated largely by the strength of masculinity. According to the data, 77% of the respondents' fishers replied women in their households have to be fully involved in the work starting from searching bait to helping with installing the nets to rolling to sorting and selling fishes at collectors or as vendors.

It is very usual to fish for women in the small fishing families and they usually fish during the night and in times of raining in order to skip from the watchmen sent out by the grant owners. Women from the fishing families met during the field visit reported they felt unsecured when fishing and sending fishes in the darkness despite that the research team did not found out any violent cases on women during the field trip.

SECTION 1: INTRODUCTION

BACKGROUND

Network Activities Group (NAG) is currently implementing livelihood improvement projects in three main regions of Myanmar_ Delta, Dry zone and Hilly regions. One of its major development projects in Delta area is the Improving Fishery Governance System which is mainly targeted towards small-scale fishery folks, aimed to sustainable livelihood developments of fishing folks and their community in Delta through the governance approach. Currently, the project covers 15 villages in Pyapon and Daedayae Townships of Ayeyarwady Delta region. Considered the market as significant in promoting livelihood and income of the target groups in which women are considered as priority, the Gendered Market Chain Analysis is expected to be a valuable reference and source of information for the implementation of the project and the targeted beneficiaries.

FOCUS AREA

The study focuses on four areas: the value chain, the power and governance, the distribution of returns and Gender. The mentioned focused subjects are examined by the following analyses:

- **The Value Chain Mapping** is applied in exploring how fishery market chain at three different levels: village, townships and exports are by different actors such as producers, intermediaries, processors and exporters.
- **Analysis of Power and Governance** is used to investigate power within the production and exchange relationships across the value chain, including the power to set market prices and conditions for contracts. The analysis will also explore on the existing State Laws, Rules and Regulations on the fishery sector.
- **The Segmentation Analysis** is being applied in order to identify the gender issues across the value chain. The analysis will help us understand different roles between women and men, the differentials of returns between them and the gender specific constraints for women against participating in equal terms and conditions of the chain.
- **The Distributional Analysis** is conducted to explore the value added generated along the chain and examines the return to labor and capital for the different actors participating in the chain. The analysis will also answer on the differential of returns between men and women as the data gathered and analyzed as segregated by sex.

METHODOLOGY

This research mainly applies qualitative research methods. The data was collected by such data collection tools as FGD and Key Informant Interviews in 11 out of 15 project villages under the “Improving Fishery Governance Project” in October 2011. In order to catch the situational overview the research teams have done Key informant interviews with members of Village Administrative Committee (VAC), Fishery Development Committee (FDC) and Village Development Committee (VDC) and Village Elderly and Respected Persons (VERP). In addition, the research team undertook key informant interview with fish collectors and middlemen. The research teams have undertaken (99) Key informant interviews throughout the field trip in 11 villages of Pya Pon and Dedaye as well as middlemen; off-shore fishers and fishery experts resided in the Pya Pon and Kyaik Latt townships. FGDs were carried out mainly with small and medium fishers at the village level with gender segregation. In addition, the research team had an opportunity to have FGDs with off-shore fishers at their association office resided in Pya Pon. The field researchers of MDRI have undertaken 24 FGDs during the whole field trip starting with the field observational trip in Pya Pon. Furthermore, the key and specific findings of the study are being highlighted by case studies. In addition, the survey (structured) questionnaires were used especially to carry out distributional analysis.

The study is comprised of two components: Policy Review and the field data collection. The Policy Review is undertaken in order to understand how the existing rules and regulations will have impact on the outcomes of the value chain. We will examine whether they create opportunity or constraints and as well as rents for actors participating in the current fishery value chain. The field data collection in fact is comprised of three phases: the “Fish Market Observational Trip”; the pre-test and the actual data collection trip. The “Fish Market Observational Trip” rather provided the lead researcher with situational overview as the lead research was able to catch the coordination meeting which was attended largely by lead members of FDCs in the first day and an official from the Pya Pon DoF, the township chairman of MFF and a member of parliament from the Ayarwaddy Regional Congress. At the meeting, the FDC members presented their situations in the face of unclear fishing rules and regulations, and the freshwater fishery arena governed in reality by the middleman.

Among the discussions made by the officials from the DoF and the Chairman from MFF, the most interesting thing was different accounts on the auction held by the regional government this year. The lead researcher had a chance to learn about the action, the auctioneers and the bidders from their speeches during the coordination meeting. More specifically, how the auction was highly competitive, how the bidders who mostly are the middlemen made

fierce and irrational bidding against each other and that the regional government let the bidders pay the price as high as it was possible with the purpose of examining how large revenue that the government could collect from his region.

REPORT STRUCTURE

The Gender Market Chain (GMC) report is composed of seven sections following the executive summary. The first section is occupied with the introduction which gives information on the background of the study, focus areas, methodology, and the report structure. The section 2 of the report is occupied with the value chain which commenced with the explanations on key actors involved in the value chain. In this section, the types of fishers are defined and described based on their relationships and terms of involvement in the value chain. Then the fishery value chain is explained by the Value Chain Map. The section 3 is analyzed on the power and governance in the fresh water fishery arena and the subject is explained by many case studies and quotes of respondents during FGDs and key informant interviews. The Section 4 is occupied with distributional analysis which examines the distribution of returns among different actors involved along the value chain. The value added tables and charts help highlight different value added made by different actors. In addition, the section answers the question on the gaps of different returns for each actor. The Section 5 is present on the Gender and it particularly explains the role of women in the freshwater fishery sector. Section 6 is vested for the conclusion which is just followed by the section for the recommendations for the improved governance in the sector.

SECTION 2: VALUE CHAIN

1. KEY ACTORS INVOLVED IN THE VALUE CHAIN

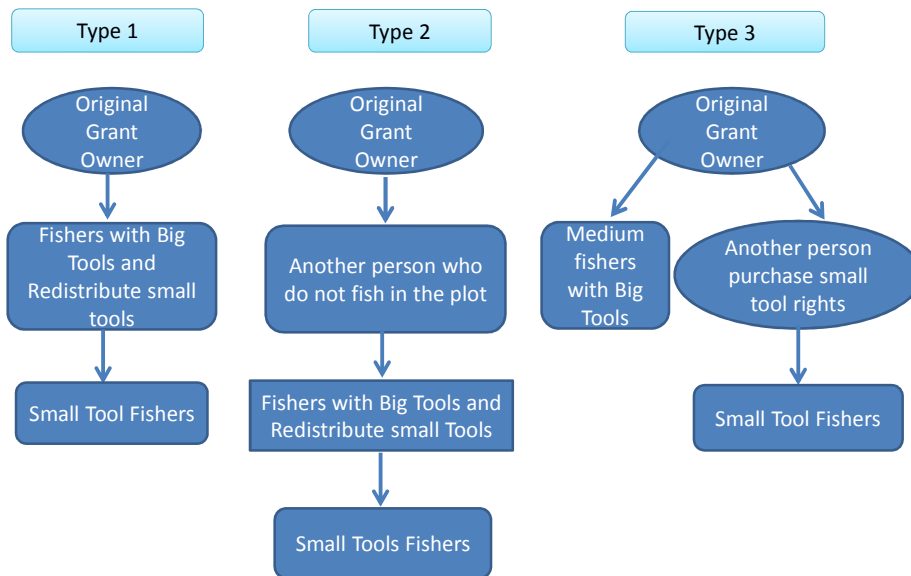
The fishery value chain in the studied area is the course like other value chains constituted with three main actors: the producers, the distributors and the consumers. However, the chain in reality is complicated at the producer level being comprised of different actors transferring property right in a lengthy hierarchical structure. Before explaining the hierarchical structure constituted by different levels of property right possessions among the producers, it needs to lay out three different fishing found out during the study: fresh water fishing, in-shored fishing (fishing around the shore and within 10 miles from the shore) and the off-shore fishing (that is fishing beyond the 10 miles from shore).

