Summer School Compendium

Gender Mainstreaming for Resilient Agriculture

July 2012

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Citation

Ponnusamy, K., Shukla, A.K, Kumar, A, Nayak, J and Kishore, K. 2012. Gender Mainstreaming for Resilient Agriculture. Compendium of training lectures in the summer school of DRWA organised during 18.07.2012 to 07.08.2012, DRWA, Bhubaneswar. PP 1-250.

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Gender issues in Marine Fisheries

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The term "gender" connotes the relationship between men and women in society. The time has come when the term gender is not only assigned to women but rather broadly explores the differential roles played by the male and female counterparts in society. At present even in developing economies of the world, men and women are expected to play equal roles in their respective spheres of life and be effective contributors in the development process. A detailed introspection in to the developmental agendas of the 1960's and 1970's revealed that, large scale exclusion of women from the developmental/welfare projects, contributed to the failure of these programmes and this led to the focus of such initiatives being shifted souly on women compared to their men counterparts. However, even considering changes in the development agenda was found to be too narrow as programs focused on women and development ran the risk of alienating men and simplifying the complex relationships between the different roles played by man and woman in the community. From about 1995, therefore, programs began to recognize that success in development depends on the community and the interrelationship between people in it, and not on women and/or men per se, hence giving rise to gender rather than women's programs (**Levy** 1996).

The fisheries sector in developing countries is recognized as one of the most economically depressed sectors in society.The important involvement of women in natural resource-based livelihoods and resource management in the developing world has long been hailed, but rarely been valued equally with the contribution of men. In fisheries, women have traditionally been occupied in pre- and post-harvest processing of seafood products and marketing the catch. Women and men are engaged in complementary activities in fisheries. In most regions, the large boats used to fish off-shore and in deep-sea waters have male crews, while women manage smaller boats and canoes. Many more women engage in fishing with rudimentary equipment, wading along the shores collecting shellfish and seaweed. In artisanal fishing communities, women are mainly responsible for performing the skilled and time-consuming tasks that take place on-shore, such as net making and mending, processing the catch and marketing it.

Gender Aspects of Fisheries

In many countries, it is mostly rural women who are engaged in inland fishing. In Africa, they fish in the rivers and ponds. In Asia, where fish and seafood are an integral part of the diet of many cultures, women are active in both artisanal and commercial fisheries. In parts of south India, women net prawns from backwaters. In Thailand and Laos, they fish in canals. In the Philippines, they fish from canoes in coastal lagoons. Women have also assumed a leading role in the rapid growth of aquaculture. They often perform most of the work of feeding and harvesting fish and

shellfish, as well as in processing the catch. Women in Lesotho and other southern African countries participated in an Aquaculture for Local Community Development Programme, sponsored by FAO, and became managers of small household ponds. The fish produced in these ponds are either eaten by the family or sold to purchase other foods. Often elderly women and children collect shellfish along the shores, adding to family income and nutrition (**FAO**, 2004).

In some regions, women have become important fish entrepreneurs. For example, in the European Union, women control 39 per cent of the fish industry, administering and controlling significant sums of money and generating substantial returns for their household and community (**Aguilar**, 2002). As such, women earn, administer and control significant sums of money, financing a variety of fish-based enterprises and generating substantial returns for their household as well as the community. Anthropological studies of fishing communities along the Kanyakumari coast of Southern India relate how fishing communities have evolved systems of keeping women away from the primary occupation of fishing by various social conditioning systems. This has deprived them of knowledge with respect to fishing technology. In parts of India and Bangladesh, where women are involved in fishing, it is only through activities such as shrimp seed and fish fry collection. In Sri Lanka and India, women's participation in fishing as an activity only forms part of community fisheries in coastal villages where they use shore/beach seines. Over the years, the use of these shore/beach seines has also been on the decline. A study done by UBINIG Policy Research for Development Alternatives in Bangladesh found that even in such a condition, it is only women from the poorest families who get involved as fry collectors.

