Women's position in blue economy

Elapata, Maheshwari ,Sangeetha [1];De Silva, Achini[2]

[1,]Department of Agribusiness Management, Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka, P.O. Box 02, Belihuloya

maheshwari.elapata@gmail.com

[2]Department of Agribusiness Management, Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka, P.O. Box 02, Belihuloya

Abstract

The fisheries sector is a vital oceanic resource that build the core of the Blue Economy. However the realization of the full potential of the Blue Economy calls the requirement of effective inclusion of all societal groups, especially women whose contribution is not well acknowledged. The study focused to investigate the fisherwomen's contribution on decision making, participation and governance in production, marketing and investment and to measure the fisherwomen's share in consumer rupee and also to find out the opportunities for traditional fisherwomen into professional careers. Questionnaires, field observations, participatory mapping, telephone interviews were applied to collect the primary data. The sample composed of 5 case studies of selected fishing communities in Sri Lanka; *Kudawella, Gandara, Ambalangoda, Beruwala* and *Jaffna*. The results revealed that the decision making power was concentrated among males. Maldive fish value chain was female dominated but pricing and investment decisions were influenced by the male members of the family. The women's contribution towards investment decisions was poor. Fisherwomen share in consumer rupee of Maldive fish and Dried Tuna Fish ranged from 3.7- 3.9% and 8.5-10% respectively. The results indicated that the superfluous involvement of intermediaries keeps female-fishers and markets separated and discouraging them to be market responsive. The results further revealed a paradigm shift of women in these fishing communities from traditional fishing activities into recreational activities, tourism and higher education. Gender empowerment interventions on both hard and soft skills development were considered as an essential requirement to exploit the unrivalled opportunities in the blue economy.

1. Introduction

1.1. Background

Sri Lanka being an island in the Indian Ocean is bestowed with the benefits of the Blue economy. Thus the fisheries sector which is the core that build the blue economy is considered as one of the most important economic element for the dwellers of Sri Lanka. Thus it plays a vital role in both social and economic life of Sri Lanka. The fisheries sector contributes around 2 percent to the country's GDP. Furthermore statistic revealed that around 2.4 Million direct and indirect employments have being generated in this sector including fisherman, breeders, processors, distributors, packagers and other service suppliers (EDB, 2012).These stakeholders includes both male and females.

The engagement and the contribution of male and female fishers are distinct and complementary and is strongly influenced by social, cultural and economic contexts they live in (FAO, 2016). This

variation is based on the economic status, power relations, and access to productive resources and services. In most fishing communities in the world, fish catching including ocean-going boats for offshore and deep-sea fishing was mainly dominated by males. Women were mostly responsible for skilled and time-consuming onshore tasks, such as making and mending nets, processing and marketing catches, and providing services to the boats. The primary role of women in the fishing community is multidimensional. These roles extends from livelihood, daily household chores including meal preparation, child and elderly care, shopping, reproductive and to community roles. The subsistence and the small scale fishery production is highly dominated by females (De Silva, 2011)In western Africa and Asia, as much as 60 percent of seafood was marketed by women, and in many parts of the world they also do a significant amount of shellfish gathering/clam gleaning – a fishery activity (FAO, 2016).

Harper, et al., 2013 have mentioned that meagreness on gender equity in the fishery sector particularly in Africa and the Asia-Pacific region is, mainly due to limited gender specific data on fishing activities and the under-representation of small-scale.

