



SOCIAL AND ECONOMIC ISSUES RELATED TO WOMEN IN FISHERIES

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Introduction

The focus on women's social and economic issues related to fisheries should be viewed in the context of women's role both as managers of natural resources and as providers of basic needs. At the household level women have multiple roles. In many developing countries women are primary producers of food crops, where they are active workers in the subsistence farming and small scale production systems. These productive roles can be in the crop-livestock system, forestry related or associated with marine and aquatic resources. In the post harvest sector, women around the world play a crucial role. In various developing societies women assume supporting roles in crop production, livestock rearing, and harvesting. In almost all regions of the world women are

the primary providers for the basic needs of household members. In performing all these multiple roles, women are linked to natural resource utilization.

In the fisheries sector, all activities associated with marine, freshwater, and aquaculture production are linked to the community's natural resource base. "The world's marine ecosystems support vast numbers of fish that are a vital part of the global food supply. An estimated one billion people, mostly in developing countries, depend on fish as their sole source of protein. Yet there are signs that many of the world's marine fisheries are in serious trouble" (World Resources Institute, 1994). It is estimated that mangrove fisheries provide

employment for up to half a million people. In most mangrove areas, the income generated from fisheries products is several times greater than that from forestry (FAO, 1989). In most countries in Asia and the Pacific Region, there exists large number of communities that are coastal and sea-based, and which rely on the seas for sustenance and as source of income (APWRCN, 1992). As a farm household enterprise, aquaculture is tied to agriculture, livestock and fisheries, which are linked to natural resource management.

In the developing countries, it is important to identify women as managers of natural resources in their roles both as producers and consumers (Rodda, 1993). In this context women's socio-economic roles and concerns related to fisheries have important implications for efficient management of ecological assets while supplying food to the world's growing population. A focus on women's economic and social issues in fisheries is important one on its own. Additionally, the discussion on women in fisheries gains further significance from a dual perspective of ecological sustainability and food security.

Women are the most under valued and inappropriately utilized human resources of the developing world. In the fisheries sector, the situation is not any different. Socio-economic issues related to women in fisheries should be analyzed in the framework of their participation in various spheres of activities within both the households and in the fishing communities. Women's socio-economic issues can differ among coastal fishing communities and aquaculture communities. But the fact remains that women in their various capacities make direct and indirect contributions to the fisheries sector, that are seldom counted and economically valued.

Position of women in fishing communities is well described by Heel (1986): "The status of fisherwomen has two components: status in the family and in the community or society. Their status depends on the various tasks they perform in relation to the occupation of fishing. Traditionally, fishermen capture fish, (in India) the women engage in shore-based activities. The tasks performed by men are considered productive and therefore superior and indispensable, while those performed by women are considered insignificant and inferior.

Household labor and other unpaid work done by fisherwomen is considered secondary and their economic activities are almost totally ignored. It is nevertheless a fact that the role played by fisherwomen is vital not only to their families but also to the village economy, as they are the main sellers and distributors of fish."

Women's Activities in Fisheries

As we take a look at the fishery production systems around the world, it is evident that women are actively involved in various stages of production and processing of fish. Yet, their work in fisheries is not well documented. In its strategy for Fisheries Management and Development, FAO points out that "women play a prominent role in production, processing, and marketing in small-scale fisheries and aquaculture in many countries" (1988). A primary and important social issue that has economic implications centers on the undocumented and undervalued contribution of women in production and processing in marine sector, aquaculture, and fresh water fisheries. Any appraisal of women's activities in the fisheries sector should be examined for diversity and complexity, since their

participation varies by country, local culture, and indigenous customs, and beliefs. Within the same country the differences could be found from one community to another in women's participation.

2.1 Women's Activities in Coastal Communities

In coastal fishing communities women can be directly involved in harvesting aquatic resources. Women often turn to fishing as a source of potential income, apart from their crucial role in collecting food from sea for daily subsistence (APWRCN, 1992). In reviewing the roles of women in fisheries in the Bay of Bengal Region, Madhu (1989) identifies the diversity as, "apart from activities as wife, mother, and homemaker—which engages them from dawn to dusk—fisherwomen market fish as retailers, auctioneers or as agents of merchants; make and repair nets; collect prawn seeds or fish seeds from back waters to supply to fish farmers; work as laborers for shrimp processing firm (at the landing site, at peeling sheds or at the processing plant); dry and salt fish; and prepare variety of fish products (fish crackers, fish balls, fish paste etc.)". In parts of India, women net prawns