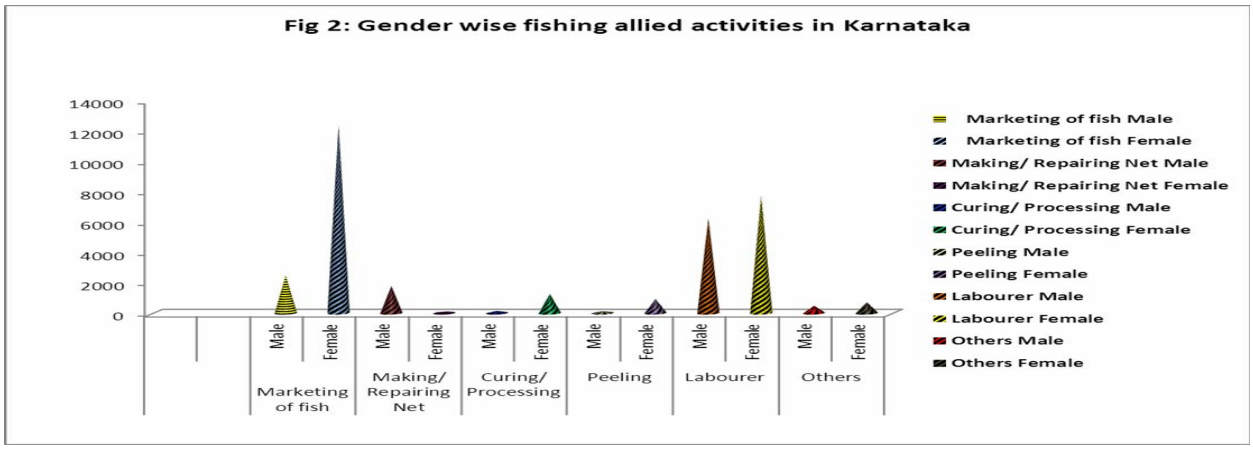
Women in Bangladesh play a significant role in the small-scale fisheries sector. About 30% of women in rural and coastal areas are directly or indirectly engaged in small-scale fisheries. Of the total employed in the fisheries sector, about 10-12% are women. The major areas of women's involvement are aquaculture, shrimp culture, fish processing, net, gear and craft making. Though women in Bangladesh, similar to their counterparts in the region, are not involved in active fishing from the sea, they participate in certain forms of fishery as a family along with the men. This is usually seen in the estuarine areas where set bag nets are employed for fishing. However, a study of the set bag net fishing communities also revealed that though women work as a family in the set bag net fishery, their work remains largely unrecorded. In any case, set bag net fishery as an occupation is very low paying and most fishers involved supplement it with other occupations. In the case of Nepal, the domestic production of fish is largely from capture fisheries (52.64%) and aquaculture (47.35%). Government policies encourage women's involvement in fisheries. Capture fishery in rivers, lakes and reservoirs, paddy fields and marginal lands and swamps are widely scattered throughout the country and is not organized. Most of the fishers involved in capture fishery are widely dispersed along rivers and other water bodies. They use mostly their traditional boats and fishing gears and thus generate only marginal economic benefits. Traditionally, rural women are involved either in fishing or fishing-related activities. To enhance fish production, a number of inland

water bodies, e.g. lakes, reservoirs and swamps have been stocked with selected species of indigenous as well as exotic carps in collaboration with local fisher communities. In these inland water bodies, women are actively inHead loaders: These are women who deal in small quantities of low value species, which are sold in inland villages. Their investment levels are the lowest and hence their risk-bearing abilities. Most of these women are young and have taken up this profession because of their social and economic status (they might be widows or destitutes). They often have young children and in a community that has imbibed taboos related to the mobility of women from agrarian communities, they occupy a very low level in the social hierarchy. They are a group of people who have been virtually wiped out of the centralized fishing systems of today.

- **Petty fish traders**: These are women who deal with medium value species and have considerably higherinvestment capacities and are therefore considered credit worthy by non-institutional credit sources. They often move out of their villages, have access to suburban markets and use the public transport systems. They are usually middle-aged and have grown-up girl children who are able to take care of the household in their absence. This group is struggling and surviving only in areas where they have links to men in the centralized production systems who in turn provide them with some space within it.
- **Dry fish traders**: These are older women who are primarily involved in fish salting and drying in a large scale. Fish for processing is procured during "glut" landings of a particular species and they usually employ family labor (including their own) for processing activities. These women access weekly markets and are usually wholesalers. They enjoy a relatively higher status in the community and their families when compared to their younger counterparts. However, with the increasing use of ice and consequent movement of fish in its fresh form, this group is affected and involved in mending nets, laying out the fishing gears, harvesting and marketing of the catch.