1.2. Significance of the Study

The widely used term in the fishing industry to the person who is involved in fishing is fishermen. The word itself indicates that fishing is performed mainly by men. Though the fisheries sector is dominated by the males, women are also involved and contribute in capturing, processing and sale as well as finance (Harper et al., 2013).The roles performed by the women tend to be overlooked and continue to be under-acknowledged in fisheries management and policy development (Harper et al,2013).Further the women participation and their involvement in post-harvest chain of fisheries sector is un-recognized, under estimated and less acknowledged in spite of being a part and parcel of wide range of harvest and post-harvest activities in both capture and culture fisheries (Kleiber, Harris, & Vincent, 2016).Thus it is very much important to acknowledge the social and political position of women as they are regarded as the food providers of the households. The fish which men caught are prepared by the women and fed to the family. Even at conditions where men caught no fish still the women act as the food provider of the family (Matthews & Evelyn, 1992). Current academic literature identifies here is a boom of studies flooding on to gender equity in the fisheries sector ((Williams, Williams, & Choo, 2002); (Bennett, 2005)).However studies particularly done for Sri Lanka is minimum. Female stakeholders in the fisheries sector were, until recently, invisible in the statistics collected and provided to fisheries managers and policy-makers. Thus the contribution to the household and local economy is yet unknown. The female workforce, particularly in the small scale fisheries sector tends to be high. Nevertheless these female processors' contribution to the household economy was significant and not measured. The fisheries sector is a vital oceanic resource that build the core of the Blue Economy. However the realization of the full potential of the Blue Economy calls the requirement of effective inclusion of all societal groups, especially women whose contribution is not well acknowledged. Furthermore many studies have been conducted to identify the fishermen's share in consumers' rupees throughout the world (Sathiadhas & Panikkar, 1992) (Dasa, et al., 2013)). However minimum or no attempts have been visible in current literature to identify the actual economic benefits the female fishers receive. Thus it was deem appropriate to the current social status of the women and the economic status of the female fish processors. Thus this would help to develop the strategic interventions to upgrade livelihood.

It is well known that the tropical coastal zone is one of the world's most productive ecosystems and that generates diverse occupation (Bailey & Pomeroy, 1996). The coastal fishing communities in Southeast Asia is benefitted with the wide range of avenues that generates income and is distributed both temporally and spatially. (Bailey & Pomeroy, 1996). The male jobs of the fishermen is regarded as the most prestigious job within fishing communities while the occupational opportunities of women are for most parts limited to low-level service occupations or exhausting, poorly paid jobs in local fish-processing factories. However the Metropolitan areas provide diverse opportunities for education, employment, and leisure than rural municipalities (Bjarnasona & Thorlindsson, 2006). This attracts both males and females in the fishing communities. Thus the study has also attempted to divulge the existing opportunities for professional careers women in these studied fishing communities.

1.3. Research Objectives

The general objective of the study is to get a snap shot of the Sri Lankan women's position in the blue economy particularly of the female fish processors. The specific objectives of the study a)To investigate decision making power, participation and governance in production, marketing and investment b) To measure the fisherwomen's share in consumer rupee: Dry fish and Maldives fish. To find out the opportunities exist for traditional fisher women into professional career.The conceptual framework of the study is depicted in figure 1.