from backwaters; in Laos, women fish in canals, and in the Philippines, women fish from canoes in coastal lagoon" (FAO, 1987). According to a government estimate by the end of 1989 the fisheries sector in Fiji had 20,000 persons who were involved in subsistence fishing, of which the majority were women (Hamida Bibi, 1990). In a southern state of India, fisherwomen go by boat to a seaweed "ground", then swim around and "pluck seaweed" (Madhu, 1989). In the Northwest Lingayen Gulf, Philippines "Gleaning as an economic activity imposes a heavy workload for women in particular. The increasing rarity of commercially-important organisms in the degraded habitats means longer gathering hours" (Mcmanus, 1989). A review from the African region documents that "in many African countries women are responsible for most shore-based fisheries activities, including fish curing, processing and marketing" (Lartey and Dzidzienyo, 1986).

2.2. Women's Activities in Aquaculture Communities

For aquaculture development, a comprehensive understanding of the local economy necessitates a thorough examination

of division of labor by gender, age, and status (World Bank-151, 1991). In many aquaculture communities women are active participants in production. "In those countries where aquaculture sector has been well established women have rapidly involved in aquaculture at every level. Not only have they expanded their traditional fisheries roles in marketing, processing, and credit, but they have become active in farming itself (production)....The participation of women throughout the industry of aquaculture worldwide covers a broad spectrum, as diverse as the many levels of sophistication attained in each country" (Nash, Engle, and Crosetti, 1987).

The diversity of aquaculture can be categorized as subsistence or barter oriented production systems and as semi-intensive and intensive systems for profit and trade. The nature of the production system impacts on women's role in aquaculture. When promoted in an integrated approach, aquaculture is an element of crop-livestock-fish farming systems. In such systems women in farm households participate at various stages of fish production ranging from collecting materials to fertilize the ponds to feeding the fish with household waste materials. Their

indirect aquaculture roles relates to their activities in other agriculture and livestock enterprises that are integrated with fish farming. At Binong, West Java in rice-fish farming systems, quantification of labor contribution in different rice-fish patterns provides evidence that female labor is an important resource in rice-fish production (Wardana and Syamsiah, no date).

In a personal communication Veverica indicates that in Rwanda (a land locked African country) participation by women has led to the rapid and successful growth of Aquaculture (1990). Rwandan women have successfully demonstrated their interest and ability to utilize modern aquaculture technology developed and disseminated through a USAID sponsored Pond Dynamics and Aquaculture Research Support Program (Konnan, 1989).

2.3. Women in Fish Processing

Women in both coastal fisheries and aquaculture participate intensively and extensively in processing fish (Wanigasundara, 1981; Mcmanus, 1989; CIRDA, 1989; Yater, 1982). This could be as simple as drying the surplus fish for future

household consumption or working as paid labor in fish processing plants. In both informal and formal sectors of fish processing women's tasks are labor intensive. In addition given the nature of seasonal variations in fish harvest, the women's formal sector activities can fluctuate depending on seasonal demand for labor. Sandhu (1989) observes that "in most places, fish processing (whether it is smoking, salting or drying) is a social system as well as a livelihood. The social organization or the division of labor is already fixed. By and large, fishing is the domain of men, while processing belongs to women"

In a case study of woman in a Kerala fishing community, a woman narrates her experiences as an agent in shore based prawn peeling enterprise that involved selling the peeled prawns to export firms at a price (Gulati, 1984). Migrant women in Gambia have organized themselves with the help of the extension agents to process sun-dried snails and fish which are traditionally used as condiment (King, 1989). In Ghana, adult women dominate the fish processing sector and a majority of them have been in business for over ten years (Osei-Oare and Tachie, 1988).

2.4. Women in Fishery Post Harvest Handling and Marketing

Women's participation in fishery marketing varies across the countries. Nauen (1989) observes that in West Africa, women have the predominant role in the post harvest sector of artisanal fisheries, though there are great differences from one country to another. Most often women trade on a small scale, but there are exceptions. In Papua New Guinea, where women in Daugo Island trade exclusively market fish caught by men while in Ghana, women own fishery businesses which often involve leasing out fishing boats to men who in turn supply them with fish (King, 1989). In some parts of Africa women are active traders in the fisheries sector. Nauen documents from her African observations that, "as part of her commercial activities, the wife buys fish from her husband and/or sons for processing. If she has granted them a loan for necessary inputs such as nets, spare parts, fuel etc. for the next fishing trip, this loan will be repaid with interest in the form of lower-priced fish.....In the absence of a formal credit sector for artisanal fishing and other small scale operations, women fish processors and traders often ensure crucial credit and

supplies at flexible conditions." In Asia and Pacific region, it is common to sight women as fish traders in shores and local markets. In Kerala-India, women are head load fish vendors, net makers, and prawn sellers (Gulati, 1984).