Table 1: Gender roles in Capture Fisheries

Scale	Region	Investment	Catch	Processing	Sales
Small	Sub Saharan Africa	• Capital for boats and gear from processing and fish sales • Community management groups invest in landing sites and refrigeration • Women invest in processing and drying	• Boat owners wealthy and older women and men • Crew : Young men and boys • Nets: Young boys • Mending nets:Women of all ages • Women collect shell fish eg:Benin and Congo	Women smoke and prepare dry fish and cook for sale	Fresh fish purchase by women for drying /processing and sale Fresh fish sales depend on ice plants managed by local communities and private owners.(especially fishers). Sales are to long distance traders and to women for local sales. Women transport fish and act as middlemen.
Small	Sub Saharan Africa	• Capital for boats and gear from processing and fish sales • Community management groups invest in landing sites and refrigeration • Women invest in processing and drying	oat owners wealthy and older women and men Crew : Young men and boys • Nets: Young boys • Mending nets:Women of all ages • Women collect shell fish eg:Benin and Congo	Women smoke and prepare dry fish and cook for sale	Fresh fish purchase by women for drying /processing and sale Fresh fish sales depend on ice plants managed by local communities and private owners.(especially fishers). Sales are to long distance traders and to women for local sales. Women transport fish and act as middlemen.
Small	Asia	Savings: Women China: Women and men invest	• Boat owners wealthy, older • Crew: Adult and younger men • Women and men mend nets • Women collect shell fish for eg in Cambodia and Thailand	Women smoke and dry fish	• Women and men sell in global markets, and to contractors for international and National markets • Sales are more likely to be controlled by men in conservative locations.
Small	Latin America	Indigenous Community fisheries	• Boat owners:Women in Wayuu indigenous communities • Women and men fish in Brazil and Mexico	Women and young men	• Women and young men in local sales • Columbia: Women and young men in Wayuu communities: • Honduras: indigenous Garifuna fish traders. • Supermarkets buy through contractors
Large	National/ global	International and national capital	Industrial fishing fleets dominate in some countries in Latin America but are also significant in other locations	Factories: Women clean, resize control quality	Large local and international buyers, including supermarkets especially in Latin America, Southern Africa and parts of Asia control marketing



Source: Marine Fisheries Census, 2010, Karnataka

It could be observed from Figure 2 that, in the State of Karnataka, maximum number of fishermen worked as laborers 18.18 %, followed by 7.25% involved in marketing of fish, followed by 5.22% in repairing/making of nets, followed by 1.42 in other activities, followed by 0.420% in curing followed by 0.370 % in peeling. As far as fisherwomen were concerned, it could be observed that, maximum percentage of them were involved in marketing of fish (36.12%), followed by 22.47% as laborers followed by 3.71% in curing/processing, followed by 2.71% in peeling and 2.10 % engaged in other activities.

Case Studies from Karnataka:

Socio-economic status of fisher men and fisherwomen in dry fish trading along Coastal Karnataka- an empirical analysis

Over the last two centuries, women's role in fisheries has been predominantly in the fish processing and marketing sectors. In Karnataka 44% and 34% of its fisherwomen are engaged in beach work and small scale fish trading respectively. Wholesale business of dry fish forms one major area where, fisherwomen are actively involved. Here the managerial roles of the fisherwomen in business as well as income earner is well pronounced. In order to delineate the status of fisherwomen in dry fish trade which forms a major chunk of the income earning avenues of the fisherwomen, a sample of 64 fishers of Dakshina Kannada district were taken consisting of an equal sample of fisherwomen and fishermen involved in dry fish wholesale trade. A causal–comparative research design was used for the present study. The studies revealed that 87.50 per cent of the fisherwomen were above 45 years of age, 40.62 per cent had high school level of education and 87.50 per cent had joint family type and had an average monthly income of Rs. 11,275. 75 per cent of the men traders had higher secondary level of education, 75 per cent had nuclear family type with an average monthly income of Rs. 8250. The average time utilisation by Fishermen in peak season was 12-15 hrs/day and during off season was 8 hrs/day. The average time utilisation by Fisherwomen during peak season was 6 hrs/day, and during off season was 1-2 hrs/day. Chi-square analysis was used to study the association between fisher women and men in dry fish wholesale trade and the results revealed that the two groups had a high and positively significant

association with respect to the profile characteristics such as age, educational status, material possession, economic motivation and their extent of participation in fisheries development programmes.

Inferences

Fisherwomen in wholesale business of dry fish play an integral role in regulating market prices and have pronounced roles accentuated from being mere labourers engaged in post harvest activities and petty fish traders to that of managerial roles in wholesale business. However, their level of awareness and participation in developmental programmes intended for their welfare is still low. Extensive and intensive extension efforts are required for effective creation of awareness among women and improve their levels of participation in developmental schemes. Differential extension training programmes for fisherwomen of different age groups and family types have to be organised. The social participation of the women in different organisations such as mahilamandals, fisherwomen self-help groups have to be enhanced and strengthened through various awareness campaigns and group based training programmes. Lack of proper sanitation facilities, absence of resting places for fisher women and lack of spacious market places in hygienic surroundings, body and knee pains were some major problems encountered by the women wholesalers.

The basic objective of involving women in fisheries development is to make them equal partners to men. That will enable them to participate productively and self-reliantly to improve their family's nutritional and living standards. They need appropriate knowledge, adequate skills, and appropriate technologies to contribute socially and economically to their community's welfare. These needs should be provided directly to them and not through the men, as was done before.