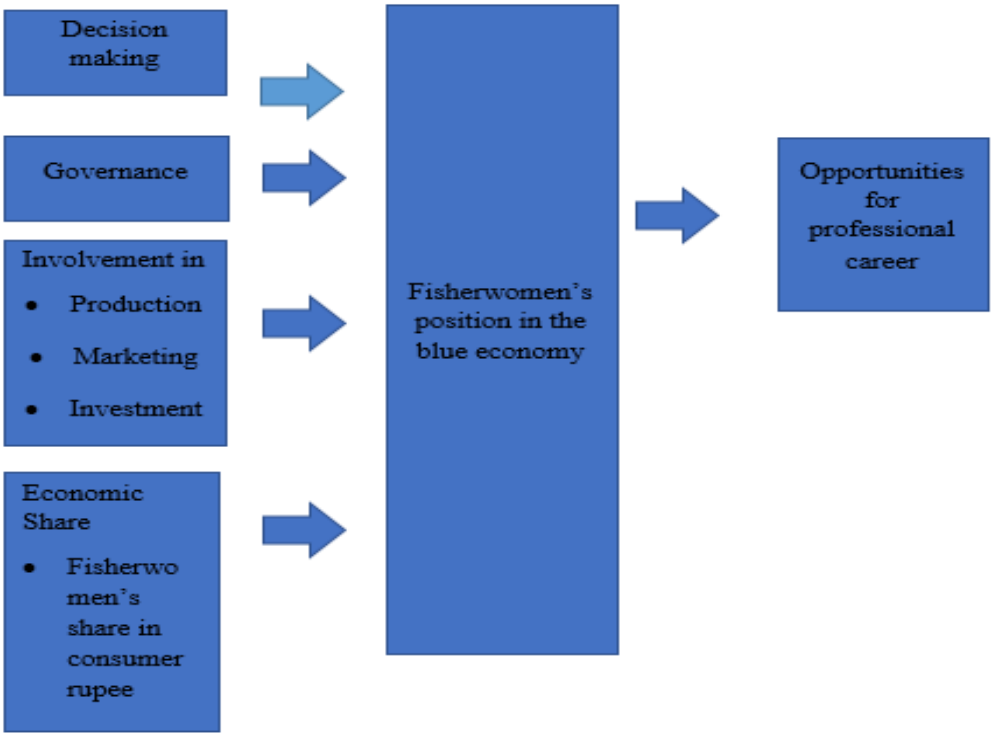

Figure 1: Conceptual Framework of the Study

2. Research Method

The study was conducted in *5* fishing communities located in the coastal belt of Sri Lanka both southern and northern. These fishing communities includes 4 fishing communities in the southern coast including *Beruwela, Ambalangoda, Ghandhara* and *Kudawella* and the northern coast includes the *Jaffna* fishing community as shown in Figure 2.This research applied a participatory and qualitative case study approach. Participatory tools and focus group discussions were conducted to collect the data from a 5 cases of selected fishing communities in Sri Lanka. The participants of the focus group have certain characteristics in common i.e. age, ethnicity, social standards and occupation. These social traits complement each other and facilitate participants to discuss and check the accuracy and validity of each other's viewpoints (Nywenga et al., 2012). The focus group discussion allowed to gather the generalized knowledge shared at community level, rather than specialized knowledge held by individuals. The data was also gathered by structured questionnaires and telephone interviews ,Gender tool kit, Diamond of pros and cons, The fisher women's share in consumer price equation was calculated by using the equation; Fisherman's share = Fisherwomen's share in consumer rupee=Net price received by the fisher at the time of first sale % Retail price (Kaygisiz et al.,2018).The primary data required to calculate the aforementioned indicator was collected from the fishermen, women fish processors, retail fish sellers and wholesalers. The information on sales quantities, fish marketing costs, price formation, and retail fish prices was gathered.

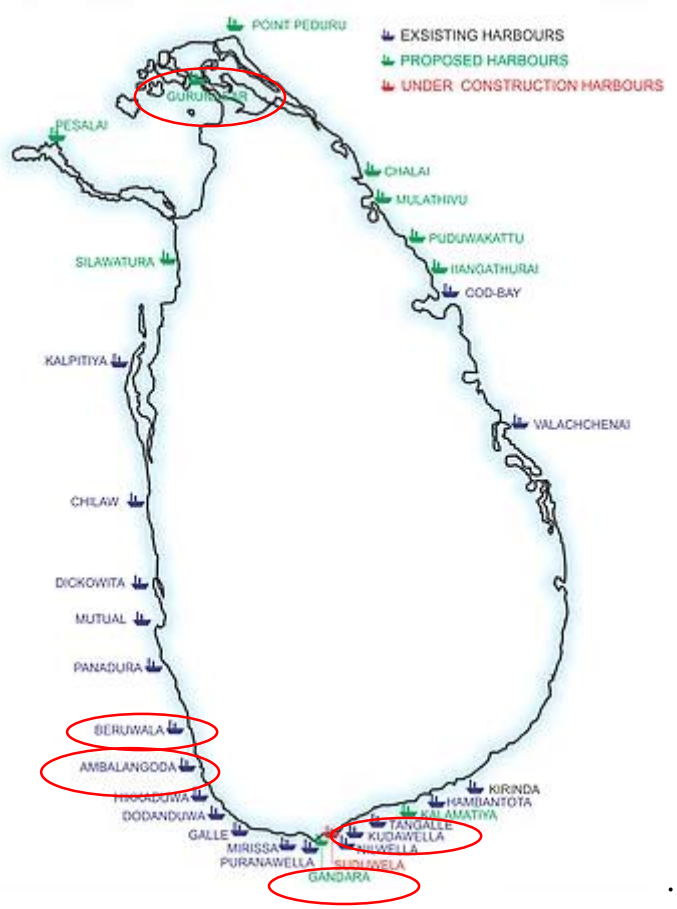

Figure 2: Research area

3. Results and discussion

The female respondents of the study were mainly Maldive fish and dried fish processors in Sri Lanka. Maldive fish which is locally known as *umbalakada*, is a specially prepared by skipjack (*Katsuwonus pelamis*) and Yellow fin tuna (*Thunnus albacares* that is consumed in the Islands of Maldives, Sri Lanka and Southern India and is used as a major ingredient in many curries and used as condiment. It is a type of tuna that is produced by traditional methods of processing. Dried fish which is locally known as *karawala* is another form of processed fish commonly available in Sri Lanka.

