Women in Aquaculture

Case studies of aquaculture production in Cambodia, Thailand and Vietnam throw up several important questions and issues related to the empowerment of women in the sector

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It has been reported in many documents that women are involved at various nodes of the aquaculture value chain. However, is it enough that they participate in activities? How much involvement is considered work? How much work is considered paid work? How does women's involvement in aquaculture impact their value and well being? One of the challenges facing women in aquaculture nowadays is the lack of recognition for their efforts, and the insufficient or inaccurate data to support how much contribution they are providing to ensure food security at the household, community and even global levels. In fact, the lack of sex disaggregated data hinders the design and planning of gender responsive policies, projects and interventions.

To explore some of these questions, case studies on selected aquaculture value chains, focusing on the grow-out production node, were conducted under the USAID Maximizing Agricultural Revenues through Knowledge, Enterprise Development and Trade (MARKET) project, with the following objectives: to map gender roles in the selected aquaculture value chain; to identify the roles and activities of women and men in the grow-out stage of aquaculture; to analyse the gender dimensions with respect to division of labour, decision making process, benefit sharing and access to resources (including knowledge and information); and finally, to identify gender issues, needs and opportunities.

WIRAWAN RAYAN

Women's involvement not only in fish farming but also in other livelihood activities provide a major income source for their households

The case studies included inland small-scale aquaculture in Cambodia, small-scale marine shrimp and tilapia cage culture in Thailand, and the small-scale shrimp-rice rotation and tilapia culture in Vietnam. Primary data was collected through focus group discussions, key informant interviews, and in-depth surveys of men and women involved in the grow-out production of selected species.

Depending on the countries, species cultured and farming systems employed, women's involvement varied. The constraints women faced includes the heavy workload in the household which needs to be balanced with the obligation in the farms. These case studies could be used as reference and materials for outreach and training in building capacity of practitioners to include women and consider the gender aspects in their aquaculture work.

Primary data was collected through farmer and household surveys, in-depth interviews with women, focus group discussions, and key informant interviews. Secondary data was also collected from local language documents, published papers, reports and government records. The respondents were farmers (at least 30 farmers or households per system, but the ratios of malesto females were unequal in some systems). In addition, in-depth interviews were also conducted with a few women to discuss their activities both at home and in the farm, roles, relationships with other stakeholders, ownership, capabilities, power and decisions making, needs, priorities and aspirations.

In Cambodia, we studied women's labour in small-scale freshwater aquaculture production. Here, aquaculture is still considered a family activity where all members engage in various aquaculture related work. Farmers also hire temporary external labour (men for construction, women for harvest). Both men and women are involved but women have more inputs than men in terms of labour and time. Men in this area often

migrate to big cities for alternative occupations outside their hometown, leaving the women to operate the farms. In most areas, rice farming is the main occupation while aquaculture is just secondary, along with livestock farming.

One of the issues related to roles included wages. Men would be paid USD 1 to 3 per day while women would be paid USD 0.5 to 2 per day. One of the reasons given for the differences in wages was that men are given a heavier workload. But this does not consider the fact that when women are left to operate the farms when men migrate elsewhere, there is pressure on women to balance both household and farm work, and sometimes other livelihoods. Technical decisions are mainly taken by the men as they are more trained. Training opportunities are limited for women as they cannot participate in training programmes even though they are invited. Financial decisions are taken mainly by the women due to their marketing and trading skills.

Women farmers face issues such as lack or inadequate technical knowledge and experience in aquaculture, financial assistance and technical support, markets to sell their fish with better prices, and support to mitigate or protect their culture operations from the impact of environmental and climate change, including drought, flood and diseases.

Small-scale aquaculture needs to be linked with food and nutrition security but there is a need to address the issues above to empower women. One example is that of Mrs CN, 54, who is both a housewife and a fish farmer. She is married to Mr KH, 56, a rice and fish farmer. They have four children and two young grandchildren. Mrs CN was trained in fish seed and grow-out production, after which she successfully expanded her farm and equipment. Now she is training others and has become an example of success, not only in her village but among aqua farmers in Cambodia. Her success has benefited herself, her family and their community.