2.5. Women's Role in Supporting Family Fisheries Enterprises

Women's supportive roles in fisheries are illustrated by their time spent making nets, repairing nets, buying or gathering fuel for smoking fish, building and maintaining fish smoking ovens, making baskets for fishing and transporting fish (ANGOC, 1989). "Mending nets, baiting hooks, packing dynamite and other forms of gear preparation are very much a part of keeping house" (Mcmanus, 1989). In aquaculture, gathering or preparing feed for the fish, collecting compost materials, and mixing compost to fertilize ponds are extended household activities done by women as family labor. In integrated agriculture - livestock-fish systems, women take care of the livestock and fish feeding. Family labor is a crucial input in the integrated aquaculture in West Java where women have a strong voice in farm management (Schmidt, 1980).

3. Women's Knowledge of Fishery Production and Resources

"Women in fishing communities often have significant knowledge about fish resources and techniques" (APWRCN, 1992). In such communities women have the power of knowledge in dual spheres of fishery production and fish consumption - household and market preference of fishes and fishery products. A study of Fulaga in the Lau group in Fiji observed that men had limited knowledge about fish resources, fishing issues, and techniques, while women's knowledge of these was comprehensive (Lal and Slatter, 1982). In almost all fishing communities in the small-scale and subsistence sector, knowledge of fish processing is women's domain. In the aquaculture sector women have the special knowledge of wild plants and leaves that are cost effective sources of pond nutrients and these women possess the skill and knowledge of processing fish feeds from crop residues, cereal by-products, and household wastes.

4. Women's Role in Food Security as Related to Fisheries

In most developing countries women as the primary decision makers and providers of family meals, choose fish and fish products. Thus women play a key role in ensuring family food security. The importance of fisheries in nutrition was recognized in the World Fisheries Conference in 1984, which endorsed a global FAO action programme. The FAO action programme calls for : " The Promotion of the Role of Fisheries in alleviating Malnutrition", which aims at increasing the nutritional impact of fisheries projects in two ways: (a) directly, by making more fish available for consumption by the undernourished, and (b) indirectly, through improving the living conditions and thus the food and nutrition situation of fishing communities" (Heel, 1986).

In certain regions of the world, any decrease in the supply of fish creates constraints on household consumption which in turn places hardship on women in meeting the family's food security needs. According to Brown (1985), "Although per capita fish consumption in Third World continues to be lower on average than in the industrial world, it is nonetheless a key protein source in the diet of coastal people. A scarp of dried fish

can often mean the difference between a nutritionally adequate diet and one seriously deficient in protein. Thus world wide decline in the per capita fish harvest does not augur well for future nutritional improvements in developing countries."

Aquaculture in many African countries provides for the animal protein when deforestation diminishes the supply of wild animals. Thus women's participation in aquaculture directly impacts on family food security needs. In Rwanda, "a main reason for women's participation in fish farming was access to fish for the family meal. Several women fish farmers mentioned that it was difficult for them to buy meat, so they opted for fish farming to produce their own fish " (Balakrishnan et al. 1993).

Households in fisheries communities experience uneven flow of an income depending on seasonal weather conditions and low catches. "The pattern of expenditure and income in fisheries is often irregular and unpredictable" (FAO, 1990). Under these hard circumstances women generate cash income by seeking gainful employment and engaging in subsistence trades to provide for the family's necessities. Many studies have

focused on women's strategies to ensure household food security during periods of famine, seasonal variability of crop yield, and deforestation. But no adequate, reliable information is available on women's coping strategies in fisheries communities.

5. Economic Implications of Women's Diverse Roles in Fisheries

In this section the economic implications of women's participation in fisheries is discussed. The economic dynamics of women's roles should be analyzed in the context of intra-household gender dynamics and society's valuation of women's contribution.