The study attempted to investigate on the decision making power, participation and governance of females processors compared to males in the production, marketing and investment on the post-harvest chain of Maldives fish. Decision-making power is the ability to influence decisions that affect one's life – both private and public (O'Neil & Domingo, 2015).The term governance is basically defined as the exercise of economic, political, and administrative authority or control (Miles, 2011).The table 1 illustrates the decision making power and the governance of both male and female with a help of a matrix developed by the authors. The table 2 summaries the degree of participation of the females in production, marketing and investment.

The focus group discussions highlighted the decision making power and governance is still concentrated among the males depicting the patriarchy society that still exist in Sri Lanka and which is common in most of the Asian cultures. A study done by Harper et al., 2013 also explained despite the greater labor contribution served by women in the aquaculture industry yet women are severely excluded from the decision making process (Harper, Zeller, Hauzerb, Pauly, & Sumaila, 2013).The decisions on what to produce mainly whether to produce for dry fish or Maldive fish or both are mainly taken by the males. However women can make an influence on the decision making moderately by giving out her opinions which are considered by the male members in the family. The focus group discussions conducted revealed that the final decision is taken by the male members in the family. The time period and time schedule is also designed by mainly the males.

Purchasing of the raw materials are mainly done by the males. Gender based discriminations, harassments and grievances discourage their involvement in purchasing fresh fish directly from offshores. Yet decisions on processing of the fish products such as cleaning, washing, drying, salting and smoking of the fish products are done by the females. Therefore females are highly influential in decision making and governance of processing of fish products than males These processed fish products mainly the dried fish and the Maldives fish are then sold to generate a supplementary income for the family and also used for household consumption.

Decisions on selecting the buyer or the method of selling is governed by the males in the family. However women contributes by selling the products to the customers including their suppliers or direct consumers when their husbands and sons are away gone for fishing. Thus they are moderately influential in price negotiation with the buyers since.

Investment decisions are taken by the males. Investments are mainly done by taking loans and mortgaging the jewelry of the females. According to the focus group discussions and interviews, the researchers found out that both these activities are done by the females on the insistence of the male counterpart. According to the focus group discussions it was revealed that the banks have a tendency to give loans to the females than males assuming females to be accountable and more trustworthy.

Table 1: Decision making and governance

	Decision Making		Governance	
Criteria	Male	Female	Male	Female
What to produce?				
When to produce?				