In Thailand, we considered women's labour in small-scale freshwater tilapia cages and marine shrimp ponds. In one area of Sakon Nakhon province, northeast Thailand, tilapia farmers' wives also have other economic activities, such as selling fish, owning a grocery store, farming rice and rubber cultivation. These are considered more important sources of income. Thus women's involvement in tilapia cage farming is limited due to other chores, but they still want to participate. Tilapia farming adds income to the family and keeps families together as the men do not have to migrate to other areas to find work. The women manage the financial aspects especially income disposal for household use.

A case study of small-scale marine shrimp ponds in a district in Chanthaburi province, eastern Thailand, revealed that female shrimp farmers have other work at home, or in trading, as hired labour and other income generating activities. Although their time is limited, women farmers can still work in the shrimp farms with their husbands, doing such tasks as feeding, record keeping and checking stock. Regarding farm ownership, it is common for husband and wife to jointly own farms. Female farmers perceive their role as important in shrimp farming due to the ownership status but the men take the main responsibility as they have more knowhow. This is a result of government extension programmes in the past wherein only the men were invited and could attend as the women had other work to do.

The women farmers do not feel constrained in doing tilapia cage culture or shrimp farming, especially when they work in partnership with their husbands. Household work does not prevent them from being involved in aquaculture but can limit the time they devote to farming. Women farmers also feel empowered while making decisions to improve their operations to generate more income. A case in point is Mrs M, who was the first one to establish tilapia cage farming in her area. She is also a rice farmer. She said, "I have more control of our rice and fish farming business than my husband. I can make my own decisions about farm operations. I can do everything that a man can do in the farm, even heavy work. People here perceive me as economically better-off." Another beneficiary is Mrs SK, a small-scale shrimp farmer and public school teacher, who said: "I hired a farm manager (male), and I also visit my farm and can interact with my manager and workers without any difficulty."

Tilapia cages are located on rivers, often at quite a distance from the homesteads. This is difficult for women who have household responsibilities and other livelihood activities. Access to finances is also important, as operating fish cages could entail high costs. The lack of technical knowledge hinders them, for tilapia cage operations and management are quite intensive.

One of the challenges facing women in aquaculture nowadays is the lack of recognition for their efforts.

For shrimp, the limited land available for expanding operations is a constraint even if the farmers have more knowledge and resources. The farm workload could be high but they can hire workers to help them.

For those who require finances, the high cost of operations leads to more debts. Many farmers also incurred heavy losses due to diseases, especially the Early Mortality Syndrome (EMS) in the last three years.

In Vietnam, women's labour in small-scale tilapia cages and rice-shrimp rotation in ponds was studied. Tilapia cages in the province of TienGiang, in the Mekong Delta region, are dominantly managed by male members of households. Women's involvement is limited mainly at the input stage, and during sales and marketing in local markets. Women have to balance their household and other activities with farm work. The major roles of men include operations and handling technical matters, obtaining credit or loans and managing the repayments, stocking seed and feeding during the culture period, and financial and selling decisions, including pricing. However, both men and women can take decisions on how to use the income from tilapia for spending, especially for family and household use.

For rice-shrimp rotation system in ponds, both men and women can operate small-scale farms. The women are active in the small-scale collection and harvest of produce, in assisting in feeding and cleaning, as well as financial decisions and making savings, along with housework. The men mainly engage in critical operations which have intensive technical and management requirements, as well as marketing communications, that is, negotiating with buyers.

In Vietnam, as in most places in Asia, heavy and physical work is stereotyped as a male activity. Women's involvement is therefore limited due to the perception that they cannot do heavy work, and also because of the lack of technical training in intensive operations. According to the men, they take responsibility for the heavy work and for high risk investments in order to protect their women from hurt and losses. In addition, the stereotype of men being regarded as head of the household might limit women's participation in farm work.

Several important issues and questions emerge from these case studies. In household or small-scale operations of aquaculture, women are already involved. The main issue is how can they be more empowered in the work that they are doing? Increasing women's participation can be an added burden, and yet there is often no adequate compensation. Thus, beyond just increasing their participation or involvement, we should examine how women are treated, compensated and protected as they go about their work in farms, homes and communities. Do they have a voice or opportunity to express how they feel in the workplace?

