



# CIFE-Status Paper on WOMEN IN FISHERIES



Women depend on fishery resources for food, work, income and identity, especially, to nurture their children. Yet, they tend to have less control than men over these resources and the associated wealth. Initiatives in fisheries management and fisheries conservation are rarely scrutinized for their potential impacts on women. The World Wide Fund presented discussion on the proposal for a Marine Stewardship Council (MSC) development, which is believed to share this weakness. The MSC ignores the complex realities of women's work, its diversity and the differing places they occupy in fish product markets. An examination is made for the implications of the proposed MSC by considering its potential impacts on access to fish and its consumption among different groups of women. (Neis, -B.L. 1996) Women participate in fisheries in different ways in different sectors.

## Marine Sector

The men in capture fisheries are engaged in going out into sea and diving for the material. After men return from sea, the work is taken over by women. This will relieve additional burden of men, who again, go out into the sea after gainfully engaging the women. Pre-processing and fresh fish marketing are major roles performed by fisher women.

The activities and responsibilities of the women go far beyond providing household support or supplementing household income. Adjustment with fishermen, conscious savings and household contributions permit women to meet daily household needs, to keep money for unexpected events or incidental expenses, and to accumulate capital at the same time. Moreover, women's role in financing and investing in fishing equipment and materials suggest that they control a significant part of fishing activities. Fisher women in Maharashtra coast are mostly engaged in fishing, serving as crew on the boats with men as well as in the post harvest activities. The activities like, sorting, washing and drying of fish needs to be improved to minimize the energy required by women in carrying out these activities.

The women in fishing communities play important role in the fisheries sectors in terms of their involvement in fish related activities viz. fish vending; fish drying, prawn peeling, sorting, grading, fish packing, and net making. Mostly, they are involved in fish marketing followed by house keeping, fish processing , etc. In the fish processing units women play an important role. The migrant women in such industries face problems. They are exposed to health hazards and financial exploitations.

The technological advancement in fisheries has brought a lot of changes in the socio-economic conditions of fisher women adversely affecting their livelihood. The advent of motorization of country craft led to concentrate landing, thus, denying employment opportunity to small-scale fisher women vendors. The modernization resulted in replacement of indigenous handmade nets by machine made nets. No attention has been given to accord the role of women in fisheries in this regard,as far as policy makers are concerned.

In India, the developmental plan for marine fisheries lays emphasis on improving the lot of marginal fishermen. A concerted effort to coordinate the fishing would improve the subsidiary activities of fishermen household, by tapping the potential of the fisher women.

Fish landed would definitely go a long way in improving the socio-economic condition of this sector. The post-harvest technology for handling fish can be easily transferred to these beneficiaries. Giving due consideration to the factors, like, relatively low level of formal education of the beneficiaries and the need to design a cost-conscious configuration of processing equipment, Integrated Fisheries Project has developed and popularized low cost technologies that could be adopted by the coastal fisher women for self-employment

Tewari (1998) made a comparison between coastal fishers and coastal farmers in Thane district of Maharashtra. This can be summarized in Table 1

Table 1: Gender profile of coastal fishers and farmers

Factors	Coastal Agriculture		Coastal Fisheries		Remark
	Male	Female	Male	Female	
Average age (years)	45.9	38.5	39.3	34.4	Fishers are younger
Attended school (%)	96.6	67.9	75.2	56.6	Fishers are less educated
Exposure to mass media (%)	76.3	32.6	47.5	35.8	Fishers (males/females) are less/more exposed
Occupation (%)	100.0	50.0	97.2	56.6	Fishers (males/females) are less/more occupied
Time spent in Primary Occupation (Hour per week)	48.3	15.3	79.1	23.2	Fishers (males/females) are more occupied
Benefit perception from work (Non-beneficial %)	54.6	65.9	66.0	50.0	Fishers (males/females) have more/Less apathy
Why women work?					
Family needs money (%)	54.6	33.3	57.8	56.6	Fisherwomen work as family need more money
Husband sick/away/dead (%)	23.9	21.0	19.3	14.2	
Personal choice (%)	15.0	30.0	18.3	21.3	

Srinath (1986) opined that the major areas of participation of women in coastal fisheries in Kerala are, prawn peeling, curing, drying and trading of fish, net making and clamshell collection. Younger age group of women is making prawn peeling and net making. Availability of infrastructure was the major constraint in participation of women in fisheries