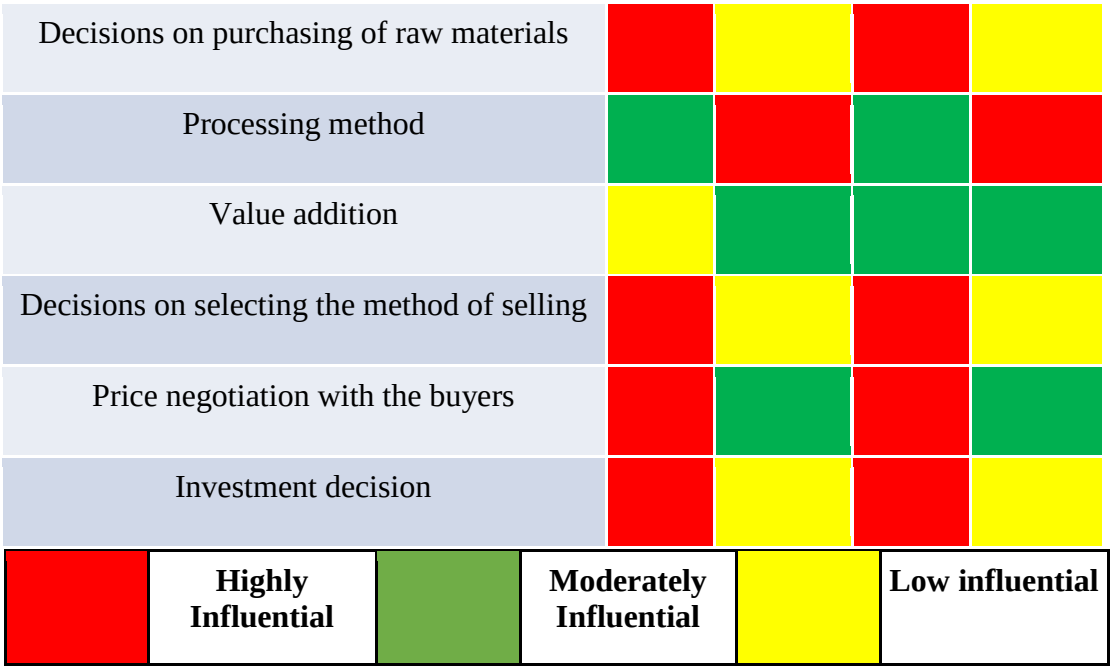

Table 2: Degree of Participation

	Maldives Fish		Tuna Dried Fish	
	Male	**Female**	**Male**	**Female**
Production				
Marketing				
Investment decision				

	High		Moderate		Low

The diamond of the pros and cons were adapted to list out the strengths and the limitations faced both males and females in theses fishing communities. Both males and females agreed that the fishing industry has made a betterment to their life. As discussed earlier the decision making power and governance of processing of the Maldives fish and dried fish is secured with the females. The main reason is due to traditional knowledge on Maldive fish and dried fish processing they have accumulated from generations to generation from their grandmothers and mothers. On the other

hand the strength that exist within men is the naturally secured control over fishing and fishing related activities within the hands of males. Both females and males deprive from the financial assistance needed to support their fishing related activities. They consider the limited access to on financial assistance as one of the major limitation. Gender based discriminations, harassments and grievances discourage the females' involvement as well as limit new entrants. The discussions with the female processors clearly indicated that it was the major reason from preventing them to go to shores and purchase the fresh, and quality raw fish needed for processing. So they either have to depend on the male members of the family or the truck divers that transport fish from the shores to the processing unit which are usually low in quality.

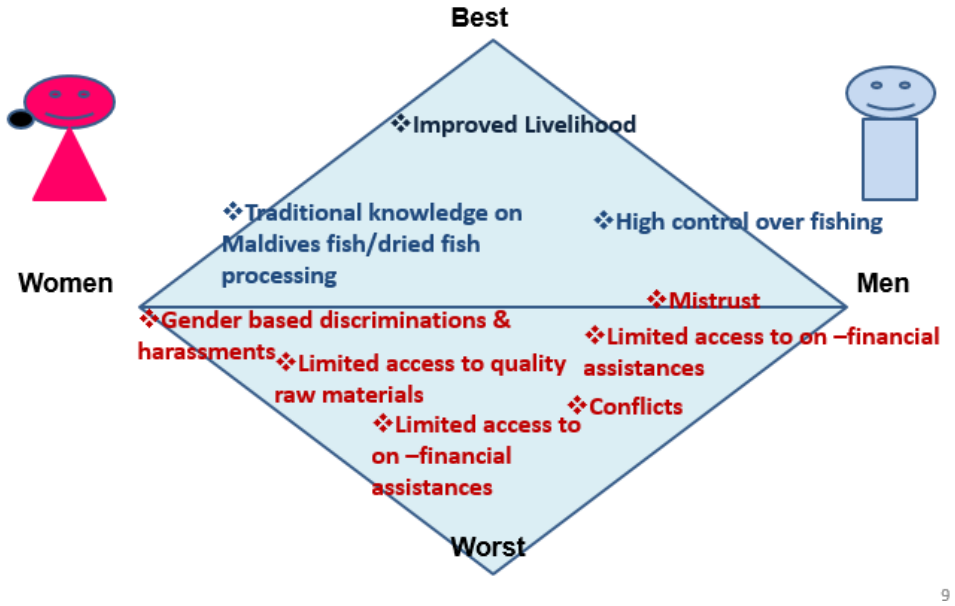

Figure 3: Diamond of Pros and Cons

The fish marketing channel as most of the other agricultural channels start off with the producer/fisherman and ends with the final consumer including a number of intermediaries in between. The intermediaries involved are the fish traders, wholesalers, commission agents and retailer (Dasa, et al., 2013). The marketing channel for the processed fish items also take the similar chain including the processor, wholesaler, and retailer and finally the consumer. However various value addition activities are done by the intermediaries including packaging, powdered Maldive fish etc. The study thus attempted to reveal the actual share the female processors receive after selling processed fish products.