A recurring theme among the women in the three countries studied was the added burden of aquaculture to their demanding work in the home and in other livelihood activities. How can men share the burden of household and family responsibilities that women carry every day?As the seafood industry becomes more concerned about their contribution to social development, especially in the production nodes, one of the areas of focus will be how the public, private and civic sectors may support empowerment of women in aquaculture.

Half the fishers in the world

Tracing the road ahead for women in fisheries in Asia, a continent that produces the most fish and supports the largest number of fishers in the world

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Fishing and the fisheries are a major source of food and livelihood for millions of people in Asia. Many Asian countries like China, India, Indonesia, Japan, Thailand and Vietnam are major fish producers. The fisheries policies in these countries have centred on increasing production over the last two decades. This has resulted in investments in centralized infrastructure development, along with introduction of bigger sized crafts, gears and different fishing systems. In many developing and less developed countries in the region, this has had government funding.

Though there are boundaries defined to differentiate fishing zones for traditional small-scale and larger vessels in the region, policing of the violations is difficult and often inadequate. Conflict situations are also observed between different fishery users in the countries in the region. On the whole, over capacity, increase in population, and decrease in available resources has led to the increased vulnerability of small-scale fishers. Fishing capacity increases have not necessarily reflected in increased per unit catches or better returns to the primary producers. Fisher producers have become fisher labourers working on bigger crafts, or are migrating out of the sector. Fishing trips are becoming longer and less economical. Another key development during the last two decades has been the influx of electronic communication, and the fisheries sector has witnessed increasing use of Information and Communications Technologies (ICTs) for both backward and forward link activities.

SIBASIS GUHA / CIFT

A woman feeding in aquaculture pond, India. Women contribute in almost all activities right from pond preparation, stocking, feeding, and to harvesting

A major shift in production has been the emergence of aquaculture as an alternative to capture based fish production. By 2006, most of the production in the sector came from culture. In many countries in the region like Thailand, Vietnam, Bangladesh and India, major fish production comes from aquaculture rather than capture fisheries. Many factors such as unsustainable and over exploitative practices of many capture based fisheries, climate change induced impacts, and development activities along coastal areas have also had an impact on coastal fisheries and aided the growth of aquaculture. Aquaculture is more akin to agriculture and many of the factors of production can be reasonably controlled. Though there are many risks associated especially with regard to disease outbreaks and environmental concerns, this sector is growing and will continue to occupy an important place in future fish production. The past two decades have seen many countries evolving policies to develop aquaculture, with an eye on lucrative export markets. For developing countries in Asia and elsewhere, fish trade is clearly a significant source of foreign exchange. The growth of aquaculture has seen the emergence of a new class of non-fisher entrepreneurs, with coastal farmers shifting from rice cultivation to shrimp farming. This trend was also visible in an earlier era, when the capital intensive mechanization of capture fisheries shifted the ownership of vessels into the hands of non-fishers.

Women have been an integral part of fisheries. All over the world, studies have acknowledged that women form half the workforce in fisheries, especially in Asian countries. With small-scale and often subsistence fisheries and aquaculture dominating, it is imperative for the fishing communities that both men and women engage in the sector, which is a source of food and income for their families. However, the sector has strong gender divisions of labour, hosting much invisible women's work in fisheries and in fisheries production chains, and limiting women's access to the means of

production in fisheries and in aquaculture because of cultural taboos and practices.

Women have always been a dominating presence in marketing of fish, mostly in retail trade. They have been traditional processors of fish and also contribute to the growing labour force in the industrial processing sector. Though not so highly noticeable, a small proportion of women have always been involved in fish capture, often using nets and traps in inshore waters and inland water bodies. They have also gleaned for molluscs, crustaceans and fish. Fry collection for aquaculture is carried out by women in India, Bangladesh and Sri Lanka in inter-tidal waters. However, closed seasons in various areas due to conservation efforts have made these areas inaccessible and have affected livelihoods. We also have women diving for crustaceans, molluscs, coral and other fishes and seaweeds in Japan, Korea and India. Evidence from certain countries suggests that women are working on commercial fishing vessels but they form a very small minority. Women as harvesters have always engaged in subsistence fishing to make ends meet for their families. Women are rarely encouraged to take up fishing, as fishing has always been thought of as a male preserve. Post-capture activities are a niche area for women, be it sorting the landed catch, or in processing and marketing and processing. In the industrial fisheries too, commercial processing is dominated by women in most Asian countries, including India, Thailand, Bangladesh and Vietnam.