5.1. Uncounted and Under Valuation of Fisherwomen's Work

Fisherwomen augment households' monetary resources directly by contributing their time, labor, and marketing skills. Women's intensive participation in the subsistence and small scale fisheries is seldom quantified as economic contribution to the national economy. Value of women's time used to mend the net, to transport fish to the market, and to create use-value for the

fish products is seldom counted with money value. Alternatively, if a paid laborer is hired to mend the fish net or transport fish to market, then the labor cost will be counted as a cost of fishery enterprise.

5.2. Fisherwomen's Financial Support to Family in Lean Fishing Seasons

In fishing communities women take on economically productive ventures to generate family income during lean fishing seasons. In Sri Lanka fisherwomen set up food stalls and make coir products and copra to supplement family income. In the coastal communities uneven flow of resources pushes women to seek income alternatives. They manage household finances during the absence of men. Fisherwomen, under these circumstance, are responsible for family's financial decisions. Yet, they are not usually perceived as major decision makers or managers of household resources.

5.3. Fisherwomen in Cooperatives/Organizations for Collective Gains

In fisheries communities, women's groups are organized to improve their economic conditions. CIRDAP's programs

assist women in Indonesia, Philippines, Sri Lanka, and Vietnam expanding their income generating opportunities in the fisheries sector (CIRDAP, 1989). Bay of Bengal Program's much publicized efforts in this area of work fall under three categories: diversified income generating activities; training packages to improve the participation of women in their own technological, socio-economic and cultural development; and credit (Madhu, 1989). "In Shimoni, Kenya, a women's group has formed a cooperative and bought a fishing fleet, the catch of which they process and market, increasing their empowerment and decision making" (Cam, 1993).

5.4. Fisherwomen and Fisheries Credit

An FAO fisheries report recommends that "the socio-economic role of women in fishing communities should receive more attention and should be supported through appropriate credit and marketing arrangements" (1990). In some regions of Africa women are influential as bankers extending credit to fishermen. While in other regions women assume small loans as start up capital for their fish-smoking enterprise. In certain regions of Asia, women suffer

under the credit burden of their fishermen who are indebted to money lenders. When examined in the framework of household resource flow and dynamics, credit seems to be an essential input in small scale fisheries. A Philippines pilot credit scheme provided credit for women for a number of post-harvest activities such as fish smoking, fish paste, shell-craft and fish trading. In this programme the loan repayment rate was 97.4 percent, and women were able to raise their standard of living (FAO,1990). In the aquaculture context, Nash, Engle and Crosetti (1987) observe that "production projects invariably require a credit component. As access to credit and lack of management skills are constraints to the participation of women as producers, projects must have the facility to provide resources to meet these needs."

6. Ecosystem Degradation: Impacts on Women in Fisheries

Coastal communities depend on harvest from the sea. The harvest of the sea is threatened by increasing pollution and degradation of the environment. The fishing communities and families suffer from the effect of losses in fishes that are important

for subsistence and as a source of income. The sources of environmental degradation that impact on fishery stocks are agriculture run-off (pesticides and herbicides), domestic and industrial sewage, toxic industrial wastes from coastal factories, radioactive discharges, and oil refineries and oil spills. The coastal communities bear the cost of modernization.

"For fisherwomen, certain forms of pollution may directly affect the size of their catch and levels of income. The effect of pollution of rivers and mangroves in Suva, Fiji, was noticed by women in poorer communities who fished daily in those areas to supply the family with food and income" (APWRCN,1992). It is documented that " Many women are involved in fishing in the shallow waters of low-lying coastal areas, and their activities will be affected by any rise in sea level resulting from climate change. In southern Nigeria, where many rural women are involved in fishing and farming, the rivers and creeks are being polluted by the oil industry; and in Sierra Leone, local ponds fished by women are silting up. Women's income generating work of processing and preparing fish is also

affected by reduced fish supplies" (Rodda,1993).

7. Commercial Fishing: Impacts on Women's Fishery Activities

Worldwide increase in demand for seafood fosters commercial fishing. The growth in commercial fishing has led to the use of powerful technologies culminating in the over-exploitation of fish and the destruction of the aquatic ecosystem. Additionally, advanced technologies can threaten the livelihood of those dependent on the traditional fisheries sector. "The introduction of improved technology and methods aimed at increasing fish cash will normally increase women's work load in processing and marketing. This increase may be beneficial to women, permitting them to earn more income, but it can also be detrimental if it burdens them with additional work for which they get no economic reward or for which they are not adequately equipped" (FAO, 1988).