It is only fresh water and in-shored fishing in which the hierarchy of producers has constituted due to redistribution of property rights having different layers among the different producers. In both types of fishing, the producer level is found out to be consisting of four main types of actors: the original grant owner or the middlemen, the big fishers, the medium fishers and the small fishers. In other words, the property right in fresh water fishery arena (including in-shore fishing) has found out to be being distributed in the three following types involving the four actors mentioned earlier. (See Figure 1)

The type 1 and the 3 are the two types most commonly found out in villages visited. Type 1 is found out in 5 villages while type 3 is found out in six villages. Type 2 is found out only in one village where the hierarchy is constituted one step longer than the other types. There are also three villages where the two types_ type 1 and type 3 are seen together. As a specific case, in two villages the middlemen did not redistribute the right for small tools and thus making the small fishers difficult for the living. In that village only the big and medium fishers using

the similar big tools who repurchased the grant from the middlemen have the right to fish. It cannot be said surely that the decision for not redistributing small tools rights is of the middlemen or the other two types of fishers.

Figure (1): Three Types of Property Right Distributions



1.1 ACTORS IN HIERARCHICAL TRANSFER OF A GRANT IN THE FRESH WATER FISHERY

THE ORIGINAL GRANT OWNER OR THE MIDDLE MEN

The original grant owners are involved in all three types of distribution of property rights (fishing rights). They are termed differently by the fishers of the lower level in hierarchy_ the grant owner (“Gayan Pye Shin”), the brokers (“Pwe Sar”), the business owners (“Loke Ngan Shin”) and the capital rich people (“Ngwe Shin Kye Shin”). All original grant owners found out or referred by the fishers at village during the study visit are not fishers. They sell the grant (the property right) back to true fishers especially big fishers and medium fishers. In other words the original grant owners are the middlemen between the state and real fishers accessible to the property right because of their strong capital and networks as well as thanks to the lack of proper information flow to the true fishers resided only at the villages.

It is revealed by the study that the middlemen tends to be fish collectors resided in the townships or Yangon and collecting fish as much as possible is their main goal. This main goal in fact make them to get grant and sell back to true fishers especially the big fishers¹ on credit so that they could have a binding to collect fishes from them. In another case the middleman does not collect fish directly from the fishers whom she sold the grant but the fishers

¹ The tools which catch fishes 10 more times than the tools used by the small fishers for example Kyar Pike and Ba Win Pike.

has to sell at the collector specified by the middleman. The relationship between the middlemen and the collector however, was not clearly found out during the study visit.

According to the fishers in the visited villages, the grant provided to the original grant owners can be viewed in two types – the grant called (Tender) given by auction and the grants (called Kye Dye) not listed on the auction which were usually given to persons affiliated to the government. Starting in this year, the later type of grants is given only by auction and thus resulting in many original owners who consecutively gained the grants under the previous government have lost this year². The grants called Kye Dye are still existed in some villages as they are normally given three years consecutively. According to one of the VDC leaders, it is known that the areas under the Kye Dye are to be specified as common fishing plot after giving Kye Dye for six consecutive years according to the fishing regulation under the previous governments. However, this has never been happened in their village and they had never heard of such rules until they were given training on the Fresh Water Fishery Law by NAG.

THE BIG FISHERS

The big fishers are usually those who fish with big tools like “Kyar Pike” (set net) and more importantly they tend to purchase the fishing grant from the original grant owner or the middle man. The big fishers have to pay over 10,000,000 Kyat (100 lakh) for the grant (i.e. the whole grant for all sorts of tools big and small in the specific areas). The big fishers tend to fish with big tools and they resell the license for the smaller tools know in termed in Burmese as “Ye Paw Ye Shan”, directly to the small fishers or to another person at a price. Those people who purchased small tool license as the whole lot usually are fish collectors and they resell each small tool license to the small fishers. Such kind of fish collectors had to repurchase the whole lot of small tool license for collecting fish in the specified areas as the current rule according to many respondents (fishers, collectors at the village and the township) allows only those collectors with “Ye Paw Ye Shan License” to collect fish at the areas concerned³. The big fishers in many cases have to sell the fish catch to the original grant owners or the collector recommended by the original grant owners. The big fishers usually purchase the grant on credit resulting in repaying the debt by fish. It could be assumed that big fishers could do large fishing business not because that they owned strong capital but because of their close relationship with the middle men who gained the original grant. The research team met three big fishers at three visited village and two of them are found out to be relatives of the middlemen and the other one has life-long working relationship with the middle men.

THE MEDIUM FISHERS

The medium fishers according to this study are those who fish with big tools and the average license fees for the middleman is 12.05 lakh in Kyat. The medium fishers are differentiated from the small fishers mainly for two things: 1) the costs for license fee which is 29 times larger than that of small fishers and 2) the fishing tools they used are 10 times better in fish catch than that of the tools used by the small fishers. Here the two common types of big tools Kyar Net (similar one used by the big fishers) and the Bawin Net are the main tools used by the fishers termed as medium fishers in this study. The average license fee for both types of the tools is over 12 lakh which is 29 times higher than the tools used by fishers termed as small fishers in this study.

The medium fishers acquire fishing license mainly in two ways: they repurchased licensed from the big fishers or from the small tool license owners (Yae Paw Yae Shan License owners). As most of them have to purchase the

² According to the personnel from Department of Fishery (Pya Pon), all grants in the future will be given through auction.

³ The Yae Paw Yae Shan License owners collect fish mainly from small fisher and some medium fishers. The fish catches of big fishers and the medium fishers affiliated to the same big fishers that are his license is acquired from big fishers are collected by the middleman. It is not clear that the rule which allows only the Yae Paw Yae Shan owner to collect fish is the formally stipulated fishing rules or not. In fact, the rule according to one fish collector is null and void as there is no type of Yae Paw Yae Shan fishing according to the current fishing rules.

license on credit they have to sell their fishes to the person from whom they purchased the license. So, the medium fishers also are those who immediately to do with the hierarchical structure after the big fishers.