Women's work in the fisheries, being subsistence and family oriented, remains invisible.

The changes in the fisheries sector have affected women in many ways. The increased mechanization and the centralization of landings to bigger harbours from the beaches have meant loss of employment for the fisherwomen, who once were the custodians of fish after landing. Women took over in the supply chain thereafter, and engaged in the marketing or processing of fish. In India, for instance, fishing operations have shifted from beach landings near fishing villages to more urban based harbours. The landed fish is now auctioned and marketed through institutionalized labour organisations in these harbours. Women find it difficult to penetrate this set up. It has also meant travelling from their fishing villages, disrupting set work regimes and increasing workload. Women have also lost the bargaining power they once enjoyed, when the landings were within their reach. Now they have to depend on the auctioning being carried out in the harbours, and their resources do not permit them to be active in the process. A change that may be noticed, however, is that many women are becoming auctioneers or agents of auctioneers.

While women continue to be active in fish marketing in most Asian countries, the physical conditions are still very dismal. Upscaling their fish businesses is a problem because of lack of resources, and they continue to be small players in the larger scheme of things. Aquaculture, being similar to agriculture, should have seen more participation of women. However, here too they continue to be near invisible. A recent study by the Network of Aquaculture Centres in Asia-Pacific across Thailand, Vietnam, Cambodia and Lao PDR that focused on small-scale aquaculture systems (see the article 'Women in Aquaculture' in this issue, based on this study) found that women were present in all the major nodes of the aquaculture value chains. They contribute in almost all activities right from pond preparation, stocking, feeding, water management and healthcare, to harvesting. Since they are seldom categorized as hired labour and contribute mostly in the form of family labour, the invisibility was high. In industrial processing, the shop floor almost entirely comprises women's labour, involving working long hours and standing in cold conditions that are required for processing. However, in all countries, it has been observed that women are disadvantaged as far as the wages are concerned and invariably earn less than the men engaged in this industry. The working conditions also leave a lot to be desired.

On the whole, women take on a range of work within the fisheries and within fishing communities in Asia. The nature of work varies with the social and cultural distinctiveness of their countries, but the underlying similarity is that it is rarely seen as being 'productive'. Though it is acknowledged that women are the custodians of traditional knowledge about their natural environment and resources, women's work in the fisheries, being subsistence and family oriented, remains invisible.

Largely limited to the post-harvest sector and marketing, women in the fisheries face limitations in their scale of operations as a result of low levels of both investments as well as risk-bearing abilities due to lack of access to resources like institutional credit and technological innovations such as ice boxes and proper storage mechanisms. Though initiatives in micro-credit have helped women from other sectors to begin

micro-enterprises, they have largely been under-utilized and not completely effective in fisheries. Studies in India and Philippines have shown that micro-credit can often be diverted to meet family needs. Women need to find ways to exploit the opportunities to tap micro-credit, and utilize it effectively, as credit from other institutional sources may continue to be difficult to obtain.

Even when women are actively engaged in economic activity, it has been observed that their income is not always under their own control, which poses a big social challenge. Poor physical conditions of work have been highlighted quite often, but continue to get little or no policy level attention or field level intervention. This is the case in both marketing and processing. To equip women to meet the changes taking place with regard to electronic devices and applications, skill development training opportunities must be made available. Technical training in other fisheries related areas such as management of aquaculture farms and other fish related businesses are also required.

A larger, but more important, issue is the disruption or displacement of lives and livelihoods due to anthropogenic or natural factors. Development initiatives, climate change impacts and natural disasters call for mitigation strategies that must also include capacity building, especially to help women to meet the emotional as well as physical aspects of the losses they incur. In most natural calamities, women are seen to be the more vulnerable.

For women to be able to articulate their concerns and needs, formation of formal organizations is essential. The one network that was established in the late 1990s and still continues to be active is the Mekong River Commission's 'Network on Gender and Fisheries' active in the Thailand, Vietnam, Cambodia and Loa PDR.