The Maldive fish processing cost for 1 kg of Maldives fish and dried fish was calculated based on the data collected as shown in the table below. The cost incurred for processing includes the transportation cost pertaining to deliver the raw fish from the port to the processing unit. The average distance from the port to the processing unit was calculated to be 10 km. The cost of raw materials which includes the raw fish, salt, firewood and labor.

Table 3: Cost Incurred for Maldive Fish and dried fish production

Type of cost	**Maldive Fish**	**Dried Fish**
The Transportation cost(Port to processing(10km):	Rs.15	Rs.15
Raw Fish	Rs.600	Rs.360
Salt	Rs.210	Rs.12
Labor	Rs.2	Rs.2

The equation depicted below was adapted to calculate the fisherwomen's share in consumers rupee.

Fisherwomen's share in consumer Rupee =Net price received by the fisher at the time of first sale % / Retail price.

The table 4 indicates the calculations for the Fisherwomen's share in consumer rupee.

Table 4: Fisherwomen's share in consumer rupee

	Fisherwomen's share in consumer rupee	
	Maldives Fish	**Dried Tuna Fish**
Women involved in selling raw fish	=(120*5/2800)% =21.4%	=(120*3/1300)% =27.6%
Women involved in processing	=(950/2800)% =34%	=(400/1300)% =31%

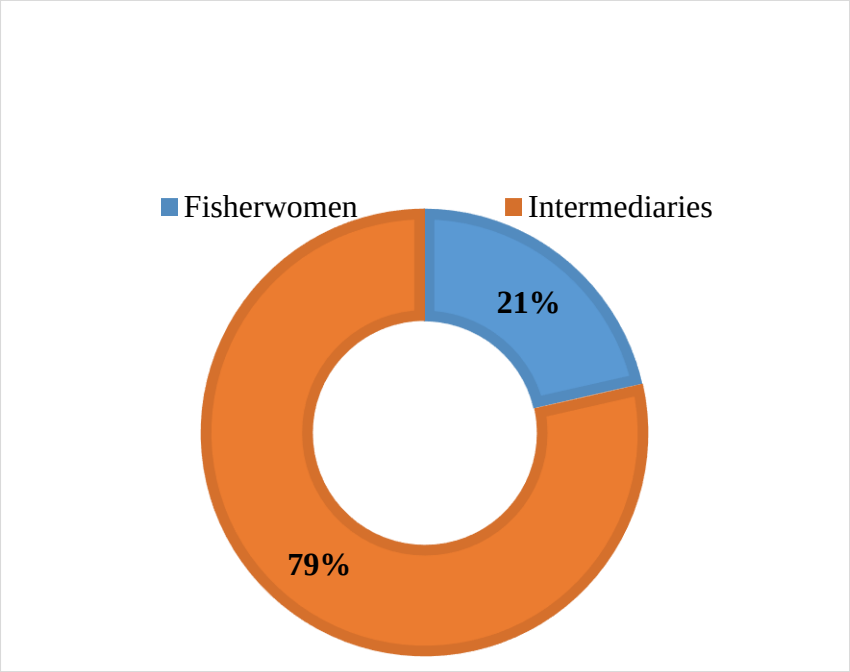

Figure 4: Fisherwomen's Share in Consumer Rupee: Maldives Fish

Processing of 1 kg of Maldives fish requires 5kg of raw fish. The average price of raw fish is Rs.120.The average retail price of Maldive fish is Rs.2800.The Fisherwomen's Share in Consumer Rupee for Maldives Fish is 21% indicating that 79% of the profit is circulated within the hands of the intermediaries (Figure 4).