THE SMALL FISHERS

Small fishers in the arena of fresh water fishery are those who used small or subsistence fishing tools for which some purchase the license from the big fishers or the small tool license owners (Yae Paw Yae Shan License owners). However, majority of the small fishers have purchased license for only one tools and they also use other tools without having license. According to the data, 77% of the fishers have license for one of the tools they used but they fish with other tools without license. Actually, they even use their bare hands for catching prawns. In one specific case the small fishers do not have license for their tools because the big fishers who gained the grant from the original grant owner did not redistribute licenses for small tools. The research team found out such case in two villages out of 11 villages visited during the study.

1.2 NON-HIERARCHICAL FISHERS

There are fishers both big and small who are out of the arena of hierarchical transfer of the grant for fishing in the areas of fresh water courses. They are 1) big off-shore fishers 2) small fishers who acquire license directly from the State (Department of Fishery) 3) fishers who fish eel. The first two types are fishers who acquire license directly from the Department of fishery and fishing eel do not need license.

The big off-shore⁴ fishers first have to make license for their boats and the tools license have to make based on their types of boat and tools. The big off-shore fishing in fact has three different types and all types have to follow the same procedure of licensing. In addition to the license, they also have to take responsibility for the insurance and labour registration of their labourers.

1.3 THE COLLECTORS

The research team met 9 collectors in the village and four collectors in the township. Five out of 9 collectors are the actors part of the hierarchical structure. It is peculiar that five of the fish collectors met during the study visit are small tool license owners who in fact are smaller kind of middlemen or the big fishers. Three of the five have acquired small-tool license (Yae Paw Yae Shan License) directly from the middleman (the original grant owner_ the one who get the grant directly from the State through auction or by affiliation with government) or in one specific case directly from the State (DoF). Many small fishers and even medium fishers have to purchase license for each type of small tools from those small-tool grant owners. In fact, the small-tools license owner get the license mainly for collecting fish as it is only the grant owner who can collect fish caught by the small-tool licensed fishers.

In one case which is not unusual, a big fisher who repurchased the whole grant from a middle man who actually is a collector in Yangon whole sale market, collect fishes at the village and sell back at the latter's collecting firm. In another case, the fish collector in Kyaik Latt township who mainly collect fishes from the village level collectors, take grant for some of the watercourses and sell back to the fishers and the collectors at the village. Then as we have known, the township collector gets the fishes from them. So, the collecting business largely is deeply attached to the hierarchical structure regarding the property right distribution in fresh water arena.

Another type of collectors at the village is the collectors independent from the hierarchical structure. Those non-hierarchical collectors are collecting the products extracted from the area beyond the fresh water grant and the collectors who collect eel and crabs. According to the fishers and the collectors at the village, a new rule has

⁴The off-shore fishing is one of the capital intensive fishing. The off-shore fishing under the off-shore fishing rules is the fishing which has to fish beyond the 10 miles from shore and use over 30 feet with over 12 horse power engine.

stipulated since this year by which only those who have the whole license or at least the small tool license are allowed to collect products. The research team found out two cases in two villages where the collectors have ceased collecting fishes as the grant owner and the authorities came and banned fish collecting.

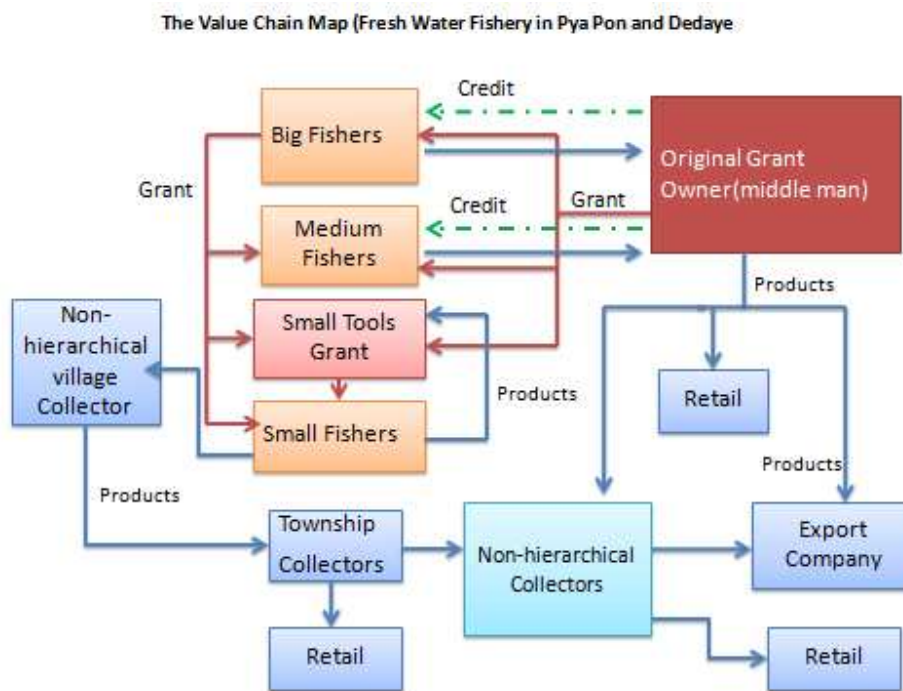
The collectors at the township and Yangon mostly are the middlemen who acquired original grant directly from the State. The research team met four collectors at the township level and two of which are crab collectors. However, according to the fishers at the village especially big and medium fishers the fish they caught are to be sold at the middlemen from which they gained the fishing license.

2. THE VALUE CHAIN

2.1 THE VALUE CHAIN OF THE HIERARCHICAL FRESH WATER FISHERY

The value chain starting from acquiring property right for fishing in the fresh water arena is found out to be commencing with middlemen and it is simply the middlemen that become the destiny where most of the product goes before they reach in the hands of retailers and the exporters. More significantly it is the middle men that supply one of the most important means of production_ the credit, immediately to the big fishers from which the credit might be flowed to the medium and small fishers.

Figure (2): The Value Chain Map



In the above value chain map, it can be seen that the property right goes from the middleman to the big fishers directly and to the medium fishers mostly via big fishers and sometimes directly from the middleman. (In the map the flow of property right are shown in red). In almost all cases, the fish (product) caught by or collected by big fishers directly goes to the middleman who usually owned collecting firms or connect with collecting firms where the fishers are to sell their catches.