The information obtained around Kainji Lake, Nigeria indicates that women participate to a considerable extent in actual fishing activities. The number of women owning and operating fishing equipment is equal to that of men; the fishing intensity, as well as, the diversification of fishing gear is rather low. Women fish inshore more than offshore. The collection of data for catch statistics concentrates at present entirely on male fisherfolk; access to fisherwomen for data collection purposes is presently impossible because of the tradition that strangers are not allowed to talk to Muslim women. In order not to underestimate the catches, extrapolation from catches of male fisherfolk has to be done

(Rettberg, -S.; Alamu, -S.O.; Mdaihli, -M, 1995). The survey in Nigeria showed that the women are involved in 3 combinations of activities: fishing- processing- marketing; fishing- marketing; and, processing-marketing. (Verstralen, -K.; Isebor, -C, 1997)

### Aqua culture

In the field of aqua culture, women play a very important role. The nature and the extent of involvement of women vary greatly from place to place and within a place it varies among castes, religion and stages in the family cycle. Their involvement starts from pond preparation, stocking, up to harvesting and marketing. In the eastern India the participation of women in aqua culture is more. It is said that the culture concept in agriculture came from women. Similarly, in aqua culture, women can be further trained to identify the suitable species, their sexes, differentiation between fertilized and un-fertilized eggs, age estimation, feeding, disease management, making of HAPAs for breeding, raising of fingerlings, processing of fish, net making, ITKs and marketing skills. Experiences on leasing out of ponds to women groups revealed that these groups after receiving training could do well in the culture aspects. However, exploitations of middlemen during marketing and also from the poachers, besides not able to follow the government rules and problems due to short leasing periods are the major constraints of women in aqua culture.

Reports on Women in Fisheries emphasize on the contributions of women from all corners, like, the grass root level workers, the trainers, the government officials and the researchers. This mix of personals can come out with recommendations that can be of use of women in fisheries.

In many Asian countries, the rapid development of aquaculture has provided great scope to involve a large number of people in its different production components. The involvement of rural women in small scale aquaculture is considered important for two main reasons to augment fish production at higher levels and to uplift the social and economic conditions of women, especially in poor households (Barman et al 1998). In many countries household nutrition is in critical situation because of reduced supply of fish from natural resources due to degradation and /or over exploitation of resources.

Increased aquaculture production is considered important alternatives to overcome this situation. A large number of rural women constitute a socially and economically marginal group, often forming the poorest sub-sector of impoverished communities (Kapadia, 1977; Mayous, 1995) The high rate of male migration to urban areas and greater rate of divorces/ separation have lead to an increased number of permanently or temporarily women headed household, which also demands rural women's involvement in all sorts of agricultural activities including aqua culture.

Although aquaculture is normally considered a man's activity in Bangladesh, in many countries of Asia both women and men carry it out successfully. In China, all members of households carry out most rural aquaculture jointly. Women are active in the whole production process, especially in seed production, collection, rearing and stocking. They also

harvest, transport, process and market fish and other aquatic products. Chinese women constitute more than a third of the total workforce employed in rural aquaculture. As professionals, the participants of women is quite high in China compared to other countries in Asia- 20.9 percent of fisheries technical extension staff, 27.4 percent of scientific researchers, and 37.9 percent of educational unit personnel are women in China. (Song, 1999)

In Thailand, women are involved in fish hatchery operation, nursery management, grow-out production, harvesting and marketing of fish seed. Marketing of food fish is within the domain of women. During the migration of men to cities, either seasonally or permanently, women do the whole operation of the farm. The paper 'Women in Small-Scale Freshwater Aquaculture in Northeast Thailand'( Kusakabe 2000) mentioned that women of north east Thailand have access to and control over resources in aquaculture.

In Vietnam's integrated VAC (young/ao/chuong = garden /pond / animal husbandry) fish farming, poor women are responsible for most of the regular management activities in ponds. Women, through their contribution to food security and income generation, are allowed to take more decisions in management of VAC aquaculture as a result of the knowledge they acquire through training and practical involvement in management (Voeten and Ottens, 1997). In southeastern Cambodia, small-scale fish culture also shows a higher rate of success with the participants of women in house hold ponds. Women stated they could do most of the activities independently with minimal assistance from the male members of the household (Neodesha et al. 1994).

Cambodian women can participate freely and successfully in all fish culture activities except catching the fish. They also command a fair share of the decision-making power even in male-headed households (Hatha et al., 1994) In Lao PDR, women's participating in fish cultural is similarly quite high and the selling of fish is exclusive to women. They are the sellers, buyers, traders, middle-women, and often the entrepreneurs for table-sized fish. Women also control the income-generated form the sale of fish (Murray et.al.1998).