The approach is warranted in the form of providing formal education, adult literacy classes, training and extension services related to their economic and social needs; education in child care, sanitation, and nutrition; introducing improved technologies and methods to ease their burden and increase their efficiency; developing opportunities for more income-generating activities and equitable access to credit; and encouraging women to be active in community activities, decision-making, and in all stages of project planning, implementation, monitoring and evaluation. These support activities should be directed to women in fishing communities through fisheries projects. Market places which are spacious, equipped with adequate water facilities and having provisions such as resting and toilet facilities for fisher women are the most basic facilities which should be encompassed in fisherwomen welfare programmes. Such support activities go a long way in strengthening the fisher woman’s psyche and empowering them in the socio economic developmental process.

Micro Level Entrepreneurship In Mussel Farming – A Participatory Action Model (PAM) In Extension – A study of Gender roles of fisher folk in Mussel farming

Today’s extension trends represent a paradigm shift from top down approach to bottom up approach wherein the farmer is the central figure in the technology adoption and technology refinement process.

Research and extension organizations have moved from working with individual farmers to collaboration with groups.

The Participatory Action Model (PAM) model was used for the transfer of technology to mussel farmers, through a six step process of planning and implementation. This model aims at development of group capacities through involvement of the group members in planning, implementation, review and reflection process. The study aimed at assessing the Group Dynamics Effectiveness of men and women mussel farmers in the groups. The findings revealed that the overall G.E.I was 63.03, which has been achieved, within a short period of three years of technology transfer. Results of Chi-square analysis revealed that there was significant association between men and women farmers in the groups with respect to group dimensions such as influence, styles of influence, decision making, task function, feelings, norms, interpersonal trust and group achievements at ($P<0.05$). The findings of the discriminant analysis revealed that the group dimensions which significantly discriminated the men and women farmers, were achievements of group, norms, interpersonal trust and empathy. The study implies that there is tremendous potential for harnessing the group efforts for successful adoption of the technology and future participatory efforts should be directed at strengthening these specific dimensions which govern the group behaviour and which in turn accentuate the G.E.I.

Inferences: The above study shows that the participatory action model, facilitating organization of farmers in to groups has played a pivotal role in the successful transfer of technology for green mussels and its subsequent adoption at the field level. The overall G.D.E.I of 63.03 suggests that there is further potential for effective continued use of this model in similar locations in Coastal Karnataka, since the diffusion of this technology to other end users in this region, is in the initial stage of the adoption curve with the innovators dominating the mussel groups. Women mussel farmers in the group need to be strengthened and their potential has to be harnessed on the group dimensions such as influence, styles of influence, decision making, task function ,feelings, norms, interpersonal trust and group achievements.

Opportunities and Constraints in Performing Gender Roles:

Opportunities and Constraints in Inland sector

Sl.No	**Capture**:
1.	Ecosystems:Reservoirs, rivers and wetlands **Opportunities**: Women can take up Brood stock collection and maintenance of fingerlings (At present done by fishermen) Boat facilities and safety equipment's (in which technical supportis required for fisherwomen). Trainings can be given to fisherwomen also. **Location**: Cauvery river, Mahanadi egsReservoirs **Reservoir Co-operatives**: Women to be made members (50%) membership in cooperatives. Leasing of reservoirs to women entrepreneurs Training for women to enhance fish production (in the use of craft and gear technologies)

	Fisherwomen to be sensitised about the ITK in therapeutic values of fishes. Fisherwomen to be sensitised on the best utilisation of their own locally available resources. **Inland capture**: License given only to men for fishing. Now women should also be given licenses. **Culture fisheries:** Women to be managers of hatcheries Women to be involved in hatchery rearing of Indian major carps, Cauvery carps etc Nursery can be in land based nurseries or open water nurseries. Women to be equipped in harvesting of fishes. Locations: Tamil nadu, A.P., Orissa,Karnataka, Palghat of Kerala

Opportunities and Constraints in Marine Sector

Sl.No	
	Mariculture: • Increase women participation in mariculture activities through entrepreneur development, tapping import and export markets (stakeholder workshops) throughself help groups.Strengthening market potentials. • Basic preprocessing facilities, availability of potable water, and good quality of ice. • Basic amenities for women such as toilets, water facilities(drinking water also) • To improve working conditions like raised fish selling platforms and seating facilities (to improve ergonometric conditions) • Ensure compulsory women participation in implementing the conservation activities undertaken by cooperatives and NGos working in inland and marine fishing villages • Diversified livelihood options have to be identified during off season eg ornamental fish culture, integrated fish farming • Studies on income disparities between men and women with respect to same working hours and quantum of work done. **Women professionals in fisheries sector** • Women extension workers to be given priority making them more accessible to women community. Eg problem sharing, solution finding etc… • Equal representation of women in official committees • Basic amenities like separate toilets and rest rooms for women professionals are needed. • Training to be imparted to enhance their administrative and managerial

	capabilities • GGovernment guest houses for safe accommodation of women professional during tours through out the country.

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