The property right to the small fishers (the small tool licenses) comes directly from the big fishers or from the small-tool grant owner who is in fact a middleman who purchased sheer small-tool license aimed at collecting

fishes from the small fishers. Accordingly, in many cases the fishes from the small fishers goes to the small-tool grant owner who however, do not need to sell collected fishes to the original middleman as they have purchased the whole small-tool grant. Those who do not purchase small-tool license on credit do not need to sell their fishes to the grant owner. So, the products from small fishers largely go to the collectors from villages which in turn sell comparatively at non-hierarchical collectors at the township who mostly are genuine collectors. (The product flows are shown as blue arrows)

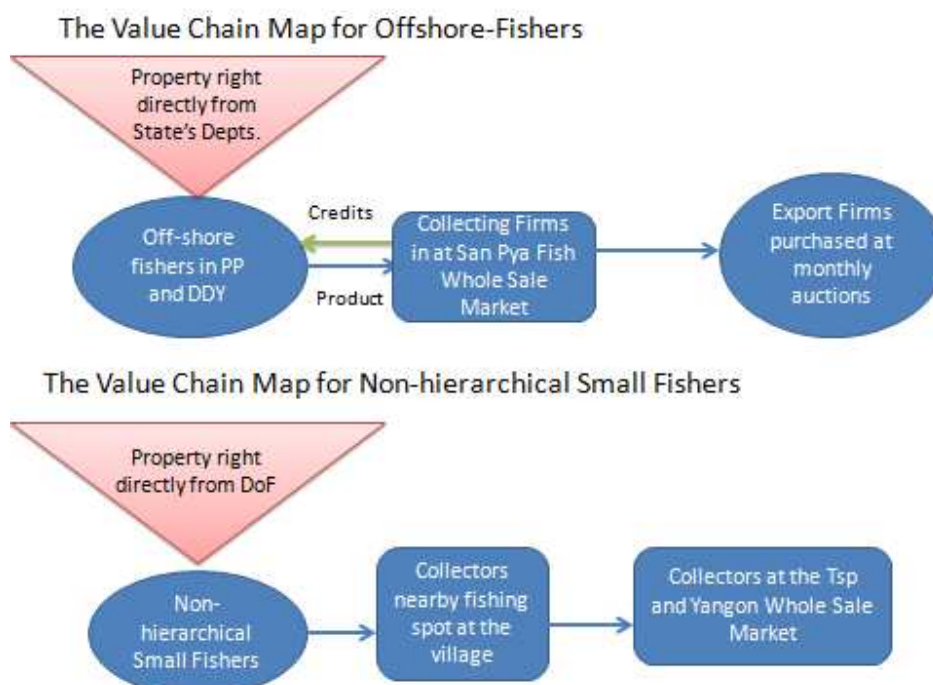
One of the significant flows from the middleman to the producers is the credit which is shown in green arrows. The substantial amount of credit for tools and labour are in fact supplied by the middlemen. The significant means of productions in the fresh water fishery in the studied areas come from the middleman and the massive portion of the products is heading to the same actors. Then it is apparent that it is the middlemen who are the most significant actors throughout the value chain of the hierarchical fresh water fishery.

2.2 THE VALUE CHAIN FOR THE NON-HIERARCHICAL FISHERS

The value chain of non-hierarchical small fishers is as similar as that of other small fishers. Most of them can sell their product freely except those who take credit from the collectors. It is found out that most of the non-hierarchical small fishers sell their products at the collectors nearby their fishing plot.

The value chain regarding the off-shore fishing, on the other hand differs to that of the fresh water fishery arena. The off-shore can be separated into two key dimensions based on the products_ one produced sea foods and another one produced preserved (dry) fish and prawns. Some sea fishers produced both and some only one. Based on the products the value chain differs.

FIGURE 3: THE VALUE CHAIN MAPS FOR NON-HIERARCHICAL FISHERS



The sea foods which are export products and are marketed to two main collecting places in Yangon: 1) MMG Collecting Firm located nearby San Pya Fish whole sale market and 2) Department of Fishery, Yangon. However,

most of the sea fishers sell at the MMG firm because of the port facilities which helped transporting products soundly. The MMG firm in fact is the brokerage house and the fishers have to pay 3% brokerage fees on the products they sold. The MMG firm sells the products to the international buyers by competitive auctions which hold monthly. According to the sea fishers, it is known that the buyers are mostly from China, India and Bangladesh.

The dried fish and prawn are made at the shore right after fishing at the sea. The products are mainly marketed at brokerages at Ba Yint Naung whole sale market. The fishers have to pay 3% brokerage fees. The dried fish and prawn are consumed locally as well as exported mainly to China, India and Bangladesh.

GENDER IN THE VALUE CHAIN

SECTION 3: POWER AND GOVERNANCE

1. WHAT GOVERNS THE ARENA IN REALITY?

“It is only the capital rich grant owners (middlemen) who really rule.....” (One of the members of FDC)

It is simply the capital rich middlemen and the pattern of State’s provision of property right that create practical governance in the arena of fresh water fishing in the studied area. As it was mentioned above, starting the whole value chain with acquiring property right by middlemen with their financial strength, maintaining the chain operates with their significant credits and ending the chain with collecting majority of fish catch in Pya Pon and Dedaye, the whole value chain in fact has few spaces free from the influence of the capital rich middlemen.

The property right (the fishing grant) prior to the current elected regime was provided in a very nontransparent way in which grant for many fishing plots known as profitable spots were not listed on the list of auction and distributed to the persons close to the government authorities. Given that the fishing spots which had never seen on the list of auction are among the list of the auction held this year at Pathein, the town of Ayaarwaddy Region, for the first time the newly elected government gave the signal of eliminating nontransparent manners practiced under the State Peace and Development Council. However, property right distribution through auction simply let those capital-rich a handful of people, not the true producers, gain the right and thus sustaining the extra layer, the middleman that have been existed throughout the undemocratic regime.

Changed in terms of property right distribution but the structure yet to be changed.....

The property right provision through more genuine auction since this year by the regional government itself brings some significant changes. First of all the business relations between the capital rich middlemen and the government authorities ranging from military authorities to the ministers were largely eliminated. Before, the property right was in the hands of government authorities and the middlemen acquired by giving bribes despite the auctions were hold symbolically at Nay Pyi Taw. Without knowing that the property right distribution would be undertaken legally through genuine competitive auction, many capital rich middlemen gave money to the government authorities as they thought they could acquire as usual. As a result many middlemen have lost significantly. Many of them have to auction for the same water course for which they gave money to the government authorities whom they thought the grant was in the hands of the later. Anyway, the new terms of property right distribution has ended business relations between the capital rich middlemen and the government authorities. This is also consequential to the empowerment of the Department of Fishery which under the former conditions had no power as the middleman had direct informal access even to the minister level.

Box (1): How the Capital Rich Middlemen and the government authorities had business relations under the previous government.....

According to one of the middlemen, he had acquired the grant by direct relations with the former Minister of Livestock and Fishery who had to auction the grants under the previous government. The middlemen and the minister are so close in business relations that the former even was able to borrow hundred millions of Kyat from the latter being needed to pay for the auction. However close in relations with the minister, the middleman had to give up the grant that he gained for six years consecutively because he could not pay the price as competitively as other capital rich middlemen in the auction.