8. Impact of Fish Processing Development on Women in Fisheries

Changes in marketing structures, such as wholesale buying for processing

plants or export many also cause women to lose their traditional roles as processors and sellers (FAO, 1988).

Cam(1993) lists various examples of the impact of fish processing development on women. Some of these are presented here.

In Senegal, the bargaining power of female fish processors has decreased with the development of whole sale fish traders. Culturally in Sierra Leone trucks have always driven by men. The introduction of insulated lorries to improve fish transportation, had the effect of putting many of the predominantly female fish marketeers (who traditionally transported fish) out of paid employment

In India, urbanization has led to greater demand for fish in towns and cities. Fisherwomen, because of cultural and economic barriers, are not mobile and have been forced from the trade by stiff competition from men, who can ride bicycles or rickshaws.

Alternatively, commercial fish processing plants can open up paid employment. But these are usually tedious and labor intensive tasks such as peeling shrimp or working in fish canning lines.

9. Women's Concerns in Aquaculture Development

Technological interventions in the aquaculture sector can have mixed impact on the economic and social integration of women. Based on the information from 18 West African countries, Trottier (1987) summarizes the issues relevant to women and aquaculture development in the region: 1) Introducing fish farming into some key areas may involve the introduction of new species for higher value markets and even exports. These efforts at times can displace women from their traditional economic role in fishery production. In such situations appropriate compensatory alternatives should be established to assist women. 2) Introducing fish farming mainly and exclusively for male beneficiaries usually adds tasks to the work load of women. This produces a predominantly negative impact on the women unless there are returns to them, and they understand the work itself. 3) Access to fish ponds often liberates women from other fishing duties, and presents an opportunity to obtain fish more conveniently and regularly throughout the year. 4) fish pond responsibilities may interfere with other activities, such as cropping, which have

established rights of remuneration (FAO, edited by Nash, Engle and Crosetti, 1987).

Ⓟ (Though around the world women are involved in aquaculture production, it is almost universally considered men's work. In general women have no direct access to training or extension agents which enable them to acquire the knowledge necessary to increase productivity; only some 10-15 percent of the participants and trainers in training courses worldwide are women. The percentage of women extension agents has been even lower (Engle, 1987).) It is observed that while many opportunities exist for women to participate in aquaculture production, more specific identification of opportunities to upgrade and expand their activities is needed (Nash, Engle and Crosetti, 1987).

10. Economic and Social Conditions of Fishery Communities and Fisherwomen's Lives

As partners in developing resources for their household women have a stake in the basic services provided in the fishing communities. The poor quality or lack of basic services such as education, health care, housing, and drinking water affects the lives

of women. They could spend more time seeking these services. As members of the coastal communities, their uncertainty of living conditions is aggravated by exposure to unpredictable climatic conditions marked by cyclones and floods. As fuel wood supply decreases the women spend additional time or money to procure the fuel for cooking or smoking fish. According to a FAO review on women in fisheries, "women's work is almost always labor-intensive and time consuming, lacking the appropriate degree of technology which would facilitate the operations without threatening to make their role redundant. Two of the most needed improvements in rural fishing villages are the provision of transport and regular water supply; as it is women spend much of their time remedying the lack of these facilities" (1991).

Valenzuela (1989) states that "Rural women in fishing communities share the same fate or suffer the same if not worse compared to their male counterparts." In general the education level of women in these communities remains low (Heel, 1986).

11. Research Framework: Women in Fisheries

Harrison (1991) observes that "the socio-economics of aquaculture development is still a greatly under-researched field". Current information available on women in fisheries and aquaculture could be summed up as limited and fragmented. Mostly, in the aquaculture sector, the available information is either experiential or observation pieces written by those involved in aquaculture technology transfer. A research framework to document social and economic issues of women in fisheries should be viewed under two categories namely "what to study" and "how to study". "What to study" falls under the category of *content of the research* and "how to study" focuses on *research methodology*.

11.1. What to study

A FAO workshop on women in aquaculture identified the need to highlight women's participation in national aquaculture case studies and it also recommended the continued collection of statistics on the participation and contribution of women to the human resources of the aquaculture sector (Nash, Engle and Crosetti, 1987). A World Bank report on research needs for aquaculture development identifies the areas

of investigation relevant to the socio-economics of aquaculture such as: social organization, organization of production, units of production, distribution, and consumption; economic activities, inter-and intra-household differential access to resources of land (and water and fishery resources), labor and capital; land/water tenure and use; division of labor by gender, age, and status; labor availability, strategies and migration; marketing and rural-urban exchanges (World Bank-151, 1991).