This network aims to improve the visibility of women's contribution in the fisheries sector. It works towards suitable policies and programmes to support their work and it tries to improve women's decision making power in the household and community, and at the government and policy level, highlighting fisherwomen's achievements in the region and initiating programmes for their benefit.

Will mere inclusion in fisheries related activities be able to empower women? This is a question that needs thought. Often it has been observed that attempts at inclusion have meant increased workloads which are not commensurate with returns. Sensitivity to gender issues is still low, not only within households and within the community but also among extension personnel who work with fishers. Development efforts by governments and NGOs are inadequate and existing legislation usually poor. The lack of appropriate and relevant sex-disaggregated databases adds to policy blindness—a problem which, if addressed, could serve as a basis for effective planning.

Programmes need not be considered as 'women programmes'; the involvement of the community as a whole is required. The participation of women in all areas in the sector, from resource management to policy decisions, must be ensured.

Strengthening livelihoods

A fisheries livelihoods programme is helping improve women's roles and participation in decisionmaking in the Vietnamese fisheries

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The Regional Fisheries Livelihoods Programme (RFLP), in collaboration with other fisheries institutions, has been trying to improve women's representation in decisionmaking as part of its goal to improve the livelihoods of fishing communities and the management of fisheries resources in six countries.

Since September 2009, RFLP has been working on five main components: co-management, safety at sea, post-harvest, livelihoods and microfinance. A strategic and cross-cutting component running through the main components is gender mainstreaming, implemented through the inclusion of gender equality considerations in the various stages of programme intervention.

One of the six countries implementing the RFLP is Vietnam, where the project has been rolled out in three central provinces: Quang Nam, Quang Tri and Thua Thien Hue. A baseline survey carried out at the beginning of the programme indicated that there was a division of labour among fisher households of different fishing groups. In marine fishing households, only the men went to sea to fish, while in lagoon fishing households, both the men and the women used boats to fish. While most women of offshore fishing households were less likely to work outside the home, women from inshore fishing households often engaged in selling fish or in other income-generation activities such as services, vending and fish processing, in addition to household work.

THUA THIEN HUE / PMU

Women in Phong Hai commune, Thua Thien Hue province, with the ice boxes provided by RFLP, Vietnam

Women from lagoon fishing households worked long hours, fishing daily with their husbands for about 12 hours, bringing fish products to the market, and additionally doing the housework. In the afternoons, they helped their husbands repair fishing gear. They thus appeared to have very little free time for relaxation or entertainment. Further, the children in lagoon fishing households also joined their parents in fishing, in contrast to marine fishing households where women and children did not usually perform any such income-generation activities.

The baseline survey also noted a generational change in the livelihoods of fishing communities: fishing no longer appeared to be the choice of many young people. The lagoon and inshore fishers, in particular, did not want their children to be fishers, and many young people were moving into big cities to earn money. Despite the presence of a network of fisheries associations in the province, the survey also revealed a low level of awareness among both fishers and government staff of the concept of co-management. Women knew even less about co-management than men.

One objective of RFLP is to improve co-management. In Vietnam this translated into providing support to set up Fisheries Associations (FAs). Although at the start of the project, FAs began by recruiting only male fishers. Later, appropriate measures were taken to ensure that the FAs promoted membership among women.

Incentives to promote women's membership in FAs included promoting household membership, with both husband and wife together having to pay only a single membership fee; and financial support only for those livelihoods projects where women were FA members. As a result, the numbers of women in FAs increased considerably. The participation increased from 12 women out of a total 1196 members in 2011 to 471 women out of 2081 members in 2013.

Consultations held in Vietnam with RFLP's 14 communities in the three provinces during April and May 2012 revealed an increasing interest in a wide range of non-fisheries income-generating activities. The participants in the consultations were both women and men. The activities included land-based agricultural

activities such as raising pigs, chicken and rabbits as well as peanut cultivation. Other small business-related options included small-scale production for shoe and garment factories. Improving existing activities such as fish-sauce making and strengthening marketing links was also discussed.

The greater involvement of women in livelihood activities would further increase their workload, as women still had to attend to household work. However, it was reported that due to declining catches and RFLP supporting livelihoods activities involving women, male fishers were willing to spend more time helping with traditional "women's' activities", like pig- and chicken-raising. Men were also reported to have started contributing to household chores, so that women could dedicate more time to income-generating activities.

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