(The middleman in one village)

Accordingly, under the situations like the above mention cases, the role of DoF had been nothing more than the brokers between some middlemen and the authorities who gained the grants as some middlemen used DoF as a channel. Now given the informal ties between the middlemen and the government authorities were erased as a result of the property right distribution through genuine auction, the role of DoF has been elevated as both middle man and the small fishers have to rely on DOF for interpreting their rights under the new institutions⁵. Still, the capital rich middlemen still govern with the background of their strong capital and sustain the hierarchical structure of property right distribution.

Competitive Auction only helps restored the existing extra layer, the Capital Rich Middlemen.....

“It is only the group of auctioneers (the regional government) who clap at the end of auction and those who won the auction seemed to be paralyzed”.

(One of the big fishers present in the auction room)

Provision of property right through auction may succeed in reducing rank-seeking through eliminating business relations between the business man and the state authorities. However, as the government of the region encouraged highly competitive bidding, the prices have risen beyond the profitable level. One of the big fishers present in the auction stated that the auctioneers only give one minutes to think about giving price and thus leading to strongly competitive bidding in the auction without having enough time to think about rationality. One of the officials from Department of Fishery explained regarding with the highly competitive auction that the Ayarwaddy regional government has a motive for examining the extent to which the sector (fishery) can generate revenue for the region. In this view, the auctioneers encouraged price competition among the business men.

In fact, the bidders at the auction are only the middle men, not the true fishers. They in practice are not those bearing the risk of loss. It is primarily the big and the medium fishers who will have to bear the burden of loss for the price at the auction raised beyond the profitable rate. The price according to the two big fishers has raised double than the price previous year.

⁵ The conclusion on the elevated role of DOF is made by the fishers at the village level and the remarks of a fishery expert from the fishery school who have working relations with DoF. Some small fishers mentioned that they dared not questioning on the their fishing rights for some water courses for the mere fact that the grant for the water course was provided with the a middleman for their close affiliation with higher ranked government authorities. Now, they have considered DoF as an entity at which they can make complaints on the issue of interpreting fishing rights between them and the grant owners.

“The increased price for the grant is not the problem for us; we can afford to pay if we got the fish.... But the fish catch is mainly reduced because of the farmers who build embankment across the watercourse.....”

One of the few biggest middlemen in Pya Pon

The above response of one of the biggest middlemen on the dramatic increase of license fees resulted by highly competitive auction held this year reflects the fact that middlemen are indifferent to the license price increases transferring the risk of loss to the big fishers. The same respondent replied regarding on the property right distribution system that they prefer competitive auction system than the old system in which only those who have close relations with the government authorities won the license. The competitive auction system according to him gives the highest bidders the chance to win the license. However, it is the big fishers who really are victimized by the dramatic increase of the grant prices.

Box (2): How the big fishers bear the risk taken by the capital rich middlemen

A big fisher who purchased the grant for the whole water course for 30,800,000 Kyat (308 lakh) from a middle man who gained the grant at the auction held at Pya Pon this year. The same plot was only 18,000,000 Kyat (180 lakh) last year. According to the big fisher, the middle man is his nephew and owned a big collecting firm at Yangon San Pya whole sale market. He purchased the grant on credit from the middleman and has to be repaid in kind (fish). The big fisher redistributed both big and small tools licenses to small and medium fishers while he himself is doing with the big tools (Kyar Pike). (He gives a piece of papers to every fisher who repurchased tool license from him.)

He has to raise the prices for the big and small tool licenses that he redistributed as the price for the grant of the whole water course has increased but not in proportionately. Otherwise the other tools could not be resold and the loss for him will be bigger. According to the big fisher, his business so far has been lost 10,000,000 Kyat and he has to repay by disposing his big tools (fishing net) and the boat If the middleman do not want to extend the repayment time until next year. Still he is not confident in getting fish in coming season enough to repay the debt. He has decided to repay debts by disposing his nets and boats if the grant prices at the auction keep high for coming season. In addition, he worried about the possible default by the medium fishers whom he redistributed the big tool license on credit again. According to him, if those fishers could not pay the debt this year, it will be continue next year. So, it is the middleman who made the bid irrationally in the auction but it is the fishers who actually pay the cost for that.

The Small Fishers_ constrained by the unclear, unenforced Rules of the State.....

“We had never heard of common fishing plot before. Now we came to know about fishing rules and the common fishing plot thank to the training on “Fresh Water Fishery Rules and Regulations” given by experts from Fishery Schools with the sponsor of NAG. But it is rarely useful in reality because those rules and regulations are lifeless”.

(One of the members of Fishery Development Committee attended the 1st Coordination meeting at Pya Pon NAG office in 16th October 2011)

It is the small fishers who bear the costs of unenforced and unclear institutions while the big and medium fishers bear the risk taken by the capital rich middlemen. According to the small fishers met during the visit and the coordination meeting held at NAG project office, they are not allowed to fish in the areas where according to the fishery rules are the common areas of fishing. In addition fishing with such small tools as Nga Phaung Waing Net and Myaw Net are also banned and seized the tools and arrested by the grant owners (big fishers) despite that such tools are exempted from licensing. According to the small fishers, the grant owners has enhanced more

fishing constraints lately and they even ban catching prawns with hands and fishing in the paddy fields with the permission of farmers. Some FDC leaders considered this intensified constraint as something to do with the increased prices of grants which make the grant owners struggle in reducing their loss thus rendering more pressure on the small fishers.

Small fishers insisted that they have no place to find fish even for the subsistence amount. When they complained at the Department of Fishery for the seizures of tools for fishing not violating according to the fishery rules, the departments frequently urged them to solve the problems with the grant owners.

Provision of knowledge on Fishery Institutions pays off.....

Many small fishers in the visited villages mentioned that they have slim hope for improving their situation despite provision of knowledge on the local fishery institutions with the support of fishery governance project. However, the studies found out some cases by which we could remark that the institutional capacity building of the project have brought about positive impacts on the country. We found out two cases in which the small fishers could raise their voice on their right under the institutions. Both of the cases are found out in two villages where the fishery governance project has been implementing since early 2010.

Box (3): The small fishers start to take a move for their rights given by institutions

A group of small fishers in one project village fish with Nga Phaung Waing Net as they have learned that such tools do not need license during the training on Fresh Water Fishery Law given by fishery governance project. However, they were banned in reality by the grant owner (the middle man) and confiscated their fishing tools. So, they with the support of village Fishery Development Committee (FDC) formed by the initiation of the project, they complained at the township DOF office. The DOF office helped to settle the issue by mediation between the two parties_ the small fishers and the grant owner. Finally, the small fishers regained their tools and could fish with the same tools.

In another case, the small fishers used Myaw net and their tools were seized by the watch men sent by the big fishers who actually attended the training given by the project. The big fishers returned the tools when the small fishers met and explained about the rules. In fact the big fisher is one of the protégés of a big middleman resided at the township.

2. MARKET RULES AND PRACTICES

Small Fishers have more freedom of marketing than the two superior fishers.....