All or any of these issues should be studied in a gender- segregated framework. Such gender segregated information can document the women's participation in the aquaculture and their struggle to access strategic resources for effective participation to improve the productivity in aquaculture sector.

A suggested list of socio-economic issues related to women in fisheries is presented in this section for discussion. The suggested issues can be studied in relation to aquaculture, freshwater fisheries, and integrated fish farming.

* Economic and social organization of the aquaculture / fishing

communities which influence women's activities and status

- * Integrated fish production system preferred by women as users of the system
- * Customary and legal rights related to common property resources that can influence women's participation in aquaculture and fisheries production
- * Labor input and decisions by women for aquaculture/ fisheries/fish farming system for various activities
- * Seasonal variation in women's activities in aquaculture/ fisheries
- * Seasonal variations in the flow of income, and fish as food into the household and their impact on household food security and basic needs fulfillment
- * Women's resource generation strategies to cope with seasonal variations of income
- * Women's perception of importance of aquaculture for improving their living level
- * Women's knowledge related to aquaculture/fisheries
- * Women's indigenous knowledge related to local plants and feed

materials which can be cost effective inputs in aquaculture production

- * Women's need for knowledge and skill development to adopt and manage aquaculture/fisheries ventures
- * Women's access to land, credit, technology, relevant inputs, and extension to adopt and support aquaculture/fisheries enterprise
- * Feasibility of organizing women's groups to encourage adoption and improve management of aquaculture/fisheries enterprises
- * Women's access to and control over the use of income generated from their aquaculture/fisheries activities
- * Women's special problems in approaching government agencies and using aquaculture/fisheries development assistance
- * Social, cultural and institutional biases preventing women's participation in aquaculture/fisheries development

11.2. How to Study

Traditionally a large sample survey is used to study a problem. This method is

still valid and needed for specific purposes. An alternative method now becoming popular is the "Participatory Appraisal." A participatory research approach involves the users or stakeholders in identifying the needs. Such a participatory appraisal helps the participants to analyze their resources, constraints, and opportunities with outsiders acting as facilitators. It is a process of learning together to plan together. User participation also increases their commitment to the interventions. The participatory appraisal provides situation and community-specific information. Diversity in the social and economic realities and variability in natural resource bases are the characteristics of the communities where aquaculture /fisheries interventions are promoted. Hence, situation-specific information on community needs and user commitment are crucial for aquaculture /fisheries enterprises to take root and succeed.

Chambers (1992) states that participatory approaches and methods can enable rural people to enhance their own analysis, provoke revealing debate, provide agenda for discussion, and able to provide accessible means for farmers to communicate their priorities to extension agents and scientists. According to a World Bank report,

Bay of Bengal Programme's effectiveness lies largely in the involvement of the fishermen in the early stage of research and throughout the research process (World Bank-147, 1991). An ICLARM supported aquaculture development in Malawi promotes a participatory approach. Lightfoot, Boble, and Morales observe that the process of involving farmers as partners in research has contributed to the success of this Malawi project (1991).

An example of participatory approach as applied to Aquaculture is the participatory linkage diagramming of bioresource flow modeling. An example is presented in Figure 1 and 1 a. But we cannot not assume that participatory approach is always gender sensitive or explicitly seeks women's perspectives in the issues analyzed (Alice Welbourn, 1991; Guijit, No date). Participatory research should be planned to explicitly include women as participants. I have illustrated in the diagrams 2 and 2a how the bio-resource flow diagramming comes to life reflecting the gender differentiated participation in aquaculture. In planning the aquaculture / fisheries research, one cannot stress enough, the importance of the following issues: including women as the

sample in the study; developing gender differentiated data/ information base and identifying women's constraints to access resources, technology, and training.

12. Conclusion

The presentation on socio-economic issues related to women reviewed the women's activities in diverse spheres applicable to fisheries sector. Women in their multiple roles are managers of natural resources and food security. In the fisheries sector there are many issues which are pertinent to both men and women in the fishing communities. But the social, cultural, and institutional biases affect women either more adversely or differently in comparison to men. For any sector development to succeed, we need to understand the potentials and limitations of all factors of production. In developing countries human resource is a crucial factor of production and women make up half of the human capital. We cannot afford to ignore the potential of 50 percent of human capital in any production system, for both reasons of efficiency and equity.

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