There is a large number of studies on women and work in Bangladesh (Amin 1997, Chen 1990 White 1992, Zaman 1996). They explained the segregated nature of women's work, their sole responsibility for and long-time involvement in unpaid household work, under estimation of their participants in agricultural production, restricted access to resources (land, inputs, technology extension and support services) and control over resources.

The seclusion of women by purdah has been noted as the main factor constraining women's participants in income-earning activities, reinforcing their inferior position compared to men. Purdah - the veiled seclusion of women has been a constraints in the participation(Chen, 1990). With respect to variations in class (poor, middle and rich,) religion ethnicity, and area, there are some differences in the observance of purdah. Women from poor households are less restricted by purdah as they are forced to work outside to earn their livelihood (Chen, 1990, White 1992) but they are also unable to break through the greater limits of purdah in their working

environment as imposed by the society. This is reflected in their working environment, which is imposed by the society. This is reflected in the presence of fewer poor women in limited and specific sector of wage labor, and their lower wage rate compared to men. (Amin 1997).

Zaman (1996) analyzed the longer working hours of Bangladeshi women compared to men. She reported on the involvement of village women in Rajshahi district in different kinds of agricultural and livestock rearing activities. Rahman and Routray (1998) noted that rural women in Bangladesh not only participate in post-harvest processing corps; they also have a greater share in crop production activities (10-18 percent in food grain production and 6-48 percent in non-cereal crop production). However, most of the studies did not report on the participants of women in aquaculture activities. Although large number of rural farming households have ponds and women also participated in fish culture.

In the Ox-bow Lake Project (OLP II) in Jessore two landless women formed fish farming groups and received long-term user rights (50 years) to public water bodies where they constructed ponds within the lakes and practiced in fish culture successfully. The project showed great socio-economic improvement of poor landless women involved in fish culture (Chowdhury and Rahman, 1998 Kibria et. al. 1999 Nathan and Apu, 1998). To strengthen women's participation in fish culture, the Mymen Singh Aquaculture Extension Project (MAEP) introduced components of gender, recruited women extension staff (19.3 percent), and provided credit and technical support to 4,681 women fish farmers (32 percent). The outcome was encouraging and revealed women's potential as active fish farmers (MAEP, 1999).

In north-west Bangladesh, the Northwest Fisheries Extension Project (NFET) tried to involve women in pond-based fish culture from the beginning, but in most cases only limited success was achieved (Gregory and Kamp, 1999). However, involving poor women in cage culture for grow-out of fish showed comparatively better success (Kamp, 1999). Using women's model fisheries villages as community approach for fish culture extension, NFEP is trying to involve large number of rural women in fish culture (Griffith, 1999). Involving more landless women's groups for grow-out of fish in cages in public water bodies showed better success in production with improvements in cage design and use. Initiatives have been taken to involve women in tilapia seed production and nursing of fresh water prawn post-larvae using fine meshed nylon net cages in ponds. NFET also arrange workshops with local non-governmental organizations as forum members to encourage them to involve more women in fish culture as their beneficiaries. NFET has also been trying to involve women in rice-fish culture project in the northwest region for several years (Best et.al. 1998)

Barman (2001) revealed that involvement of women in aqua culture is limited in Bangladesh. Women are largely involved in unpaid household activity, live stock rearing. The findings of the study are summarized in Table 2, 3, 4, 5, & 6h.

**Table 2: Activity profile of women and men**

Type of Activity	Women		Men	
	Number of Activity	Percentage	Number of Activity	Percentage
Household activity	59	83	12	17
Corp production and processing	19	27	42	73
Fish culture	8	32	17	68
Livestock rearing	12	44	15	56
Marketing	8	36	14	64
Religious activity	7	35	13	65
Other activities	15	21	55	79
Total	128	43	168	57

**Table3: Participation of household members in fish culture activities in percentage.**

Activity	Women	Men	Girls	Boys
Pond excavation	4	80	-	16
Pond preparation	6	78	-	16
Manuring	25	53	9	13
Fish Selection	15	83	-	2
Stocking	17	71	1	11
Feeding	31	39	12	18
Harvesting	8	59	8	25
Sale	4	71	-	25