Small fishers sell their fishes in various places: at the village collector, at village tract collector, at township collector. Many of the small and even medium fishers also sell fishes by themselves as vendors because they could earn higher price than that given by the collectors. With insignificant fish catch, most of the small fishers sell their products at their village collector for accessibility and convenience. One significant finding is that the small fishers are found out being able to sell more freely as they could make decisions on marketing only based on the amount of fish catch and accessibility. Their products are too small to be concerned with by the middlemen and as a result most of the small fishers are found out to be quite free to market their product.

Most of the medium fishers sell their product mostly to the middlemen or big fishers from whom they gained fishing grant and credit. In one case, the fishers have to sell their products to the collectors to whom their grant owners have asked to sell their fishes. According to the four big fishers we have met during the studies, three of

them have to directly sell their fishers to the middlemen while the other one have to sell at the collector described by the middleman (the grant owner). So, the products from medium and big fishers are headed mainly to the middlemen.

Malpractices are common in the market.....

"It is out of the question that collectors short weight and the fishers inject water (inside fishes and prawns). It is tacit agreement between us!"

(One of the medium fishers)

Most of the fish collectors used traditional scale measures. As to the fishers satisfaction on the fish collectors 52% of the respondents report dissatisfaction while 48% replied satisfaction with their collectors on the terms of marketing. However, according to majority of fishers, all collectors use short-weighted measures. On the other hand, fishers inject water into fishes and prawns in order to gain weights before they sell to the fish collectors. Many fishers are dissatisfied with their collectors for three reasons: short-weighted measures, price below the market rate and differentiating sizes. The collectors according to them sometimes use all three methods and mostly used one or two of the mentioned cheating methods. According to small fishers, village collectors tend to take 5% to 10% profit. However, it is only 3% to 4% profit they could make from the products they collected according to the collectors.

Both the products and the prices decrease.....

"Usually the prices come up when the products scared but now the products decrease and so as the prices"

Fishers who mainly fish hilsa at the main water course of Pya Pon River

According to the fishers big and small, the fish catch have been significantly decreased since the year after the Nargis. It is found out fish catch decreased two times less than last year (2010) and 7 times decreased than that of 2009. Two causes are mainly reported concerning with the fish catch decreases: fishing with toxics and fishing with tight nets. Big fishers accused small fishers of using toxics in fishing and vice versa. Small fishers also points out the tightly knitted nets used by big fishers as one of the main causes of fish decrease.

The prices have been varied based on the types of fishes. According to the fresh water fishery the prices have decreased in 2011 than 2010 for export fishes like hilsa. But the price is not that different for those fishes consumed locally. However, according to the off-shore fishers, the fishes they caught like Nga Moke and lobsters are increased in prices 1.1 times than that of previous year. Such fishes are exported annually to china, India and Bangladesh. The buyers from those countries have to purchase at the competitive auction from a private company located in Yangon. The big sea fishers explained the rare product (fish catch decrease) as one of the significant factors of price increase in those products.

SECTION 4: DISTRIBUTIONAL ANALYSIS⁶

The immediate cost of middlemen is only 35% while it is 44% and 81% for small and medium fishers respectively. For Big Fishers the immediate cost twice as large as their possible earning for this year.

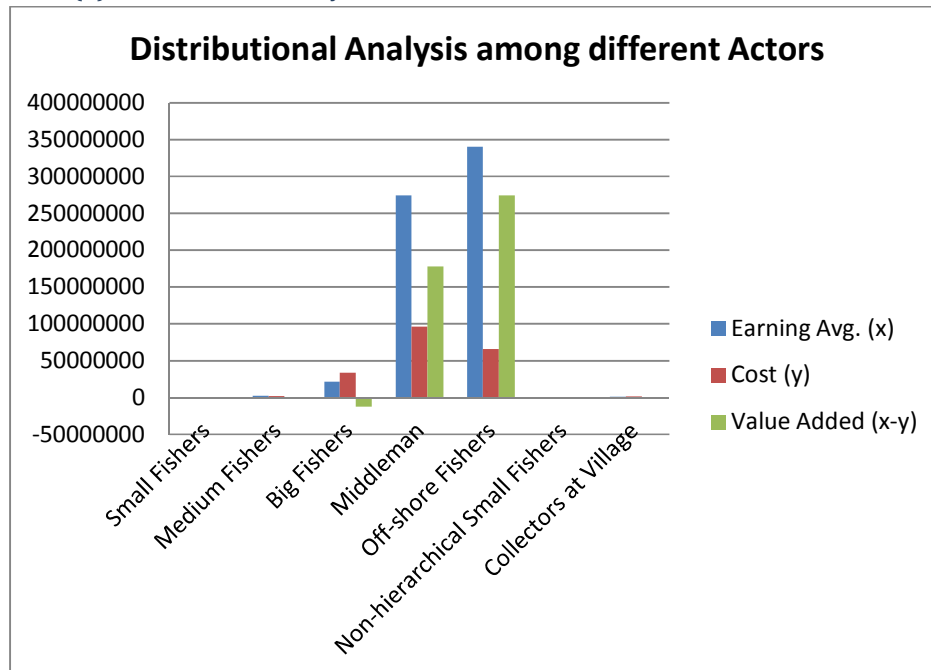
The analysis of value added is undertaken in order to picture the distribution of returns for each actor throughout the chain. The analysis clearly points out the big gaps between the returns gained by different actors in the hierarchical structure of the fresh water fishery arena. If we look at the hierarchical structure of the fresh water fishery, it is the middle men who gained the highest value added while the big fishers who have to directly and immediately take the burden of illogically high rate of license fees. Far from making any value added, the big fishers have been faced with significant loss which can be clearly seen by the upside down strip at the distributional chart below. It is found out that the big fishers have lost over 121 Lakh. The small fishers have made value added two times larger than that of their cost. The medium fishers have found out gaining very thin amount of value added especially because of the high annual license fees. It is revealed by the data that the immediate cost occupied 81% of annual earning of medium fishers while it is 44% for small fishers. The same cost constitutes only 35% of the annual earning for middle while the cost of big fishers now have reached double than they could have earned for this year.

Table (1): Distributional Analysis of Different Fishers in Pya Pon and Dadeye Townships

Particular	Earning Avg. (x)	Cost (y)	Value Added (x-y)
Small Fishers	678009	300391	377618
Medium Fishers	2503992	2032246	471746
Big Fishers	21660000	33841100	-12181100
Middleman	274500000	96440000	178060000
Off-shore Fishers	340317600	66017928	274299672
Non-hierarchical Small Fishers	932925	109000	823925
Collectors at Village	1046000	1531000	-485000

⁶ The value added here is calculated on the immediate cost such as license fees, transportation costs, labour and so on. The value added described here are not an exact breakdown of the total value added but rather an approximation based on the approximated figures given by the respondents. In addition, the data on the middlemen and the big fishers are not to be fully considered as representative to the same people because of the very limited number of respondents. The field team had a chance to meet two big fishers and one big middleman. However, many fishers met during the field visit are rarely free from the hierarchical influence of that same middleman. For many fishers in the village he is the giant and powerful middleman.