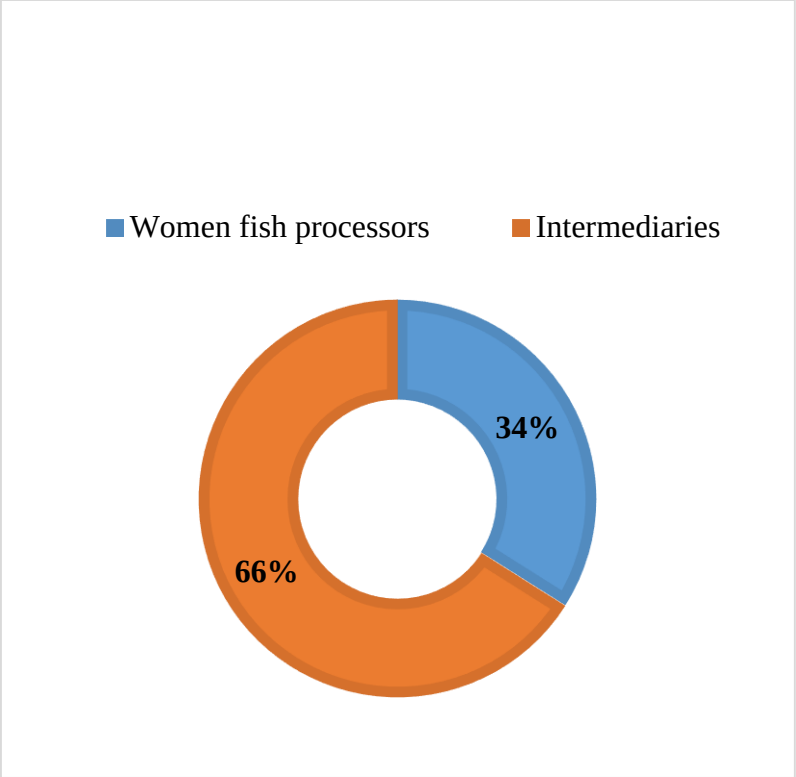

Figure 5: Women Fish Processor's Share in Consumer Rupee: Maldives Fish

The Women Fish Processor's Share in Consumer Rupee for Maldives Fish is 34% indicating that 66% of the profit is circulated within the hands of the intermediaries (Figure 5).However this reveals an important finding. The women fish processors has secured a considerable amount of profit than the fisher women that sells raw fish. Shifting for innovative practices and value addition thus provides better economic opportunities.

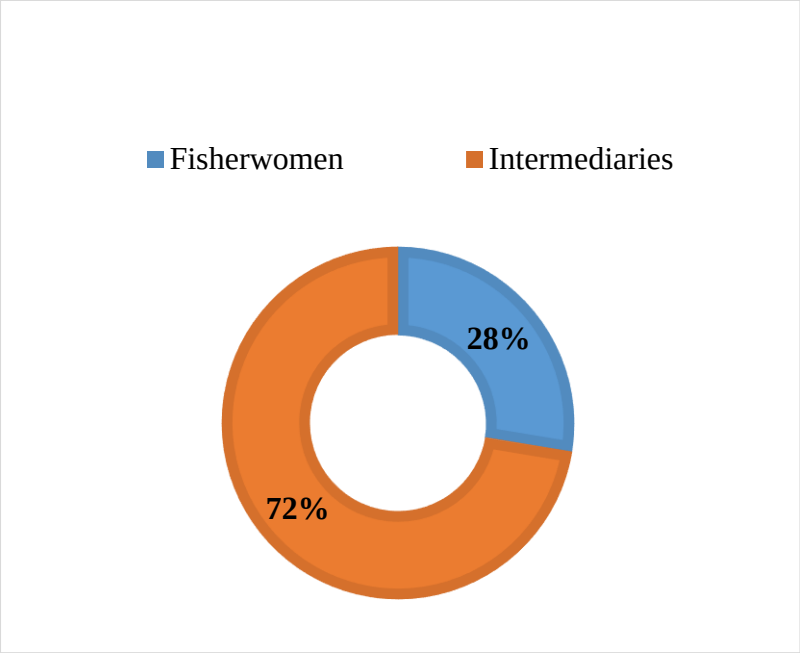

Figure 6: Fisherwomen's Share In Consumer Rupee: Dried Fish

Production of 1kg of dried fish of tuna requires 3kg of raw tuna fish.The average retail price of the 1kg of dried Tuna fish is Rs.1800.Th Fisherwomen's Share in Consumer Rupee for Maldives Fish is 28% indicating that 72% of the profit is circulated within the hands of the intermediaries (Figure 6).