**Table 4: Participation of household member in pre-stocking management of fish culture in percentage**

Activity	Women	Men	Girls	Boys
Pond drying	7	97	2	22
Pond digging	7	100	1	20
Embankment repair	4	96	2	14
Removal of weeds	6	98	1	13
Removal of unwanted fish	3	100	-	13
Liming	12	99	3	13
Use of organic manure	37	92	11	14
Use of inorganic fertilizer	5	98	2	10

**Table5: Participation of household members in post-stocking management of fish culture: Household member's number and percentage (in the parenthesis)**

Activity	Women	Men	Girls	Boys
Stocking	21(11)	191(96)	-	24(12)
Use of supplementary feed	85(54)	145(92)	14(9)	33(21)
Use of cow dung	76(48)	144(90)	12(8)	20(13)
Use of poultry/duck litters	6(25)	22(92)	2(8)	4(17)
Use of urea and TSP	7(12)	57(94)	1(2)	4(7)
Use of lime as preventive	3(6)	54(98)	-	5(9)
Fish harvest for household consumption	9(5)	176(88)	9(5)	28(14)
Fish harvest for sale	-	115(99)	-	15(13)

**Table 6: Participation in Decision-Making in Fish Culture-Activities.**

Activity	Women	Men	Girls	Boys
Pond excavation or renovation	X	XXXXXX XX	-	X
Pond preparation	X	XXXXXX XX	-	X
Pond Manuring	X	XXXXXX XX	-	X
Fish species selection	XXX	XXXXXX	-	X
Fish stocking	X	XXXXXX XX	-	X
Use of supplementary feed	XXXX	XXXXX	-	X
Harvesting fish	XX	XXXXXX X	-	X
Sale of fish	-	XXXXXX XX	-	XX
Fish consumption	XX	XXXXXX X	-	X
Control over money	XXXX	XXXXXX	-	-

Note: - One X represented 10 percent of total decision-making participation for each specific activity.

## Recommendations

In future the major recommendations for the development of women in fisheries should center on

- Identification of the changing roles of women in fisheries and aquaculture over space and time
- Sensitizing the innovation generating and diffusion institutions on the issues of women in fisheries
- Developing women specific technology
- Involving social workers, NGOs and policy making bodies to promote activities for women in fisheries
- Developing schemes, specifically for women
- Providing legal aids to support women in fisheries
- Conducting need based training for women
- Organization development for women
- Augmenting credit and market access to women
- Introduction of female extension workers

Following monitoring & evaluation parameters for participation of women in fisheries need to be developed for different fisheries sectors

### Marine Fisheries

- Fish catching along shores
- Fish marketing
- Handling and processing of fish
- Maintenance and making of gears
- Fish processing
- Pen culture, etc

### Brackish water aquaculture

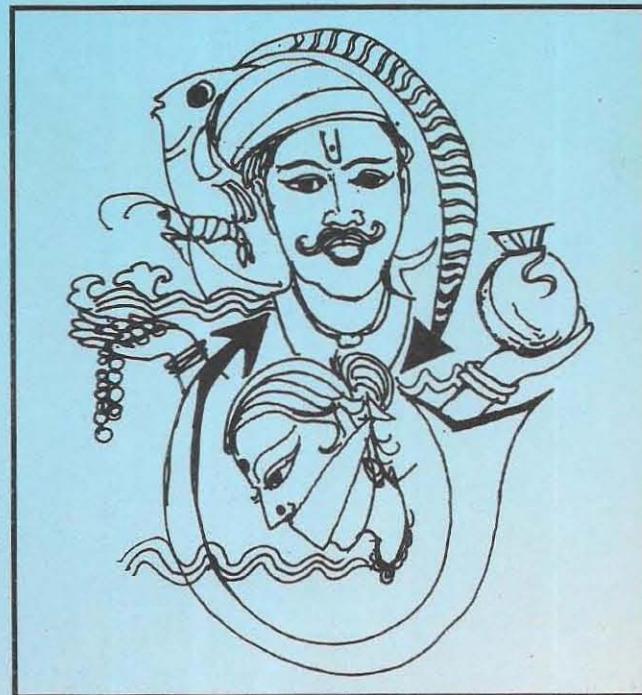
- Management of prawn hatchery
- Collections of prawn seeds, etc

### Fresh water aquaculture

- Aquaculture practices
- Seed rearing
- Integrated Fish Farming
- Net making and its repair
- Pearl and Oyster culture
- Fresh water prawn farming, etc

## Future Research areas in women in fisheries

- Changing scenario of participation of women and their participation
- Energy spent by women
- Impact of technologies on women
- Impact of policies on women development activities for women
- Working environments for women and Training modules for women need to be developed



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