Chart (1): Distributional Analysis of Different Actors



Comparative analysis between Non-hierarchical and Hierarchical Fishers

One interesting finding is the comparative value added gained by fishers within hierarchical structure and the non-hierarchical fishers regardless of big or small in business size. It is clearly found out that the immediate cost for non-hierarchical fishers are much less than that of the fishers under the hierarchical structure. The immediate cost constitutes only 12% and 19% of annual earning for non-hierarchical small and big fishers (off-shore fishers) respectively. It is the license fee that is largely attributable to the low immediate cost for “non-hierarchical fishers”. The license fees occupy only 8% and 1% of the total immediate cost for non-hierarchical small fishers and the off-shore fishers. The license fees for fishers under hierarchical structure however are at least two times higher than that of non-hierarchical fishers. The average cost for license fees for different fishers and the percentage of license fees composed in the total cost is shown in the following table. It can be seen clearly that the license fees of big fishers under the hierarchical structure occupies 82% of its total immediate cost while it is only 1% for off-shore fishers who can directly have their license at the government departments.

The off-shore fishers have to make license mainly for two types. First and foremost is the boat license and based on that they have to make tools license. The other cost for off-shore fishers for which the big fresh water fishers do not need to expend is the insurance for labor and labour registration. Despite these extra costs to the off-shore fishers (paid to the government directly), their costs for the license is over 80 times lower than their counter parts under the hierarchical structure. The non-hierarchical small fishers only have to make tools license which can easily have at the township DOF office. According to some such fishers, the license can even be made at the village tract as the staffs from the township DOF visited the main village tracts every year for giving license. All of the non-hierarchical small fishers however are those who fish at the main river course and they usually fish hilsa. According to fishers these non-hierarchical fishing license in the fresh water fishery area are giving only for fishing in the main river course and fishing in the tributary water courses are concerned only with the fishing grant given by auction at

present. In other words, fishing rights in the tributary water courses are the affairs under the hierarchical structure governed mainly by the grant owners that is the capital rich middle men.

Table (2): The cost for license in percentage in the composition of total cost

Particular	Total Immediate Cost	Cost for License	% in composition
Small Fishers	300391	41466	14
Medium Fishers	2032246	1205385	59
Big Fishers	33841100	27770000	82
Middle Men	96440000	0	0
Off-Shore Fishers	66017928	640400	1
Non-hierarchical Small Fishers	109000	8250	8

SECTION 5: GENDER IN THE VALUE CHAIN

Men are involved only in the portion that calls for strength of masculinity. But women are in the "A to Z" of it...

It is undeniable that the fishery in the studied areas regardless of the type_ fresh water or off-shore, starting with acquiring property rights to redistribution of the rights to different level of fishers, is the male dominant arena. If we look at the starting point of the value chain that is acquiring the property rights most of the grant is found out to be in the name of male grant owners. This is the same regarding with the redistribution of the property rights to fishers in different levels_ big, medium and small fishers. However, we women in fact are seen undertaking practical and significant works in the value chain. The researchers have seen women working together with their male counterpart fishing in the wide Pya Pon River, preparing for daily fishing activities, managing the fish-collecting firms and selling their fishes as vendors.

In other words, Women's role in the sector in fact is much broader than what men do. It is commonly constructed that fishing is the livelihood which mainly depends on the masculinity. This study found out that the sector is moved with the significant contribution of women as women are found out being involved in various roles of the niche ranging from fishing together with their male counterparts to marketing their products. According to the data, 77% of the respondent fishers replied that women in their households have to be fully involved in the work starting from searching bait to help installing the nets to rolling the boat to sorting and selling fishes at collectors or as vendors.

It is found out by the study that women in the sector have obvious role in two places of the values chain: operating and managing the fish collecting firms at the villages and selling fish in the retail market. It is found out that women tend to be the actual manager of fish collecting firms based at the village despite that the fishing collecting rights are mostly recognized in their husbands' names. In order to collect fish at the village, the informal rule made by the middlemen_ the most powerful actors in the value chain requires getting small-tools license that is a license for fishing spots that could be exploited with various types of small tools. So, the fish collecting firms who want to collect fish at the village purchased that license directly from the middlemen or the big fishers. Then they redistribute it to the real small fishers and the most important thing is collecting all fishes in the specified area. So, the small tool licenses mostly are in the names of men but the firms actually are being managed by women.

Another activity on the value chain where women take distinct role in appearance is retail fish selling at the township market. It is mostly the women who sell fish retail in the township market. In one interesting case that the researchers experienced is that a retail fish seller in the Pya Pon Market who also collected fish limitedly particularly from the small fishers. However, the fish seller had reported reduction in fish collection mainly because of the increased monopolized collection of those small-tool license in the village.

Women of the small fishing families catch fishes by themselves in the nearby stream. In fact most of them fishes illegally, they have to fish at night especially in times of raining as it is the time that the watchmen sent by the grant owners are under the shelter.

Box (4): How a widow earns a living with fishing

A widow in the age of early 30's whose husband died during the Nargis earns a living as a small fishers as well as a casual labour. She had a three years old daughter who was born soon after Nargis. During the day she works as casual labour at houses of well-off in the village and she fishes at night. The raining nights are good times of fishing for fishers like her as the watch men sent by the grant owners are resting under the shelter. She sometimes feels unsecured in the darkness though she can stand the physical unease.

It is largely found out that the women in the households especially wives are significant companions to the male fishers. Most of the small and medium fishers cannot afford hiring labour for their work and family members especially their wives have to complement the need of labour in their family work. In fact, men are involved in the works that calls for masculine strength. Women however have to do very detailed and fundamental works of the small and medium scale fishery. They have to find the bait, they have to help preparing and repairing the fishing tools, they help installing the net, they roll the boat or handle the gear while the men dropping the nets, they have to sort fishes, they have to go and send fishes to the collector in addition to the all of the household chores and caring their children. So, women in the small scale fishery sector have much less resting time than their male counterpart. One of the women from the small fishing households told to the researcher that "it is me who has to do all the things_ both fishing and household works. My husband sleeps right after he leaves his boat. He has never been lending a hand in anything in the household works. He thought his duty is well done after fishing". The following case also reflects the real life of a woman in a small fishing family.

Box (5): Women role in the Livelihood_ unsecured and unease

Case 1: A fisherman's wife told the value chain researchers... "I have to find bait, I have to roll the boat and handling the gear while my husband is dropping the net, I have to sort the fishes when it is large enough to do it, I have to help clean and store the net, I have to go and send catches to the collector, and I also sell some catches in the village. I have to cook and make house works. I have to care the children and take them to school. I am most of the times tired and my body aches. And my children cannot go to schools on the days I am out of timing.

Case 2: One women who accompanied her husband in fishing experienced abortion. She was in six month pregnant when the accident happened. She fell down in the boat when she helped lifting the net and she was miscarriage.