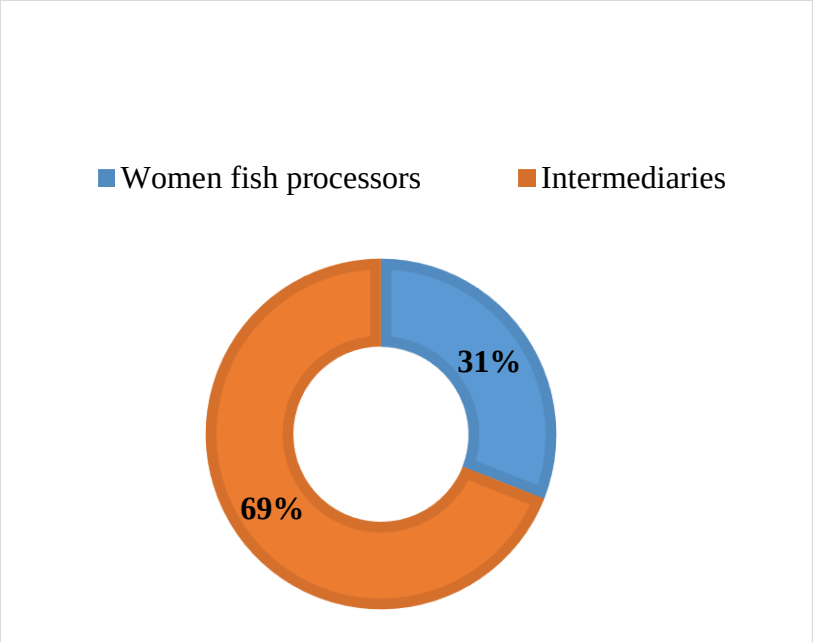

Figure 7: Women Fish Processor's Share in Consumer Rupee: Dried Fish

Women Fish Processor's Share in Consumer Rupee for Maldives Fish is 31% indicating that 69% of the profit is circulated within the hands of the intermediaries (Figure 7). It is again revealed that the females engaging in selling of value added products like dried fish is benefited than selling raw fish.

Although domestic fish marketing plays an important role, it is still highly unorganized and unregulated. The involvement of several marketing intermediaries which reduces producer's share in consumer's rupee and reduces marketing efficiency, could be minimized by evolving a cooperative fish marketing system with proper price monitoring system in the market yard.

The study also attempted to identify the opportunities for traditional fisher women into professional career. Thus it was revealed through the focus group discussions that traditionally the females were confined for selling raw fish which their husbands and the sons bring after going for fishing or either they are involved in processing of fish products mainly Maldives fish and the dried fish. However the focus group discussions indicates a trend of females shifting for other professional careers and other opportunities to be independent and to stand alone in the society dominated with males. Recreational Activities, especially Home Stay is one fine example that those women in coastal areas adopt, where they hire their home and provide bed and breakfast for the local visitors. This is conducted as a family business.

Furthermore the emergence of the Small and Medium Enterprises has been another lucrative opportunity for most of the females both in the southern coast and northern coast. Most females in

the southern coast especially females living besides areas of tourist attractions have used their culinary skills which were confined within the four walls of the household kitchen to food stalls for the tourists and the visitors that visit these places. As a further step of this milestone few females have stepped out as exporters of processed food widening their capacity and challenging the gender mainstreaming.

4. Conclusion

Females, thus provide the majority of the labor on processing but they have little control over supervision and management .The decision making power was concentrated among males. Maldive fish value chain was female dominated in the upstream value chain. Pricing and investment decisions were influenced by the male's members of the family. The superfluous involvement of intermediaries keeps female-fishers and markets separated and discouraging them to be market responsive. However it was revealed that females shifting for value addition A paradigm shift of women in these fishing communities from traditional fishing activities into recreational activities, tourism and entrepreneurial activities show a positive signal for the women's position in the blue economy.

5. Recommendation

Gender empowerment interventions on both hard and soft skills development were considered as an essential requirement to exploit the unrivalled opportunities in the blue economy. It is important to make continuous awareness on females to evoke their entrepreneurial skills and provide them with the necessary support and assistance in order to reap the benefits of such activities. Thereby they could secure a better economic share by grabbing few benefits of the intermediaries.

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