It is rarely reported during the field teams' visit about the sexual violent on the women who find fishes during the night and who sends fishes to collector very early morning when the catches are fresh. But many women respondents stated that they feel unsecured in the mentioned situation. It is not found out any cases of women

fishers suffering particular sickness from fishing in the water. However, one abortion case happened to a woman who accompanied her husband in fishing. The woman told to the research team that she had a fear to accompany her husband after she experienced abortion. But she had to in view of her family's subsistence.

Women in the fresh water fishery sector in the studied areas especially those from small fishing families are found out to be deeply and broadly involved in the livelihood under the unsecured and unsafe situation. However, the safety and security measures have yet to be included in any of the local institutions.

SECTION 6: CONCLUSION

The value chain of the fresh water fishery is found out to be heavy and complicated with the extra layer_ the middlemen which create an undesirable hierarchical structure. The new civil government has made an effort to change the structure stipulating the policy that the fishing rights are only for those who truly earn their living with fishing. However, the fishing right is distributed through competitive auction which in practice helps sustain the former structure with extra layer of capital rich middlemen. As a result, far from eliminating the extra layer, the real fishers particularly the big and medium fishers have to bear the burden of risk of loss as a consequence of illogically increased prices competitively given by middlemen during the auction.

On the other hand, small fishers are the real victims of unclear rules and regulations of fresh water fishery. They have found out more limited spaces for fishing as the fishers above them at the hierarchical structure are to be struggling for as much fish catch as possible to cover the increased licensed fees. Given the increased needs of interpreting fishing rules by the middlemen and small fishers as opposed to each other, the DoF have to play more significant role by mediating the two parties. However, the fishing rules remains unclear for both parties.

In terms of distributional analysis, the actors in the fresh water fishery have made much less value added than their counterparts of non-hierarchical fishers_ the non-hierarchical small fishers fishing mainly at the main water course of the river and the big sea fishers. It is found out high license fees is one of the main attributable factor to less returns earned by the actors under the hierarchical structure of fresh water fishery arena.

Women in the fresh water fishery are found out to be playing significant and wide-ranging role in the sector. They are seen in managing fish collecting firm to fishing with their male counterpart. However, it is male with whom property are rested. Both the right of extraction and the collection of the resources are rarely in the names of women. In reality, women are deeply involved in the livelihood ranging from preparation of fishing to fishing together with males in their families or fishing by themselves in an unpleasant and unsecured situation in addition to their normal house hold works. In addition it is women who really manage at the fish collecting firms and who sell fish retails in the retailed market in township cities. In fact, women have broader role than their male counterparts who only focus on fishing and leaves such significant works as preparing and storing fishing tools and sending fish catch to collecting firms with females in their families. Despite its extensive and significant role in the field, the measures to the safety of women fishers are yet to be included in the local and fishery institutions.

SECTION 7: RECOMMENDATION

- *Competitive auction should not be with predatory motives of the Regional Government. It should be more transparent so that the property right will be properly distributed among the true fishers*

The study reveals that the fishing right has yet directly reached to the hands of true fishers. On the contrary, the right is originated with the capital rich middlemen and the true fishers gain the right from them. It is also found out that the competitive auction with the predatory motives of the regional government will only maintain the existence of middlemen. In addition, the property right can never be in the hands of true fishers unless it is transparent that is making the information on the auction accessible to the true fishing resided at the villages. More importantly, it would be good for the fishers to be informed on the returns and possible fish catch of specific fishing spot listed on the auction.

- *Big fishers should also be included as key stake holders of fishery governance projects. Should consider provision of financial assistances and how best they will be financed.*

The interventions that will be launched by local and international organizations in view of improving fishery governance should not be limited to the small and medium fishers as the big fishers in fact are the real generators of the sector. More importantly, it is the big fishers who bear the burden of the risk taken by the middlemen under the current situation. It is important that the fishing right should be directly in the hands of big fishers who could produce mass production because of their technical and financial strength. In addition, the big fishers are key in eliminating the middlemen. So, they should be included in the institutional capacity building and are to be supported financially so that the extra layers of middleman can be eliminated. So, it is highly recommended including the big fishers in the fishery institutions that could be established with the support of Local and International organization and the private sectors like MFF.

It is very important that the big and medium fishers are to be financially strong in order to eliminate the capital rich middlemen. In order that the fishing grant (the property right) should be endowed in the hands of true producers, financing the two significant producers_ the big and medium fishers are as important as correcting the motives of the auction. At this point, we need to consider the roles of Livestock and Fishery Development Bank for financing of true fishers so that they could reach the grant. We would like to recommend a more comprehensive macro in which fishery institutions and the semi-state financial institutions like LFDB working together for the development of the sector. This path will encourage sustainable development of the sector.

- *Should advocate federal and regional governments and the departments concerned to stipulate Fishing Laws which properly distributed the property rights among the fishers_ big, medium and small. In addition, it is very important that those laws and subsequent rules and regulations should be clearly interpreted and enforced.*

It is revealed by the study that the fishing rules and regulations are not clearly interpreted and practically enforced thus leading to tensions and possible conflicts among the fishers and between fishers and the farmers. The off-shore fishers are found out to be under much better governance comparing to their counterparts in the fresh water fishery in terms of accessibility and transparency in acquiring license, low transaction cost and having risk management with insurances for properties and the labourers. This is the role that community based fishery institutions, MFF and DOF have to take coordinately.

- *For off-shore fishers, the labour issues have to be systematically solved. The off-shore fishers in Pya Pon and Dadeye should have the same fishing duration with similar fishers in the coastal areas.*

Despite the benefits from the better institutions that the off-shore fishers have enjoyed, there are the two things they want to improve are: more institutional binding on the labourers and extended duration for the fishing in the sea. The labourers very often violate the formal commitment and flee before the end of tenure for working at another employer in order for taking advance money. The off-shore fishers want the labour office and DoF to solve the problems effectively. In addition they put forward their difficulty to manage the very limited fishing duration. They are calling for the uniformity of rules with other sea fishers at the coastal areas who are allowed 60 days of fishing. According to them, most of the days in the sea are to be spent only for taking shelter. So, they are demanding another 30 days like other sea fishers in the coastal areas.

- *Safety and security measures for women fishers have to be institutionalized*

Women are involved in the livelihood in a wide-ranging ways. The worst thing is most of them are fishing under the unpleasant and unsecured conditions. The community based fishery development institutions are recommended to address the issues with complementary income generating activities or integrating safety measures into institutional foundation of those community based fishery institutions like FDCs.

- *Women retailed fish sellers in township market could be collective owners of fishing license*

Majority of the fish retailed sellers in the township market are women and some of them collected limited amount of fish. According to the small and medium fishers at the village such fish sellers give them good price because of the competition among them and the other big collectors. It is worth considering collective ownership of fish collecting rights among those retailed sellers thus enhancing property right ownership of women. In addition, this could reduce retailed fish prices as stocks will go directly to the retailing.